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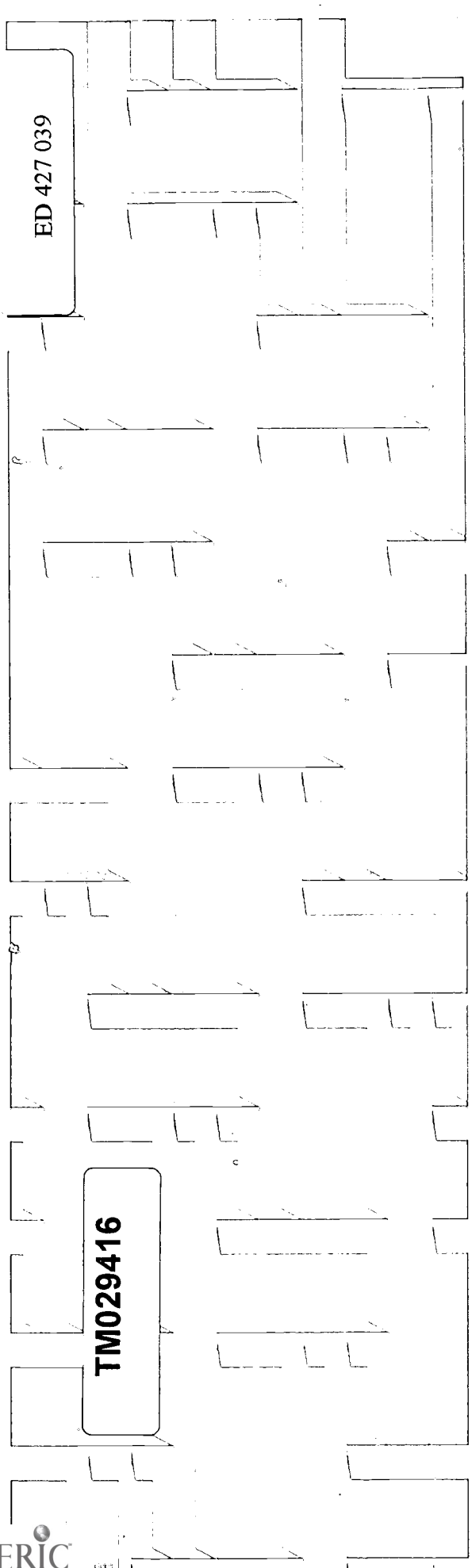
ABSTRACT

The Laboratory School for the Academically Gifted of the Chesapeake Public School Division (Virginia) is a pull-out program for students in grades 5 and 6. Identified students in these grades attend the Lab School one day each week to receive instruction in mathematics, applied science, writing, computer education/applications, and humanities. In 1996-97, 6 teachers in teams of 2 instructed approximately 407 students in the Lab School. Interviews with the Lab School teachers, its administrator and 51 students, and surveys completed by 91% of the principals from the students' home schools, home school teachers (65% of the 50% sampled), and parents (55% of the 50% sampled) provided evaluation information. The Lab School curriculum was reviewed by a consultant from the Center for Gifted Education at The College of William and Mary (Virginia). The educational literature and the findings of the evaluation support the view that the Lab School pull-out program is an appropriate approach to serving gifted children as long as the instructional program is of high quality. The Lab School was considered cost-effective, and was rated highly by the outside consultant for the individual curriculum units. A lack of coordination with the core curriculum was noted, but the responses of all groups indicated that Lab School students were not placed at a disadvantage in the home school because of the day missed each week. Recommendations are made for the continuation of the Lab School as a pull-out program with some curricular improvements and enhanced staff development for Lab School and home school teachers. Eight appendixes contain background information and documents for the evaluation. (Contains nine charts.) (SLD)



CHESAPEAKE PUBLIC SCHOOLS

LABORATORY SCHOOL FOR THE ACADEMICALLY GIFTED

EVALUATION

OFFICE OF PROGRAM EVALUATION

OCTOBER 1997

PROGRAM EVALUATION TEAM

Dr. Davida W. Mutter, Director of Staff Development and Program Evaluation

Dr. Elaine Chase, Assistant in Program Evaluation

Dr. Jim Roberts, Director of Budget

Mrs. Pam J. Parker, C.P.A., Chief Internal Auditor

Mrs. Penny Goodin, Assistant in School Improvement Planning

Mr. Larry Short, Director of Elementary Education, ad hoc member

Mrs. Elizabeth Foster, KPMG Peat Marwick, external advisor

W. Randolph Nichols, Superintendent

EVALUATION OF THE LABORATORY SCHOOL FOR THE ACADEMICALLY GIFTED
HOW TO READ THE EVALUATION REPORT

This report documents the results of the evaluation of the Laboratory School for the Academically Gifted (Lab School). The Table of Contents lists each section of the evaluation project and the related charts and appendices. The report is divided into the following sections:

- **Executive Summary of the Evaluation**
- **Overall Findings, Conclusions, and Recommendations**
- **Evaluation Proposal**
- **Review of the Literature**
- **Interviews with Lab School Teachers**
- **Interview with the Lab School Administrator**
- **Interviews with Lab School Students**
- **Survey of Principals**
- **Survey of Home-School Teachers**
- **Survey of Parents**
- **Review of the Lab School Curriculum**
- **Analysis of Final Eligibility Scores for Current Students**
- **Information from Central Office Administrators**
- **Contacts with Other School Divisions**
- **Appendices**

An **Executive Summary** of the evaluation is provided at the front of the report. The summary is an overview of the evaluation.

The **Overall Findings, Conclusions, and Recommendations** section includes the research questions, performance criteria for success, and final findings, conclusions, and recommendations of the evaluation. To obtain more detailed information regarding the findings, conclusions, and recommendations related to each data collection procedure, the reader should refer to the individual sections of the evaluation. Charts pertaining to each section appear immediately after the pages which refer to them.

The **Evaluation Proposal** defines the scope of the evaluation as agreed upon by team members and the administrator of the project and contains the signature of the program evaluation team leader and the administrator of the project.

The **Review of the Literature** provides information related to the research which guided the data collection activities of the evaluation.

The **Interviews with Lab School Teachers** section provides the results of the interviews with the six Lab School teachers and the related findings, conclusions, and recommendations.

The **Interview with the Lab School Administrator** section provides the results of the interview with the Lab School Administrator and the related findings, conclusions, and recommendations.

The **Interviews with Lab School Students** section provides the results of interviews with a random sample students who attended the Lab School in the 1996-97 school year and the related findings, conclusions, and recommendations.

The **Survey of Principals** section provides the results of the formal survey of all principals whose students attended the Lab School and the related findings, conclusions, and recommendations.

The **Survey of Home-School Teachers** provides the results of the formal survey of a random sample of home-school teachers and the related findings, conclusions, and recommendations.

The **Survey of Parents** section provides the results of the formal survey of a random sample of parents of students who attended the Lab School in the 1996-97 school year and the related findings, conclusions, and recommendations.

The **Review of the Lab School Curriculum** section provides the results of the review of the Lab School curriculum by a consultant from the Center for Gifted Education at The College of William and Mary and the related findings, conclusions, and recommendations.

The **Information from Central Office Administrators** section presents the data collected regarding cost of serving a student at the Lab School and teacher selection procedures and the related findings, conclusions, and recommendations.

The **Analysis of Final Eligibility Scores for Current Students** section provides the results of an analysis of the final eligibility scores of a random sample of fifth-grade students who attended the Lab School in the 1996-97 school year and the related findings, conclusions, and recommendations.

The **Contacts with Other School Divisions** section provides the results of telephone contacts with personnel from eight school divisions in the state regarding their programs of gifted education for students in fifth and sixth grades.

The **Appendices** section includes the background documents related to the study.

It is hoped that the format of this report will assist the reader in understanding the evaluation of the Laboratory School for the Academically Gifted.

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CHESAPEAKE PUBLIC SCHOOLS

EXECUTIVE SUMMARY OF THE EVALUATION

EXECUTIVE SUMMARY

Introduction

The need for educational services which develop the gifts of our brightest children has been supported by research for nearly a century (Cooper 1995). Early programs for the gifted in the United States concentrated largely on developing the potential of gifted secondary students. For years New York City, for example, designated high schools dedicated to the arts, music, or science. In 1962 California became the first state to mandate identification of all gifted students. Over time adjustments have been made in the gifted movement in terms of the population of students served, curricula, and teaching techniques. Today the basic foundations of education for the gifted are in place for all schools to nurture the talents of the brightest students in a wide range of programs. Additionally, programs which have proved beneficial for the gifted often make their way into the curriculum for all. The specialty of education for the gifted, with its tremendous demands for change, has been instrumental in improving education in general (Meeker 1992).

Current debate among educators regarding the education of gifted children focuses largely on the format for delivering instructional services to this group. Researchers generally agree that the core curriculum in schools is not adequate for meeting the needs of gifted learners and should be differentiated (i.e., modified) to respond to the needs of gifted learners (Borland 1989). At issue is whether students are served better through ability grouping or inclusion. Ability grouping usually refers to providing special programs outside the regular classroom for gifted students. Inclusion, on the other hand, is the mainstreaming of gifted children in classrooms where students of varying abilities work on projects according to their individual points of interest, talent, and readiness (Tomlinson 1995). Pull-out programs (one type of ability grouping) are the most widely used approach for serving the gifted although they generally vary from program to program (Borland 1989). Not disputed is the fact that a sound curriculum is the key to the success of either model of delivering education for the gifted.

A related issue of concern to educational researchers is the effects of programs for gifted students on non-identified students. Even strong proponents of education for the gifted question the logic and ethics of offering to a select group of students activities which most children would enjoy and likely succeed at (Borland 1989). In contrast, other educators recommend applying resources only to gifted programs which serve the profoundly gifted. They maintain that the majority of students currently identified as gifted could be served as well in the regular classroom if rigorous educational standards were in place (Winner 1996). Surrounding the ability-grouping/inclusion debate, therefore, are related philosophical issues which significantly impact the education of students--gifted or not.

What is the Chesapeake Program for the Gifted?

Grades K-12

The program of gifted education in Chesapeake follows the plan of the Virginia Department of

Education which was designed to guide local school divisions in developing effective program services for the gifted.

Prior to formal identification, children in kindergarten through third grade in Chesapeake participate in the Primary Enrichment Program which is designed to provide problem-solving experiences and higher order thinking skills. Formal identification of gifted learners occurs at the end of third grade when students are screened based on achievement, ability, and performance. Final eligibility for placement is determined by an Identification/Placement Committee with enrollment contingent upon the permission of the parent. Students in fourth grade participate in a specialized program which is intended to prepare them for the Laboratory School for the Academically Gifted (Lab School) in fifth and sixth grades. Middle school students may accelerate in honors level courses, and students in grades 9-12 may enroll in honors and advanced placement classes. Students gifted in the category of Visual and Performing Arts may apply to the Regional Governor's School for the Arts.

Grades 5 and 6

The Laboratory School for the Academically Gifted is a pull-out program for students in grades 5 and 6. This program is the total focus of this evaluation. Other aspects of the K-12 program for the gifted have not been addressed by this study.

In grades five and six, identified students attend the Lab School one day each week to receive instruction in mathematics, applied science, writing, computer education/applications, and humanities. The Lab School serves students Monday through Friday during the school year, but each student attends only one day per week. In the 1996-97 school year six teachers in teams of two instructed approximately 407 students (68 students per teacher per week) for the year. Approximately 81 students attended the Lab School each day for an average student/teacher ratio of 14:1.

What does educational literature say about programs for the gifted in general (see Review of the Literature, page 38)?

1. Educational research strongly supports the provision of special services for gifted children.
   - The gifted are defined by Public Law 100-297 as "....children and youth who give evidence of high performance capability....and who require services or activities not ordinarily provided by the school in order to fully develop such capabilities (PL 100-297 (1988), Sec. 4103 Definitions)."

2. Educators agree that the basic core curriculum in schools is not adequate for meeting the needs of exceptional learners who possess an advanced ability to think, to learn, and to produce information. The field of gifted education in fact derives from the need to provide gifted students with a modification of the core curriculum (Borland 1989).

3. Gifted students frequently say that they are not sufficiently challenged, and the resulting behavior ranges from underachievement and general lack of motivation to hostility.

- Academic benefits of all types of gifted programs is described in the literature as modest at best (Winner 1996).

4. Educators maintain that in order to challenge bright students it is essential to provide a curriculum of substance and rigor. A defensible curriculum for the gifted has three fundamental requirements. The curriculum:
   - Is clearly articulated with the core curriculum.
   - Distinguishes what gifted students should learn from what is offered in the mainstream.
   - Has a scope and sequence that organizes knowledge and provides a framework for instruction.

   Once the above three fundamental requirements are met, the curriculum focuses on thinking processes that produce knowledge and provides appropriate, meaningful content (Borland 1989).

5. Opportunities for acceleration and in some cases independent study are also recommended for gifted students (Tolley 1991).
   - Of all the interventions for the gifted, acceleration (i.e., meeting curricular goals at an earlier age or a faster pace) is supported best by research (Borland 1989).
   - Acceleration is possible within either ability-grouping or inclusion models.

6. Researchers are divided as to whether gifted students are served better through ability grouping or inclusion interventions. The debate concerning the two delivery models focuses on the following advantages of each format.

   Advantages of Ability Grouping: (Sapon-Shevin 1994; Tolley 1991; Winner 1996)
   - Results in greater achievement
   - Provides less opportunity for friction between gifted and non-identified students
   - Is easier for teachers instructionally because of homogeneous grouping
   - Is more easily implemented than inclusion which requires schoolwide change
   - Promotes peer support among gifted students
   - Is likely to provide a more challenging curriculum
   - Is likely to have teachers better trained in dealing with the gifted

   Advantages of Inclusion: (Cooper 1995; Lynn and Wheelock 1997; Sapon-Shevin 1994; Tomlinson 1995)
   - Discourages elitism that occurs when certain students are singled out for special services
   - Provides gifted students with more exposure to age peers
   - Is less disruptive to the regular classroom
   - Promotes multiculturism and sensitivity to differences
   - Serves more borderline gifted students who often do not qualify for special programs

- Eliminates intense competition among students to enter special programs
- Promotes schoolwide excellence
- Is less expensive to implement than full-time special programs

The philosophy, goals, and objectives of a school division determine whether ability grouping or inclusion is the best choice. An advantage of pull-out programs is that they allow gifted students to be ability grouped for special instruction and to receive instruction in the regular classroom with their age peers. In any case, the ultimate success of either model depends on the quality of the curriculum offered and the teaching that takes place (Cooper 1995).

How was the Laboratory School for the Academically Gifted evaluated?

The Laboratory School for the Academically Gifted was one of the evaluation projects of the 1996-97 school year. The purpose of the evaluation was to examine the following:

- Educational literature regarding gifted programs in general
- Lab School student population
- Lab School curriculum
- Teacher selection
- Academic advantages and disadvantages for Lab School students
- Social advantages and disadvantages for Lab School students
- Impact of the pull-out program on the home school
- Overall level of satisfaction with the Lab School among students, parents, teachers, and principals
- Whether the Lab School is the most appropriate intervention for serving this age group
- Cost of serving a Lab School student
- Gifted education programs in other school divisions
- Lab School internal evaluations

The components of the evaluation included the following:

- Interviews with all six Lab School teachers
- Interview with the Lab School administrator
- Interviews with a random sample of Lab School students (a total of 51 students)
- Survey of all principals whose gifted fifth and sixth graders attend the Lab School (return rate of 91%)
- Survey of a random sample of 50% of home-school teachers whose students attend the Lab School (return rate of 65%)
- Survey of a random sample of 50% of parents of current students (return rate of 55%)
- Review of the Lab School curriculum by a consultant from the Center for Gifted Education at The College of William and Mary

- Analysis of final eligibility scores for current fifth-grade students
- Information from central office administrators
- Contacts with eight other school divisions in the state

What are the major conclusions from the evaluation?

1. Most students who attend the Laboratory School for the Academically Gifted are students of high ability and high achievement.

   - Lab School teachers describe the majority of students as above-average, high achieving students.
   - The Lab School administrator describes the majority of students as moderately or profoundly gifted.
   - Most principals (84%) and home-school teachers (87%) describe students as above-average high achievers or moderately gifted students.
   - An analysis of the final eligibility scores of a sample of Lab School students in the 1996-97 school year revealed that 98% of the students were students of high ability and high achievement.

2. The one-day, pull-out program at the Lab School is an appropriate model for delivering gifted education to this age group as long as the instructional program is of high quality.

   - Educational literature reports that pull-out programs are the most widely used approach to serving the gifted.
   - Most of the other school divisions contacted have one-day, pull-out programs similar to the Lab School to serve gifted fifth graders.
   - In the review of the Lab School curriculum, the consultant from the Center for Gifted Education at The College of William and Mary noted that the curriculum rather than the delivery model is the key to a successful program for the gifted.

3. The Lab School program is cost effective. In the 1996-97 school year:

   - Each student received instruction one day per week at an annual additional cost of approximately $1,000 per student.
   - Six teachers served 407 students (i.e., 68 students per teacher per week) in the 1996-97 school year.

4. The following conclusions are based on a review of the Lab School curriculum by a consultant from the Center for Gifted Education at The College of William and Mary:

   - Individual curriculum units are rated above average when compared to those of other school divisions.
   - The Lab School curriculum is not coordinated with the core curriculum. (The lack

of coordination was confirmed by Lab School students and teachers who said the school has been encouraged not to duplicate the home-school program.)

- Overall instructional goals and objectives of the Lab School curriculum are not documented fully in writing.
- The overall Lab School curriculum should be upgraded. Suggestions were provided to enrich and extend the current curriculum in the short term, and a comprehensive three-phase review of the curriculum was suggested to upgrade the curriculum overall.
- A high-quality instructional program is best achieved through a sound process for developing curriculum and staff development specific to teaching gifted students.

5. Opportunities for acceleration and independent study are limited in both the Lab School and the home school.

- Lab School students, teachers, and the administrator indicated that opportunities for acceleration and independent study are limited at the Lab School.
- Parents, principals, and home-school teachers indicated that opportunities for acceleration and independent study are limited at the home school.
- Of all the interventions for gifted students, acceleration (i.e., meeting curricular goals at an earlier age or faster pace than is typical) is best supported by educational research.
- Independent study is also highly recommended as an instructional strategy but not for all gifted students.

6. The teacher selection process for the Lab School is not standardized with regard to the advertising of positions, recruitment of candidates, and selection of teachers.

- Teachers have been selected by the Personnel Department largely through recommendations by principals for outstanding teaching.
- Criteria related to qualifications for teaching gifted students (e.g., ability to create and implement a differentiated instructional plan, an endorsement to teach the gifted) have not been specified.
- The informal system of rotating teachers between the Lab School and regular classrooms has resulted in uncertainty on the part of Lab School teachers each year.

7. Lab School students experience the following academic advantages: (1) Widening and deepening of knowledge in the areas studied, (2) Planned exposure to higher level skills such as critical thinking, creative thinking, problem solving, research, and decision making, (3) Academic motivation that results from working with all high-ability students, (4) Exposure to technology training that would not be possible in the home school, and (5) Opportunities to learn both independently and as a group member.

- A disadvantage is that the lack of coordination between the Lab School curriculum

and the core curriculum appears to limit the carryover of academic advantages to the regular classroom.

- There is a perception among principals and home-school teachers that students do not experience academic advantages. This is apparently due to the fact that (1) academic advantages do not appear to transfer to the home schools and (2) reports of progress typically focus on behavioral rather than academic assessments.
- The majority of parents said that students experience greater academic success as a result of participation in the Lab School.

8. Based on the responses of all groups, most Lab School students are not at an academic disadvantage in the home school because of the day missed.

   - Most Lab School students are able to manage the demands of the Lab School and the regular classroom.
   - The loss of instructional time in transporting students to the Lab School is offset by the Lab School experiences. Many respondents, however, would prefer to locate the Lab School more centrally to increase the overall amount of instructional time available at the Lab School (currently four hours per day).

9. Any negative impact of the Lab School pull-out program at the home school appears to be on the regular classroom program.

   - The majority of principals said removing students has little impact or a positive impact on the grade-level program at the home school.
   - Teachers were divided regarding the impact of the program on the regular classroom. Half of the teachers (51%) said removing students to attend the Lab School has a negative impact on the regular classroom program.
   - Comments of home-school teachers reflected their concerns about the requirement to keep activities "on hold" in the home school on Lab School day as well as a lack of communication with the Lab School.

10. Lab School students experience the following social advantages: (1) The opportunity to interact with students with similar, unique interests, (2) The opportunity to work with students of equal or greater intellectual abilities (a student may no longer be the "top" student resulting in intellectual and emotional growth), (3) An excellent experience for students from schools with smaller numbers of identified students to meet other gifted students.

    - A disadvantage is that social benefits apparently are related specifically to the Lab School experience. As a result, the majority of principals and home-school teachers believe that students do not benefit socially from attending the Lab School.

11. The Lab School should serve students in fourth and fifth grades instead of students in fifth and sixth grades.

- Most principals said the Lab School should serve gifted fourth and fifth graders.
- Principals are of the opinion that (1) the program of gifted education for fourth graders currently is inadequate, (2) the program for fourth graders is not consistent in schools across the city, (3) sixth graders are in their first year of middle school and should remain in the home schools, and (4) a program of gifted education could be provided to sixth graders in the home schools with modifications to the middle school program.
- Only one school division contacted serves gifted sixth graders in a partial pull-out program. All others serve gifted sixth graders in full-time programs (e.g., magnet schools and centers within schools) or special courses in the middle school program.

12. Currently the home schools are not better suited to provide a program of gifted education to this age group.

- Most principals (84%) and home-school teachers (74%) agreed that under present conditions the home school is not better suited to offer a differentiated instructional program to this age group.
- Current conditions cited include (1) lack of trained staff, (2) inadequate equipment, supplies, and space, (3) inflexibility of scheduling on the middle school level, (4) insufficient numbers of gifted students in some schools, and (5) a diverse population of students with various instructional needs.
- The majority of principals indicated that they would prefer to serve gifted students (1) in the regular classroom at the home school (37%), (2) through a pull-out program at the home school (21%), or (3) "other" (5%) if these options were available.
- Home-school teachers were divided as to whether they would prefer the Lab School if other options were available.

13. Communication between the Lab School and the home schools is rare but needed regarding curriculum issues (e.g., content, field trips) and student issues (e.g., absences, grades).

- Lab School and home-school teachers expressed concern regarding the lack of communication.
- Approximately one-quarter of the principals said they have no knowledge of the instructional program at the Lab School.
- Standard midterm and final progress reports of Lab School students are sent to parents and home-school teachers for each eleven-week period of instruction. The progress reports typically focus on behavioral rather than academic assessments (see Appendix 6, page 126). Narrative reports also are prepared by each teacher at the end of the eleven-week course and vary from course to course.

- High percentages of principals and home-school teachers said they have not provided feedback to the Lab School on a routine basis.

14. Satisfaction with the Lab School is high among students, parents, and principals.
    - Satisfaction is not as great among home-school teachers. This is due to their concerns regarding the impact of the pull-out program on the regular classroom program and the lack of communication with the Lab School.
    - Most parents rated the instructional program at the Lab School "above average" or "excellent." The majority of principals rated the instructional program "average" or "above average."
    - Students interviewed generally said Lab School activities were of interest to them.
    - Students liked the hands-on activities, computer classes, working independently on "neat" projects, and working with students on the same academic level.
    - Students disliked lectures in the problem-solving class, research in the science class, some of the activities of the career education class, and (for some sixth graders) arriving late for the last class at the home school and making up work missed on Lab School day.
    - Students, parents, and principals agreed that the Lab School sufficiently challenges students.
    - Students and parents are surveyed each year during the last weeks of school to determine their satisfaction with the Lab School.

What are the major recommendations for the future of the Laboratory School for the Academically Gifted?

1. Retain the Lab School as a one-day, pull-out program.

2. Conduct a three-phase review of the **current** Lab School curriculum based on the model of the Center for Gifted Education of The College of William and Mary (see Appendix 5, page 125).
    - Review general features of the Lab School curriculum (e.g., assessment procedures).
    - Review exemplary subject-area features in the curriculum (e.g., worthiness of content).
    - Review differentiation for gifted learners in the curriculum (e.g., instructional strategies such as hypothesis testing).

3. Implement the following specific suggestions for upgrading the **current** Lab School curriculum:
    - Include assessment segments in all curriculum units.
    - Revise the process of reporting assessment results to parents and home-school teachers. Include academic (e.g., content, higher order thinking skills) as well as behavioral assessments in reports.

- Integrate the technology unit with the math and science units.
- Document in writing the goals and objectives of the Lab School curriculum.
- Provide non-content subjects such as career education where appropriate in conjunction with the four core subject areas rather than as a separate class.
- Use technology as a tool for research and presentation rather than as a subject.
- Allow enough flexibility within the Lab School curricula to ensure that students have opportunities to design some of the learning experiences during the year.
- Align the Problem Solving and Chesapeake Bay Units to state standards for math and science if the units are taught in the future.

4. Modify the process for developing **new** Lab School curricula so that teachers at the Lab School write a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
   - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.
   - Has a heavy emphasis on the four core subject areas of math, science, social studies, and English with technology serving as a tool for research and presentations.
   - Is integrated within the Lab School curriculum.
   - Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
   - Includes specific goals and objectives, exemplary content, and appropriate instructional strategies for gifted learners.
   - Follows the development process in place for the Department of Curriculum and Instruction.

   When developing new curriculum units, consider beginning with commercially prepared units which have been recommended by experts in the field of gifted education as appropriate for high-ability learners and then modify to meet the instructional goals and objectives of the Lab School.

5. Explore the possibility of offering opportunities for acceleration and independent study at the home school for students who are academically gifted. Decisions should be coordinated by principals and the Department of Curriculum and Instruction.

6. Establish a standard process for hiring Lab School teachers, including the advertising of positions, recruitment of candidates, and selection of teachers.
   - Specify qualifications for teaching gifted students as part of the criteria for teacher selection (e.g., technology standards and past experience working with gifted students).
   - Clarify the personnel policy for rotating teachers from the Lab School into the regular classroom. Consider rotating teachers no more frequently than every three years to allow for continuity in the program.

7. Require all current and new Lab School teachers to acquire the endorsement for teaching the gifted which is a minimum of 15 semester hours. The Virginia Department of Education recommends the following courses:
   - Characteristics and Identification of Gifted Students
   - Theory and Principles of Differentiating Curriculum
   - Creativity Can Be Taught
   - The Art of Teaching Thinking
   - Differentiating and Managing Instruction for the Gifted and Other Academically Diverse Learners in the Regular Classroom
   - Contemporary Issues and Research in Gifted Education
   - A required practicum

8. Explore the possibility of locating the Lab School more centrally in the school division to increase instructional time.

9. Send students in fourth and fifth grades to the Lab School rather than fifth and sixth graders. Serve students in sixth grade in the home school by restructuring the middle school schedule and providing gifted resource teachers in middle schools.

10. Establish an advisory group for the Lab School comprised of representative principals, teachers, and supervisors. The advisory group should establish guidelines to:
   - Address the productive use of academic time for both groups of students (i.e., ensure worthwhile instruction for non-identified students on Lab School day, and ensure consistent policies for Lab School students regarding making up work on Lab School day).
   - Establish effective communication between the home school and the Lab School.
     (a) Define consistent, systematic communication opportunities between the Lab School and the home school such as visitations by Lab School teachers with home-school teachers every nine weeks.
     (b) Explore the possibility of using elementary and middle school guidance counselors as the contacts in the home schools.
     (c) Review the reporting of student progress to parents and home-school teachers.

11. Provide a systematic training program on the graduate level for teachers which offers strategies for teaching gifted students in order to:
   - Meet the instructional needs of gifted students when they are in the regular classroom as well as at the Lab School.
   - Allow non-identified students to benefit from the unique instructional strategies that often are reserved for gifted students.
   - Increase the pool of teachers available for Lab School positions which will help ensure the continuation of a high-quality instructional program at the Lab School.

12. Provide staff development classes for home-school teachers in which Lab School teachers share strategies for working with gifted students.

CHESAPEAKE
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OVERALL FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

OVERALL FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This section presents the overall findings, conclusions, and recommendations from the following information sources: Interviews with Lab School Teachers, Interview with Lab School Administrator, Interviews with Students, Survey of Principals, Survey of Home-School Teachers, Survey of Parents, Information from Central Office Administrators, Review of the Lab School Curriculum, Analysis of Final Eligibility Scores for Current Students, Contacts with Other School Divisions, and Review of the Literature.

PERFORMANCE CRITERIA FOR SUCCESS: See Evaluation Proposal, page 32.

OVERALL FINDINGS: See Chart 1, pages 16 and 17.

1. **What does educational literature say about programs for the gifted in general** (see Review of the Literature, page 38)?

   - Research strongly supports providing special programs for gifted learners.
   - Researchers are divided regarding whether students are served better through inclusion (mainstreaming gifted students in the regular classroom) or ability grouping (providing special programs outside the regular classroom). The unique needs of a school division usually determine the type of gifted program offered. Ability-grouping proponents consider pull-out programs (the most widely used format for delivering gifted education and the format of the Lab School) to be appropriate.
   - Researchers report that academic achievement in programs for the gifted has been modest and that many students say they are under-challenged.
   - Researchers agree that a defensible curriculum that is educationally right for gifted students (1) should be a high quality curriculum of sufficient substance and rigor to challenge bright students, (2) should be clearly articulated with the core curriculum, and (3) should have a scope and sequence that clearly distinguishes differences between the two curricula.
   - Research uniformly supports acceleration for the gifted (defined as meeting curricular goals at a faster pace or earlier age than is typical). Independent study also is recommended but not for all students.

2. **What type of student attends the Laboratory School for the Academically Gifted?**

   - Lab School teachers consider the majority of their students to be above-average, high achievers.
   - The Lab School administrator considers the majority of students to be moderately or profoundly gifted.
   - Most principals (84%) and home-school teachers (87%) consider Lab School students to be above-average high achievers or moderately gifted.

CHART 1
SUMMARY OF FINDINGS

DATA SOURCE	What is the population of students served?	Is the Lab School curriculum coordinated with the home school?	Are there opportunities for acceleration at the Lab School? at the home school?	Are there opportunities for independent study at the Lab School? at the home school?	How is the instructional program rated?	Are Lab School students sufficiently challenged?	Is the gifted endorsement required in teacher selection?	Do Lab School students experience greater academic success?
Interviews with Lab School Teachers	Above-average, high achievers	No	Lab School: No Home School: No knowledge	Lab School: No Home School: No knowledge	*NA*	*NA*	No	Yes
Interview with Lab School Administrator	Moderately and profoundly gifted	No	Lab School: No Home School: No knowledge	Lab School: No Home School: No knowledge	*NA*	*NA*	No	Yes
Interviews with Lab School Students	*NA*	No	Lab School: No Home School: No	Lab School: No Home School: No	*NA*	Yes	*NA*	Yes
Survey of Principals*	Moderately gifted (58%)	No (53%) No knowledge (47%)	Home School: No (58%) Lab School: No knowledge	Home School: Yes (68%) Lab School: No knowledge	Average (47%) Above average (32%)	Yes (68%)	*NA*	No (63%)
Survey of Home- School Teachers*	Moderately gifted (54%) Above-avg, high achievers (33%)	No (52%) No knowledge (38%)	Home School: Divided	Home School: Divided	*NA*	*NA*	*NA*	No (56%)
Survey of Parents*	*NA*	*NA*	Home School: Divided	Home School: No (59%)	Above average (51%) Excellent (27%)	Yes (85%)	*NA*	Yes (67%)
Information from Central Office Administrators	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	No	*NA*
Review of the Lab School Curriculum by a Consultant (Center for Gifted Education, College of Wm & Mary)	*NA*	No	*NA*	*NA*	Curriculum units above average Improvements to overall curriculum suggested	*NA*	*NA*	*NA*
Analysis of Final Eligibility Scores	Students with high ability and high achievement	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Contacts with Other School Divisions	Students with high ability and high achievement	Yes	In some school divisions	*NA*	*NA*	*NA*	Yes (in most school divisions)	*NA*
Review of the Literature	Moderately gifted in most programs	Coordination with the core curriculum recommended	Highly recommended	Recommended but not for all students	Modest academic gains found in most gifted programs	Gifted students generally considered under-challenged	*NA*	Modest academic gains found in most gifted programs

*Percentages refer to percent of respondents who agree.

SUMMARY OF FINDINGS (continued)

DATA SOURCE	Can students manage the demands of the Lab School and the regular classroom?	Are Lab School students at a disadvantage because of the day missed?	Is the loss of instructional time in transporting students offset by the Lab School experiences?	Do Lab School students experience greater social success?	What is the impact of the pull-out program on the home school?	How are Lab School students grouped in the home school?	Are students, parents, teachers, and administrators satisfied with the Lab School?	Is the Lab School preferred if other options are available?	Are there obstructions to offering a differentiated curriculum in the home school?	Is your group involved in Lab School evaluations?
Interviews with Lab School Teachers	*NA*	*NA*	Yes	Yes	*NA*	*NA*	Yes	*NA*	*NA*	*NA*
Interview with Lab School Administrator	*NA*	*NA*	Yes	Yes	*NA*	*NA*	Yes	*NA*	*NA*	*NA*
Interviews with Lab School Students	Yes	No	Yes	Yes	*NA*	*NA*	Yes	*NA*	*NA*	Yes
Survey of Principals*	Yes (100%)	No (68%)	Yes (58%)	No (79%)	On non-identified students: none (79%) On classroom program: none (58%)	Randomly placed (53%) or clustered (47%)	Yes Satis (73%) Very satis (11%)	No (58%)	Yes (84%)	No (84%)
Survey of Home-School Teachers*	Yes	No (72)%	Yes (67%)	No (69%)	On non-identified students: none (54%) or positive (15%) On classroom program: divided	Randomly placed (64%)	Yes Satis (49%) Very satis (10%)	Divided	Yes (74%)	No (95%)
Survey of Parents*	Yes (96%)	No (74%)	Yes (76%)	Yes (58%)	*NA*	*NA*	Yes Satis (44%) Very satis (44%)	*NA*	*NA*	No (77%) (at time of survey)**
Information from Central Office Admins	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Review of the Lab School Curriculum by a Consultant	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	Curriculum more important than delivery model	*NA*	*NA*
Analysis of Final Eligibility Scores	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Contacts with Other School Divisions	*NA*	*NA*	*NA*	*NA*	*NA*	Varies among divisions with pull-out progs	*NA*	*NA*	Inclusion practiced in some sch divs	*NA*
Review of the Literature	Common complaint of gifted students is "boredom"	*NA*	A criticism by some who favor inclusion	Researchers divided as to impact of pull-out progs	Pull-out programs considered disruptive to regular classroom by those favoring inclusion	*NA*	Parents generally prefer pull-out programs	Researchers divided as to delivery method preferred	Researchers divided	*NA*

*Percentages refer to percent of respondents who agree.

**Opinion surveys are administered to Lab School students and parents during the last few weeks of school.

- An analysis of the final eligibility scores of a sample of Lab School students in the 1996-97 school year revealed that 98% of the students were students of high ability and high achievement (see Analysis of Final Eligibility Scores for Current Students, page 97).

3. **Is the Laboratory School for the Academically Gifted offering a differentiated curriculum that cannot be provided at the home school?**

Articulation with the core curriculum:

- Lab School teachers, the administrator, Lab School students, principals, and home-school teachers responded that the Lab School curriculum is not coordinated with the core curriculum.
- The review of the Lab School curriculum by an external consultant from the Center for Gifted Education at The College of William and Mary confirmed that the curriculum is not coordinated with the core curriculum (see Review of the Lab School Curriculum, page 93).
- Lab School teachers and the administrator indicated in interviews that teachers are encouraged not to duplicate the home-school program. Curriculum units currently focus on themes that are loosely integrated among the units, and themes selected are based on student interests.

Opportunities for acceleration:

- Students, teachers, and the administrator of the Lab School agreed that opportunities for acceleration in the core curriculum were not available at the Lab School and that opportunities for acceleration in the Lab School curriculum units were limited to allowing students to move through projects at a faster pace.
- The majority of principals (58%) and Lab School students said opportunities for acceleration in the home school were not available. Home-school teachers and parents were divided as to whether opportunities for acceleration were available in the home school.

Opportunities for independent study:

- The majority of principals (68%) said opportunities for independent study were available in the home school; home-school teachers were divided as to whether opportunities were available; the majority of parents (59%) said opportunities were not available.
- Lab School students, teachers, and the administrator said opportunities for independent study were not available at the Lab School.

How the instructional program is rated:

- A high percentage of principals rated the Lab School instructional program as average (47%) and above (32%). The remainder indicated they have no knowledge of the program.

- A high percentage of parents rated the Lab School instructional program as above average (51%) to excellent (27%).
- Most Lab School students, the majority of principals (68%), and most parents (85%) agreed that students are sufficiently challenged by the Lab School program.
- The external consultant who reviewed the curriculum indicated that individual curriculum units are above average when compared with those she has observed in other school divisions. Suggestions, however, were provided to enrich and extend the current curriculum in the short term, and a three-phase comprehensive review of the curriculum was suggested to upgrade the curriculum overall (see Review of the Lab School Curriculum, page 93, and Overall Findings, Conclusions, and Recommendations, page 28).
- In interviews, the Lab School administrator and Lab School teachers cited instructional goals of the Lab School (e.g., to develop higher level thinking skills, to promote cooperation and teamwork among students, to avoid duplication of the home-school curriculum). The external consultant noted in her review of curriculum documents, however, that overall instructional goals and objectives for the Lab School were not evident.

Providing a differentiated curriculum in the home school:

- The majority of principals (63%) and most home-school teachers (74%) said that the home school currently is not better suited to offering a differentiated curriculum for gifted students at this age level.
- The external consultant noted in her review of the curriculum that a curriculum of high quality can be delivered effectively with either an ability-grouping or inclusion model and that the one-day pull-out program at the Lab School is appropriate for this age group. The consultant also noted that a program of high quality is achieved through an established process for developing sound curriculum as well as staff development specific to teaching gifted students.

4. **How are teachers selected for the Laboratory School for the Academically Gifted, and what changes have occurred in staffing since the program began?**

- Teachers have been selected by the Personnel Department largely through recommendations by principals for outstanding teaching.
- An endorsement in teaching the gifted as recommended by the Virginia Department of Education has never been required.
- The pool of applicants for positions at the Lab School traditionally has been small. Graduate courses sponsored by Chesapeake Public Schools was suggested as a way to increase the pool of applicants for the Lab School.
- Teachers have been informed periodically of the possibility of being rotated from the Lab School into regular classrooms; rotation thus far has been voluntary.

5. **Are there academic advantages and disadvantages for the gifted student who enrolls in the Laboratory School for the Academically Gifted?**

- Lab School teachers and the administrator generally agreed on the following academic advantages:
  1. Students are exposed to wider and deeper knowledge than is available in the regular classroom especially in the area of technology.
  2. Students are exposed to higher level thinking skills.
  3. Students are motivated because of the association with other students of high ability.
  4. Students learn to work both independently and as a group member.
- The majority of parents (67%) agreed that students experience greater academic success as a result of attending the Lab School. The majority of principals (63%) and home-school teachers (56%) disagreed. Standard midterm and final progress reports are sent to parents and home-school teachers for each eleven-week class. Teachers also prepare final narrative reports which vary from course to course. Progress reports focus on behavioral rather than academic assessments.
- Most students, principals, home-school teachers, and parents agreed that students can manage the demands of the Lab School and the regular classroom.
- Principals (68%), home-school teachers (72%), parents (74%), and most Lab School students generally agreed that students are not at a disadvantage because of the day missed in the home school.
- The majority of principals (58%) and home-school teachers (67%) and a high percentage of parents (76%) said the instructional time lost in transporting students to the Lab School is offset by the Lab School experiences. Lab School teachers, the administrator, and students agreed. It was suggested by some respondents, however, that the Lab School be more centrally located within the city to increase overall instructional time.
- A high percentage of principals (74%) responded that students in fourth and fifth grades would be a more appropriate population for the Lab School than students in fifth and sixth grades. Comments of some principals and teachers reflected the opinions that (1) sixth graders are in their first year of middle school and should remain in the home schools, (2) with some alterations the middle school program could accommodate the needs of gifted sixth-grade students, and (3) the program of gifted education for fourth-grade students is inadequate and inconsistent across the city.

6. **Are there social advantages and disadvantages for the gifted student who enrolls in the Laboratory School for the Academically Gifted?**

- Lab School teachers and the administrator indicated that students who attend the Lab School benefit socially from the opportunity to interact with students who

have similar, unique interests and who have equal or greater intellect (especially students from schools where the number of identified students is small).

- The majority of parents (58%) agreed that students experience social success as a result of attending the Lab School. High percentages of principals (79%) and the majority of home-school teachers (69%) disagreed.

7. **How does this pull-out program impact the instructional program in the home school?**

Impact on non-identified students:

- A high percentage of principals (73%) indicated that the pull-out program has no impact on non-identified students who remain in the regular classroom.
- The majority of home-school teachers said the pull-out program has no impact on non-identified students who remain in the classroom (54%) or the impact is positive (15%).

Impact on the regular classroom program:

- Home-school teachers were divided as to the impact of the pull-out program on their classroom programs (e.g., pacing of instruction and classroom cohesiveness). Fifty-one percent (51%) said the impact was negative.
- Comments of home-school teachers reflect the concerns of some teachers regarding requirements to keep home-school activities "on hold" on Lab School day.
- Both home-school and Lab School teachers expressed concern about the lack of communication between the home school and Lab School.

Impact on the grade-level program:

- The majority of principals (58%) said the pull-out program has no impact on the grade-level program in the home school.

How gifted students are grouped in the home schools:

- According to principals, approximately half the home schools randomly place Lab School students in classrooms in the grade level, and approximately half cluster Lab School students in classrooms.
- The majority of home-school teachers (64%) indicated that Lab School students are randomly placed in classrooms in the grade level.

8. **What is the overall level of satisfaction among students, parents, teachers, and administrators with the Laboratory School for the Academically Gifted?**

- High percentages of principals (84%), parents (88%), the majority of home-school teachers (59%), and most students are satisfied or very satisfied with the Lab School.

- Students interviewed also said Lab School activities were generally of interest to them. Students liked the hands-on activities, computer classes, working independently on "neat" projects, and working with students on the same academic level. Students disliked lectures in the problem-solving class, research in the science class, and some of the activities of the career education class. Some sixth-grade students disliked arriving late for the last class at the home school and making up work missed at the home school on Lab School day.

9. **Are there other more appropriate interventions for serving academically gifted fifth- and sixth-grade students, including interventions that could be offered in the home school?**

- The majority of principals said they would prefer other options for serving their gifted students if they were available.
  1. Approximately one-third of principals (37%) would prefer a differentiated instructional plan provided in the regular classroom.
  2. Twenty-one percent (21%) would prefer a pull-out program in the home school which provides a differentiated instructional plan.
  3. Five percent (5%) would prefer "other" plans.
- Home-school teachers were divided as to whether they would prefer other options if they were available.
- High percentages of principals (84%) and home-school teachers (74%) agreed that under current conditions the home school is not better suited to offer a differentiated instructional program. Conditions cited were lack of trained staff; inadequate equipment, supplies, and space; inflexibility of scheduling on the middle school level; insufficient numbers of gifted students in some schools; and a diverse population of students with various instructional needs.

10. **How does the cost of serving a student in the Laboratory School for the Academically Gifted compare with the cost of serving an age peer in the regular classroom?**

- The budgeted per pupil cost for all students in the 1996-97 school year was $5,509. The additional budgeted cost for a Lab School student was $999 (see Information from Central Office Administrators, pages 102-104).
- Six teachers served 407 students in the 1996-97 school year for a weekly student/teacher ratio of 68:1.

11. **How are gifted fifth- and sixth-grade students served in other school divisions in the region?**

- Six of the eight school divisions contacted have partial pull-out programs similar

to the Lab School program to serve gifted fifth-grade students. Only one school division contacted serves gifted sixth-grade students in a partial pull-out program. The other school divisions serve gifted sixth graders through full-time programs (e.g., magnet schools, centers within schools) or special courses in the middle school program.

- The gifted curriculum is articulated with the core curriculum in seven of the eight school divisions contacted. Only Chesapeake and Suffolk do not have the gifted curriculum articulated with the core curriculum.
- All school divisions except Chesapeake require teachers in the pull-out programs for the gifted to have an endorsement in teaching the gifted as recommended by the Virginia Department of Education.

12. **How are the programs at the Laboratory School for the Academically Gifted evaluated?**
    - The Lab School administrator indicated that surveys are provided each year to current students and parents during the last few weeks of school.
    - Most Lab School students interviewed said they had recently completed surveys which asked for their opinions about the Lab School.
    - High percentages of principals (84%) and home-school teachers (95%) said they have not been involved in evaluations of the Lab School.
    - A high percentage of parents of current students (77%) said they had not been involved in evaluations of the Lab School when surveyed in April 1997.

OVERALL CONCLUSIONS:

The following conclusions are based on an analysis of the results from all of the data collection activities of the evaluation.

What does educational literature say about programs for the gifted in general?

1. Educational literature supports one-day, pull-out programs such as the Laboratory School for the Academically Gifted (Lab School) for this age group.
2. Educational researchers recommend a curriculum of high quality which is articulated with the core curriculum and modified to meet the needs of gifted students.

What type of student attends the Laboratory School for the Academically Gifted?

3. Most students who attend the Lab School are students of high ability and high achievement.

Is the Laboratory School for the Academically Gifted offering a differentiated curriculum that cannot be provided at the home school?

4. Based on the review of the Lab School curriculum units by the external consultant from the Center for Gifted Education at The College of William and Mary:
   - The individual Lab School curriculum units are above average when compared to those of other school divisions.
   - The Lab School curriculum is not coordinated with the core curriculum. (This has resulted in part because Lab School teachers, who along with Lab School students confirmed the lack of coordination, have been encouraged not to duplicate the home-school program).
   - Overall instructional goals and objectives for the Lab School curriculum are not documented fully in writing.
   - The overall Lab School curriculum should be upgraded through a comprehensive three-phase assessment of the span and ordering of skill development in the Lab School curriculum (i.e., a review of general features, a review of exemplary subject-area features, and a review of differentiation for gifted learners in the curriculum).
   - The Lab School is an appropriate model for delivering gifted education to this age group as long as the instructional program is of high quality.

5. Opportunities for acceleration (i.e., developing some concepts and skills at an earlier age than in the general curriculum) are limited in both the Lab School and the home school.

6. Opportunities for independent study are limited in both the Lab School and the home school.

7. Most parents rate the quality of the instructional program at the Lab School "above average to excellent." The majority of principals rate the program as "average to above average."

8. Based on the responses of Lab School students, their parents, and principals, most students are sufficiently challenged by the Lab School program.

9 According to principals and home-school teachers, the home school currently is not better suited to offer a differentiated curriculum for gifted students.

How are teachers selected for the Laboratory School for the Academically Gifted, and what changes have occurred in staffing since the program began?

10. The teacher selection process for the Lab School is not standardized with regard to the advertising of positions, recruitment of candidates, and selection of teachers.
    - Criteria related to qualifications for teaching gifted students (e.g., ability to create

and implement a differentiated instructional plan, an endorsement to teach the gifted) have not been specified.

- The informal system of rotating teachers between the Lab School and regular classrooms results in uncertainty on the part of Lab School teachers each year.

Are there academic advantages and disadvantages for the gifted student who enrolls in the Laboratory School for the Academically Gifted?

11. Students who attend the Lab School experience the following academic advantages:
    - A widening and deepening of the knowledge acquired in the regular classroom
    - Exposure to higher level skills such as critical thinking, creative thinking, problem solving, research, and decision making
    - The academic motivation that results from working with all high-ability students
    - Exposure to technology training that would not be possible in the home school
    - Opportunities to learn both independently and as a group member.

    A disadvantage is that the lack of coordination between the Lab School curriculum and the core curriculum appears to limit the carryover of academic advantages to the home school. As a result, principals and home-school teachers perceive that students do not experience academic advantages as a result of attending the Lab School. In addition, progress reports typically focus on behavioral rather than academic assessments which may contribute to their perception that there are no academic advantages.

12. Most Lab School students are able to manage the demands of the Lab School and the regular classroom.

13. Most students are not at an academic disadvantage in the home school because of the day missed.

14. Based on the responses of all groups, the loss of instructional time in transporting students to the Lab School is offset by the Lab School experiences. Locating the Lab School more centrally within the city, however, would increase the amount of instructional time available.

15. According to principals, the Lab School should serve gifted fourth and fifth graders rather than fifth and sixth graders, and a program of gifted education could be offered to sixth graders in the middle schools.

Are there social advantages and disadvantages for the gifted student who enrolls in the Laboratory School for the Academically Gifted?

16. Students who attend the Lab School experience the following social advantages:
    - The opportunity to interact with students with similar, unique interests

- The opportunity to work with students of equal or greater intellectual abilities (a student may no longer be the "top" student resulting in intellectual and emotional growth)
- An excellent experience for students from schools with smaller numbers of identified students to meet other gifted students

A disadvantage is that social benefits apparently are related specifically to the Lab School experience. As a result, the majority of principals and home-school teachers believe students do not benefit socially from attending the Lab School.

How does this pull-out program impact the instructional program in the home school?

17. According to principals and home-school teachers, removing gifted students from the regular classroom to attend the Lab School one day each week has no impact or a positive impact on the academic progress of non-identified students.

18. According to the majority of principals, removing gifted students from the regular classroom to attend the Lab School one day each week has no impact on the grade-level program at the home school.

19. Home-school teachers are divided as to the impact of removing students from the regular classroom to attend the Lab School. Half of the teachers view the impact as negative due to their concerns regarding requirements to keep home-school activities "on hold" on Lab School day and the lack of communication with the Lab School.

20. Gifted students are clustered in several classrooms in the grade level in about half the home schools and placed randomly in classrooms across the grade level in the other half.

What is the overall level of satisfaction among students, parents, teachers, and administrators with the Laboratory School for the Academically Gifted?

21. Satisfaction with the Lab School is high among students, parents, and principals. Satisfaction is not as great among home school teachers apparently due to concerns about the impact of the pull-out program on classroom activities in the home school and the lack of communication with the Lab School.

Are there other more appropriate interventions for serving academically gifted fifth- and sixth-grade students, including interventions that could be offered in the home school?

22. The majority of principals would prefer to serve gifted students in the regular classroom (37%) or through a pull-out program in the home school (21%) rather than the Lab School if other options were available. Home-school teachers, however, are divided as to whether they would prefer the Lab School or other options if they were available.

23. According to principals and home-school teachers, the home schools are not better suited to offer a curriculum of gifted education for fifth- and sixth-grade students under current conditions. Conditions cited include the following:
    - Lack of teachers trained in education for the gifted
    - Lack of monetary resources for materials and supplies
    - Lack of appropriate equipment for higher level projects
    - Space restrictions
    - Inflexibility of scheduling to accommodate differentiated programs for students in the sixth grade
    - Insufficient numbers of students to justify differentiated instruction
    - A diverse population of students with a variety of instructional needs

How does the cost of serving a student in the Laboratory School for the Academically Gifted compare with the cost of serving an age peer in the regular classroom?

24. The cost of enrolling a student in the Lab School exceeds the cost of enrolling a fifth-grade or sixth-grade student in the regular program by approximately $1,000. Four hundred and seven students are served by six full-time teachers (68 students per teacher per week) making the one-day, pull-out program cost effective.

How are gifted fifth- and sixth-grade students served in other school divisions in the region?

25. Most of the school divisions contacted serve gifted fifth graders in programs similar to the Lab School. Only one school division besides Chesapeake serves gifted sixth graders in a partial pull-out program. The other school divisions serve gifted sixth graders in full-time programs (e.g., magnet schools or centers within a school) or special courses in the middle school program.

How are programs at the Laboratory School for the Academically Gifted evaluated?

26. Lab School students and parents are surveyed at the end of each year regarding their opinions of the Lab School

27. Feedback has not been requested from principals or home-school teachers on a routine basis.

28. Communication between Lab School teachers and the home schools is rare but needed regarding curriculum issues (e.g., content, field trips) and student issues (e.g., absences, grades).
    - Lab School and home-school teachers expressed concern regarding the lack of communication.
    - Midterm and final progress reports of Lab School students are sent to parents and

home-school teachers for each eleven-week period of instruction. Progress reports typically focus on behavioral rather than academic assessments.

OVERALL RECOMMENDATIONS:

The following recommendations are based on a comparison of the findings and conclusions of the evaluation with the performance criteria for success established in the Program Evaluation Proposal.

1. Retain the Lab School as a one-day pull-out program.

2. Conduct a three-phase review of the **current** Lab School curriculum based on the model of the Center for Gifted Education of The College of William and Mary (see Appendix 5, page 125) .
   - Review general features of the Lab School curriculum (e.g., assessment procedures).
   - Review exemplary subject-area features in the curriculum (e.g., worthiness of content).
   - Review differentiation for gifted learners in the curriculum (e.g., instructional strategies such as hypothesis testing).

3. Implement the following specific suggestions for upgrading the **current** Lab School curriculum:
   - Include assessment segments in all curriculum units.
   - Revise the process of reporting assessment results to parents and home-school teachers. Include academic (e.g., content, higher order thinking skills) as well as behavioral assessments in reports.
   - Integrate the technology unit with the math and science units.
   - Document in writing the goals and objectives of the Lab School curriculum.
   - Provide non-content subjects such as career education where appropriate in conjunction with the four core subject areas rather than as a separate class.
   - Use technology as a tool for research and presentation rather than as a subject.
   - Allow enough flexibility within the Lab School curricula to ensure that students have opportunities to design some of the learning experiences during the year.
   - Align the Problem Solving and Chesapeake Bay Units to state standards for math and science if the units are taught in the future.

4. Modify the process for developing **new** Lab School curricula so that teachers at the Lab School prepare a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
   - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.

- Has a heavy emphasis on the four core subject areas of math, science, social studies, and English with technology serving as a tool for research and presentations.
- Is integrated within the Lab School curriculum.
- Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
- Includes goals and objectives, exemplary content, and appropriate instructional strategies for gifted learners.
- Follows the development process in place for the Department of Curriculum and Instruction.

When developing new curriculum units, consider beginning with commercially prepared units which have been recommended by experts in the field of gifted education as appropriate for high ability learners and then modify to meet the instructional goals and objectives of the Lab School.

5. Explore the possibility of offering opportunities for acceleration and independent study at the home school for students who are academically gifted. Decisions should be coordinated by principals and the Department of Curriculum and Instruction.

6. Establish a standard process for hiring Lab School teachers, including the advertising of positions, recruitment of candidates, and selection of teachers.
   - Specify qualifications for teaching gifted students as part of the criteria for teacher selection (e.g., technology standards and past experience working with gifted students).
   - Clarify the personnel policy for rotating teachers from the Lab School into the regular classroom. Consider rotating teachers no more frequently than every three years to allow for continuity in the program.

7. Require all current and new Lab School teachers to acquire the endorsement for teaching the gifted which is a minimum of 15 semester hours. The Virginia Department of Education recommends the following courses:
   - Characteristics and Identification of Gifted Students
   - Theory and Principles of Differentiating Curriculum
   - Creativity Can Be Taught
   - The Art of Teaching Thinking
   - Differentiating and Managing Instruction for the Gifted and Other Academically Diverse Learners in the Regular Classroom
   - Contemporary Issues and Research in Gifted Education
   - A required practicum

8. Explore the possibility of locating the Lab School more centrally in the school division to increase instructional time (currently four hours per day).

9. Send students in fourth and fifth grades to the Lab School rather than fifth and sixth graders. Serve students in sixth grade in the home schools by restructuring the middle school schedule and providing gifted resource teachers in middle schools.

10. Establish an advisory group for the Lab School comprised of representative principals, teachers, and supervisors to serve for a three-year term. The advisory group should establish guidelines as follows:
    - Address the productive use of academic time for both groups of students (i.e., ensure worthwhile instruction for non-identified students on Lab School day and consistent policies for Lab School students regarding making up work on Lab School day)
    - Establish effective communication between the home school and the Lab School
        (a) Define consistent, systematic communication opportunities between the Lab School and the home school such as visitations by Lab School teachers with home-school teachers every nine weeks.
        (b) Explore the possibility of using the elementary and middle school guidance counselors as the contacts in the home schools.
        (c) Review the reporting of student progress to parents and home-school teachers.

11. Provide a systematic training program on the graduate level for teachers which offers strategies for teaching gifted students in order to:
    - Meet the instructional needs of gifted students when they are in the regular classroom as well as at the Lab School.
    - Allow non-identified students to benefit from the unique instructional strategies that often are reserved for gifted students.
    - Increase the pool of teachers available for Lab School positions which will help ensure the continuation of a high quality instructional program at the Lab School.

12. Provide staff development classes for home-school teachers in which Lab School teachers share strategies for working with gifted students.

CHESAPEAKE PUBLIC SCHOOLS

EVALUATION PROPOSAL

PROGRAM EVALUATION PROPOSAL
CHESAPEAKE PUBLIC SCHOOLS

PROJECT: Laboratory School for the Academically Gifted
ADMINISTRATOR: Larry Short, Director of Elementary Education

PROJECT PROFILE:

DESCRIPTION:

The Laboratory School for the Academically Gifted (Lab School) is a special program for students in grades five and six who have been identified as having superior intellectual aptitude. The program is designed to offer differentiated instruction (a modification of the instruction offered to unidentified age peers) that is organized in units of study which stress investigation, cooperative problem solving, and higher order thinking skills. A student attends the Lab School one day each week to receive instruction in mathematics, applied science, writing, computer education/applications, and humanities.

In the 1996-97 school year (as of September 30), 407 students attend the Lab School. The Lab School serves students Monday through Friday every week during the school year, but each student attends only one day per week. Six teachers in teams of two instruct approximately 81 students each day for an average student/teacher ratio of 14:1.

Potential students for the Lab School are identified through formal schoolwide screening in third grade. The formal screening process uses multiple criteria measuring achievement, ability, and performance to identify gifted students. Final eligibility for placement is determined by the Identification/Placement Committee which is comprised of classroom teachers, resource teachers for the gifted, principals, and the coordinator of the gifted program. Enrollment of a student in the Lab School is contingent upon the permission of the parent.

GROUP SERVED: Students in the fifth and sixth grades who have been identified as academically gifted

GOALS AND OBJECTIVES:

To provide academically gifted students in grades five and six with a differentiated curriculum that is not available in the home school

EVALUATION METHODOLOGY:

RESEARCH QUESTIONS:

1. What does educational literature say about programs for the gifted in general?
2. What type of student attends the Laboratory School for the Academically Gifted?

3. Is the Laboratory School for the Academically Gifted offering a differentiated curriculum that cannot be provided at the home schools?
4. (a) How are teachers selected for the Lab School, and (b) what changes have occurred in staffing since the program began?
5. Are there academic advantages and disadvantages for the gifted student who enrolls in the Lab School?
6. Are there social advantages and disadvantages for the gifted student who enrolls in the Lab School?
7. How does this pull-out program impact the instructional program in the home school?
8. What is the overall level of satisfaction among students, parents, teachers, and administrators with the Laboratory School for the Academically Gifted?
9. Are there other more appropriate interventions for serving academically gifted fifth- and sixth-grade students, including interventions that could be offered in the home school?
10. How does the cost of serving a student in the Lab School compare with the cost of serving an age peer in the regular classroom?
11. How are fifth- and sixth-grade gifted students served in other school divisions in the region?
12. How are the programs at the Laboratory School for the Academically Gifted evaluated?

PERFORMANCE CRITERIA FOR SUCCESS:

1. The review of the Literature indicates that programs similar to the Lab School are appropriate for serving 5th- and 6th-grade gifted students.
2. (a) Ninety-five percent (95%) of a sample of Lab School students from the 1996-97 school year exhibit high ability and high achievement as evidenced by a score of 18 or above on the eligibility matrix.
   (b) Seventy-five percent (75%) of home-school teachers and principals surveyed, Lab School teachers interviewed, and the administrator of the Lab School indicate that Lab School students exhibit high ability and high achievement.
3. The Lab School provides a differentiated instructional plan documented in writing that
   - is clearly articulated with the core curriculum to provide long-range, rigorous, trial-and-error based study
   - focuses on thinking processes and not merely the acquisition of information
   - provides opportunities for independent study and acceleration
   - provides evidence of unique instructional strategies
   - exposes students to knowledge they would not learn in the regular classroom
4. Teacher selection is based on (a) a teacher's demonstrated ability to create and

implement a differentiated instructional plan and (b) formal training in the teaching of the gifted.

5. (a) Seventy-five percent (75%) of parents, home-school teachers, and principals surveyed indicate that students experience academic advantages at the Lab School that would be unavailable at the home school.
   (b) Students interviewed indicate that they experience academic advantages at the Lab School that would be unavailable at the home school.
6. (a) Seventy-five percent (75%) of parents, home-school teachers, and principals surveyed indicate that students experience social advantages at the Lab School that would be unavailable at the home school.
   (b) Students interviewed indicate that they experience social advantages at the Lab School that would be unavailable at the home school.
7. (a) Seventy-five percent (75%) of parents, home-school teachers, and principals indicate that the pull-out program does not negatively impact the classroom in the home school.
   (b) Students interviewed indicate that the pull-out program does not negatively impact the classroom in the home school.
8. (a) Seventy-five percent (75%) of parents, home-school teachers, and administrators surveyed express overall satisfaction with the Lab School.
   (b) Students, Lab School teachers, and the administrator interviewed express overall satisfaction with the Lab School.
9. There are no other more appropriate interventions for serving academically gifted fifth- and sixth-grade students.
10. The cost of enrolling a student in the Lab School exceeds the cost of enrolling a fifth- or sixth-grade student in the regular program.
11. Fifth- and sixth-grade gifted students are served in similar programs in other school divisions in the region.
12. Evaluation processes are in place that include: student achievement, student and parent opinion, and advisory group evaluation.

DATA AND METHODS OF COLLECTION:

1. A review of the literature will be conducted.
2. Data regarding population served will be collected from
   - Interviews with Lab School teachers
   - Survey of home-school teachers
   - Survey of elementary principals whose students attend the Lab School
   - Interview with the administrator from the Lab School
   - Analysis of final eligibility scores for current students (1996-97)
3. Data regarding the Lab School curriculum will be collected from
   - Internal and external reviews of Lab School curriculum documents
   - Interviews with students currently attending the Lab School
   - Survey of parents of current students of the Lab School
   - Interviews with Lab School teachers

- Survey of elementary principals whose students attend the Lab School
- Survey of home-school teachers
- Interview with the administrator from the Lab School

4. Data regarding teacher selection and changes in staffing patterns since the program's inception will be collected from
   - Interviews with central office administrators including the Director of Personnel
   - Interview with the administrator from the Lab School
   - Interviews with Lab School teachers
5. Data regarding academic advantages and disadvantages of enrollment in the Lab School will be collected from
   - Survey of parents of current students of the Lab School
   - Survey of home-school teachers
   - Survey of elementary principals whose students attend the Lab School
   - Interviews with students currently attending the Lab School
   - Interviews with Lab School teachers
   - Interview with the administrator from the Lab School
6. Data regarding social advantages and disadvantages of enrollment in the Lab School will be collected from
   - Survey of parents of current students of the Lab School
   - Survey of home-school teachers
   - Survey of elementary principals whose students attend the Lab School
   - Interviews with students currently attending the Lab School
   - Interviews with Lab School teachers
   - Interview with the administrator from the Lab School
7. Data regarding impact of the pull-out program on the instructional program in the home school will be collected from
   - Survey of parents of current students of the Lab School
   - Survey of home-school teachers
   - Survey of elementary principals whose students attend the Lab School
   - Interviews with students currently attending the Lab School
8. Data regarding overall level of satisfaction with the Lab School will be collected from
   - Survey of parents of current students of the Lab School
   - Survey of home-school teachers
   - Survey of elementary principals whose students attend the Lab School
   - Interviews with students currently attending the Lab School
   - Interviews with Lab School teachers
   - Interview with the administrator from the Lab School
9. Data as to other appropriate interventions for serving academically gifted fifth- and sixth-grade students will be collected from best practices in the literature, surveys of principals and home-school teachers, and from appropriate central office staff.

10. Data related to the cost of serving students in the Lab School will be collected from the Director of Budget and Director of Transportation.
11. Administrators of programs for the gifted in other school divisions will be contacted by telephone to determine how their fifth- and sixth-grade gifted students are served.
12. Data related to internal evaluation activities will be collected from .
    - Interviews with current students of the Lab School
    - Survey of parents of current students of the Lab School
    - Interviews with Lab School teachers
    - Survey of elementary principals whose students attend the Lab School
    - Interview with the administrator from the Lab School
    - Lab School evaluation reports

ANALYSIS PROCEDURES:

1. Apply performance criteria once data is collected.
2. Perform a cost-benefit analysis based on collected data.

TIME LINE OF EVALUATION ACTIVITIES

Interview Project Personnel Document Goals and Objectives Review Literature	March 1997
Establish Research Questions/Objectives and Performance Criteria	April 1997
Collect Data Analyze Data and Answer Research Questions Compare Performance with Criteria for Success	May 1997
Report Findings and Recommendations	August 1997
Implement Recommendations	1997-98

Wanda Bertram
TEAM LEADER

A. Lacy Short
ADMINISTRATOR

May 30, 1997
DATE

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

REVIEW OF THE LITERATURE

REVIEW OF THE LITERATURE

INTRODUCTION

The need for educational services which develop the gifts of our brightest children has been supported by research for nearly a century (Cooper 1995). Early programs for the gifted in the United States concentrated largely on developing the potential of gifted secondary students. For years New York City, for example, designated high schools dedicated to the arts, music, or science. In 1962 California became the first state to mandate identification of all gifted students. Over time adjustments have been made in the gifted movement in terms of the population of students served, curricula, and teaching techniques. Today the basic foundations of education for the gifted are in place for all schools to nurture the talents of the brightest students in a wide range of programs. Additionally, programs that prove beneficial for the gifted often make their way into the curriculum for all. The specialty of education for the gifted, with its tremendous demands for change, has been instrumental in improving education in general (Meeker 1992).

Current debate among educators regarding the education of gifted children focuses largely on the format for delivering instructional services to this group. Researchers generally agree that differentiated instruction, which refers to the modification of courses of study to respond to the needs of exceptional learners, is essential (Borland 1989). The major issue is whether gifted students (and the educational community in general) are better served through ability grouping or inclusion. Ability grouping usually refers to providing special programs outside the regular classroom for gifted students. Inclusion, on the other hand, is the mainstreaming of gifted children in classrooms where students of varying abilities work on projects according to their individual points of interest, talent, and readiness (Tomlinson 1995). The most widely used approach to serving the gifted, the use of pull-out programs, represents one type of ability grouping. Gifted students are pulled from the regular classroom and ability grouped for special instruction for periods of time which vary from program to program. The students are mainstreamed in the heterogeneous classroom the remainder of the time but do not necessarily receive differentiated instruction in the regular classroom (Borland 1989).

A related issue of concern to many researchers is the effects of decisions for gifted students on non-identified students. For instance, even strong proponents of education for the gifted have admitted that they ponder the logic, and even the ethics, of offering to a select group of students activities which most children would enjoy and likely succeed at (Borland 1989). Another concern for some researchers is that the majority of students currently identified for most programs for the gifted are moderately gifted students who could be served as well in the regular classroom if rigorous educational standards were in place. They advocate applying resources only to programs for profoundly gifted students who frequently remain underchallenged even in special programs for the gifted (Winner 1996). Surrounding the ability-grouping/inclusion debate, therefore, are related philosophical issues which significantly impact the education of students--gifted or not.

WHAT IS THE CHESAPEAKE PROGRAM FOR THE GIFTED?

Program

The Virginia Department of Education provides a plan for the development of effective program services for the gifted in the commonwealth (The Virginia Plan for the Gifted 1996). Each school division devises a plan within the guidelines of the Virginia Plan for the Gifted for approval at the state level. The program for the gifted offered through Chesapeake Public Schools is in compliance with the Virginia Plan for the Gifted. Chesapeake presently combines the practices of ability grouping and inclusion to deliver differentiated instruction to students in grades K-12. The Virginia Department of Education provides funds to support Chesapeake's program for the gifted.

All children in kindergarten through third grade participate in the Primary Enrichment Program, a curriculum designed to give children experiences in problem-solving and higher order thinking skills prior to the formal identification process at the end of third grade. In grade 4 identified gifted students participate in a specialized program designed to prepare them for the activities offered in the fifth- and sixth-grade curricula at the Laboratory School for the Academically Gifted (Lab School). In addition to the elementary curriculum for the gifted which emphasizes analytical and scientific research skills, students may also be accelerated in the subject areas for which they demonstrate special interest/talents. Alternative instructional materials and enrichment programs such as Accelerated Reader and Odyssey of the Mind are also available for elementary gifted learners.

In grades five and six, Chesapeake students attend the Laboratory School for the Academically Gifted, also known as the Lab School, which is the focus of this evaluation. One day each week identified students attend the Lab School where they are assigned to a team of two teachers. Cooperative problem-solving and higher order thinking skills are applied in the areas of mathematics, applied science, writing, computer education and applications, and humanities. These students also are given the opportunity to audition for the orchestra, band, or chorus programs in their home schools.

Middle school students identified as gifted may accelerate in honors level courses including English, math, science, and social studies. Students in grades 9-12 may enroll in honors and advanced placement (AP) classes in academic, visual and performing arts, technical arts, and dual enrollment classes. Students who are gifted in the category of Visual and Performing Arts may apply to the Regional Governor's School for the Arts.

An extensive summer school program for gifted students is also offered at each grade level.

Selection Process

Screening to identify a pool of candidates for the program for the gifted in Chesapeake is a continuous process in grades K-3 with the identification-through-instruction model. In this model, differentiated instruction is provided to students whose performance in the regular classroom identifies them as exceptional learners. Formal schoolwide screening occurs in third grade at which

time students with superior achievement, ability, and classroom performance are selected to be evaluated for placement in the Lab School.

A team approach is used to determine ultimate eligibility and placement of students in the Lab School. Serving on the Identification/Placement Committee are classroom teachers, resource teachers for the gifted, principals, and the supervisor of the Lab School who review data related to each student. A total score for each student is derived from weighted scores in the areas of achievement, ability, and classroom performance and is reviewed by the team to determine eligibility. Enrollment in the Lab School program is contingent upon the written permission of the parent, and a process for appeal is available to a parent whose child is not selected to attend the Lab School. The process for appeal includes a review of the child's eligibility documentation and the eligibility criteria with the parent by a committee of individuals not on the original Identification/Placement Committee (Local Plan for the Education of Gifted Students 1996-97).

WHAT DOES EDUCATIONAL LITERATURE SAY ABOUT PROGRAMS FOR THE GIFTED?

Research in general strongly supports providing differentiated instruction to gifted children. Public Law 100-297 (1988) defines the gifted as

> ".....children and youth who give evidence of high performance capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and **who require services or activities not ordinarily provided by the school** in order to fully develop such capabilities (PL 100-297 (1988), Sec. 4103 Definitions)."

Differentiated instruction is defined as a course of study for gifted students that is in some manner different from the one to which non-identified students are exposed. When effective, differentiated instruction possesses the following characteristics:

(1) knowledge is highly specialized and tied to real-world problems with students conducting bona fide research
(2) students produce rather than simply consume knowledge
(3) the teacher is a manager who assists with locating specialized resources, a guide who asks tough questions to assist in discovery, and a broker who helps the student identify audiences who share the level of interest and knowledge about the topic (Cooper 1995).

The point at which researchers currently diverge in their opinions is in deciding whether differentiated instruction should be offered to the gifted in special programs in which students are homogeneously grouped (i.e., ability grouping) or in the regular classroom (i.e., inclusion).

Ability-Grouping Advocates

Educators who support ability grouping cite evidence that gifted students achieve more in a

homogeneous setting than equally gifted children in a mixed-ability classroom (Winner 1996). They express concern that the needs of the gifted cannot be met in the regular classroom.

Specifically, educators in favor of ability grouping fear that mainstreaming the gifted will encourage the abandonment of differentiated programs, devalue individual differences, and generally diminish the quality of education for the gifted. Cooperative learning, one of the major strategies of inclusion, has come under attack in particular because ability-grouping advocates say the technique simply turns advanced students into tutors of the less advanced (Sapon-Shevin 1994). They emphasize that the commonly held belief that gifted students serve as role models for their classmates is really a myth, citing research that says the more alike role models and observers are, the greater the chance the model will influence the observer (Tolley 1991).

Ability grouping in full-time classes for the gifted appears to be limited to a few school districts. Providing pull-out enrichment classes is the most common approach for serving the gifted at the elementary school level and is a limited type of ability grouping. Identified students (frequently those who score 130 or more on an IQ test) typically leave their classrooms once or twice a week for classrooms in which they are homogeneously grouped. Gifted students are mainstreamed with their non-identified peers the remainder of each week but may or may not receive differentiated instruction while in the regular classroom. Research regarding pull-out enrichment programs has revealed modest benefits to students because of the limited amount of advanced instruction provided. Some researchers contend that the project-based learning available in enrichment classes is more or less indistinguishable from good classes for ordinary children and probably would benefit students of any ability level (Winner 1996).

Inclusion Advocates

Educators who oppose ability grouping generally recommend inclusion instead. Variously referred to as detracking, mainstreaming, and untracking, inclusion refers to the practice of serving gifted students in the regular heterogeneous classroom. Ability grouping, these researchers say, breeds elitism because a limited number of students are targeted for special services that could probably benefit every student. They prefer a process for identification of the gifted which recognizes the overlap of intellectual ability, creativity, and task commitment rather than the traditional approaches which identify only a few students (Cooper 1995).

Inclusion enthusiasts oppose pull-out programs for gifted children which they view as disruptive to classroom cohesiveness. Removing children, they say, discourages the accepting of and open communication about individual differences and makes promoting multicultural education more difficult. They also contend that when students leave, it sends the message, "if you are different, then you have to leave," and that the coming and going from classes for the gifted disrupts the classroom flow (Sapon-Shevin 1994).

Inclusion, however, is a complex challenge for public schools and involves more than the simple regrouping of students (Lynn and Wheelock 1997). Not only does it require a holistic approach to change which involves the philosophy, curriculum, teaching strategies, and structural organization

of the school (Sapon-Shevin 1995), inclusion is a political as well as educational issue. Parents of the gifted, who often are influential and articulate, are usually supportive of the concept of ability grouping (Lynn and Wheelock 1997).

Inclusion as a vision probably is shared by most educators of the gifted. The real world experiences of many, however, collide head-on with the vision (Tomlinson 1995). They are quick to remind others that (1) special programs exist because exceptional learners' needs were not being addressed in the regular classroom, (2) reform has done little to improve regular classroom conditions that impede differentiated instruction (e.g., large class sizes, lack of teacher training in multi-intelligent curricula, and a tendency by teachers to accommodate struggling learners first), (3) there has been a lack of emphasis on equity and quality of educational opportunity for advanced learners, and (4) inclusion for special education students who have been the primary target of inclusion efforts is far from unanimously positive (Tomlinson 1995).

The educators of the gifted who champion the practice of inclusion emphasize that unless inclusion is treated as a process rather than a singular event, it likely will not be successful. They maintain that the effort involved to achieve inclusion is worthwhile. When the curriculum for gifted education is successfully integrated into the total school curriculum, they say, the entire school achieves a high level of excellence (Cooper 1995).

A Defensible Curriculum

Whatever the format for delivery, the field of education for the gifted derives from the need to provide gifted students with a modified curriculum (Borland 1989). Educators of the gifted agree that of major concern is making the different curriculum educationally right for gifted students. An "educationally right" curriculum allows every bright student to commit to long-range, rigorous, trial-and-error based study that could potentially contribute to knowledge in a field (Cooper 1995). Yet, gifted students frequently say that they are not sufficiently challenged, and the resulting behavior ranges from underachievement and general lack of motivation to hostility. These reactions often are the result of their being required to produce greater quantities of the same kind of assignment which gifted students find repetitive and punishing. (Tolley 1991). In addition, achievement has been shown to be greater in special programs for the gifted than in the regular classroom, but benefits are described in the literature as modest at best (Winner 1996).

Researchers agree that whether gifted students are served in special programs or the regular classroom, a curriculum of substance and rigor should be provided. They say that such a curriculum will (1) distinguish what gifted students should learn from what is offered in the mainstream, (2) have a scope and sequence that organizes the knowledge and provides a framework for instruction (e.g., Bloom's Taxonomy), and (3) be articulated with the core curriculum. Once these three fundamental requirements are met, a defensible curriculum should focus on thinking processes which produce knowledge and should provide appropriate, meaningful content which differs from program to program but which ideally is related to learning that already is established and valued within the school division. Opportunities also should be provided, where appropriate, for independent study and for acceleration. Educators of the gifted emphasize, however, that not all gifted students are

capable of independent study and recommend this approach alongside other instructional techniques (Borland 1989).

Acceleration Strategies

Of all the interventions provided for gifted students, acceleration (i.e., meeting curricular goals at an earlier age or a faster pace than is typical) is supported best by research. Acceleration is possible within either ability-grouping or inclusion formats and may include grade skipping, early entrance to kindergarten, ungraded schools (Borland 1989), or partial acceleration in which a child spends a period a day in another classroom at a higher grade level (Tolley 1991). Research on acceleration, when the acceleration is appropriate, is uniformly positive. Although grade skipping is considered the least desirable form of acceleration available, research supports exercising this option if a child's ability is clearly above that of age peers and the child is unhappy in the current grade (Borland 1989).

WHAT CAN BE CONCLUDED FROM THE REVIEW OF THE LITERATURE?

The following conclusions emerged from this review of the literature:

1. Research uniformly supports the provision of special services for the gifted.

    - Educators agree that the basic core curriculum in schools is not adequate for meeting the needs of exceptional learners who possess an advanced ability to think, to learn, and to produce information.
    - The key to curricular differentiation for the gifted is providing a curriculum (1) which is educationally right and defensible (i.e., a curriculum of substance and rigor which challenges bright students with long-range, rigorous, trial-and-error based study that has the potential to contribute to knowledge in a field) and (2) which is articulated with the core curriculum but whose scope and sequence clearly distinguishes differences between the two curricula.
    - Independent study is recommended for some gifted students alongside other instructional approaches.

2. Achievement in special programs for the gifted while greater than for mainstreamed students still has been modest, and gifted students frequently say that they are insufficiently challenged in the programs.

3. Pull-out enrichment programs are the most widely used format for delivering gifted education.

    - An advantage of pull-out programs is that they allow gifted students to receive special instruction with their gifted peers and also interact with their age peers in the regular classroom.

- A disadvantage of partial pull-out programs is that the limited amount of differentiated instruction produces modest benefits.

4. Of all the interventions schools provide for gifted students, acceleration is supported the best by research. Educators of the gifted suggest the following forms of acceleration: grade skipping, partial acceleration (i.e., a child spends a period a day in another classroom at a higher grade level), early entrance to kindergarten, and ungraded schools.

5. Researchers disagree on the format for delivering education for the gifted. At issue is whether education for the gifted is best delivered through ability grouping or inclusion. They cite the following advantages of the two formats:

ADVANTAGES OF ABILITY GROUPING	ADVANTAGES OF INCLUSION
Results in greater achievement	Discourages elitism that occurs when certain students are singled out for special services
Provides less opportunity for friction between gifted and other students	Provides gifted students with more exposure to age peers
Is easier for teachers instructionally because of homogeneous grouping	Is less disruptive to the regular classroom but requires more instructional expertise on the part of the regular classroom teacher to avoid "watering down" the curriculum
Is more easily implemented than inclusion which requires schoolwide change	Promotes multiculturism and sensitivity to differences
Promotes peer support among gifted students	Serves more "borderline" gifted students who often do not qualify for special programs
Is likely to provide a more challenging curriculum	Eliminates intense competition among students to enter special programs
Is likely to have teachers better trained in dealing with the gifted	Promotes schoolwide excellence
Permits homogeneous and heterogeneous grouping of the gifted in pull-out programs	Is less expensive to implement than full-time special programs

There clearly are advantages to each of the formats for providing educational services to gifted students. The philosophy, goals, and objectives of education for the gifted in a particular school division determine whether ability grouping or inclusion is the best choice. The ultimate success of either format depends on the quality of the differentiated curriculum offered. Researchers conclude that when the differentiated curriculum is educationally right for gifted students and characterized by substance and rigor, the benefits of programs for the gifted will provide a dividend for the future of this unique human resource.

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CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

INTERVIEWS WITH LAB SCHOOL TEACHERS

INTERVIEWS WITH LAB SCHOOL TEACHERS

PURPOSE OF THE INTERVIEWS: On May 19, 1997, individual interviews were conducted with the six Lab School teachers to gather information regarding the (1) type of student served by the Lab School, (2) the curriculum, (3) teacher selection, (4) academic advantages and disadvantages for students who attend the Lab School, (5) social advantages and disadvantages for students, (6) overall level of satisfaction among Lab School teachers, and (6) evaluation processes. Teachers interviewed were Mrs. Weatherspoon (career education), Ms. Moss (science), Mrs. Northern (science), Mrs. Bondurant (problem solving/math), Mrs. Psimas (computer technology), and Mr. Mumma (computer technology).

PERFORMANCE CRITERIA FOR SUCCESS: See Evaluation Proposal, page 32.

FINDINGS: See Summary of Interviews, Appendix 1, page 109.

1. **How would you describe the majority of the students served by the Lab School (i.e., profoundly gifted; moderately gifted; above-average, high-achieving students; average students; other)?**
   - All six teachers indicated that the majority of students served fall into the category of above-average, high-achieving students.
   - Teachers indicated that students with a full-range of academic abilities are served at the Lab School.

2. **What are the goals of the Lab School curriculum?**
   - Teachers indicated that the goals of the Lab School are as follows: to develop higher level thinking skills and to promote cooperation and teamwork among students through a curriculum that does not duplicate the curriculum in the home school.

3. **How do you develop the Lab School curriculum? (i.e., framework such as Bloom's Taxonomy** [see Appendix 2, page 117]**; how topics are determined; use of a set of basic skills in an area; interrelationships of individual Lab School curricula)**
   - Teachers said they approach development of their individual curricula in a variety of ways. Most begin with Bloom's Taxonomy of Educational Objectives (i.e., interpretation, application, analysis of relationships, synthesis, evaluation) as the framework, determine topics based on student interests, incorporate strategies for working with gifted students, and tie in their curriculum to the other Lab School curricula to the extent possible.

4. **How is the Lab School curriculum tied in with the core curriculum?**
   - Teachers indicated that the Lab School curriculum is related only in a broad sense to the home-school curriculum (i.e.. same subjects such as math and science). Teachers said they try to ensure that the home-school curriculum is not duplicated.

5. **What opportunities for acceleration are available at the Lab School (i.e., describe pacing of work for students)?**
   - Teachers explained a variety of approaches for dealing with students who require acceleration. Most said that acceleration is not a specific goal in their classrooms but that opportunities for students to go as far as they wish with the assignments are included in their instructional plans.

6. **What opportunities are available for independent study at the Lab School?**
   - Teachers indicated they are receptive to independent projects but independent projects are difficult due to time constraints. As with acceleration, independent study is not a specific goal. Several teachers individualize instruction to facilitate independent study, and most teachers encourage students to do further research related to topics at home.

7. **Explain how students in the Lab School are grouped (i.e., different grade levels; different schools; different teams; different abilities)?**
   - Three teams of two teachers provide eleven weeks of instruction each; students receive a total of thirty-three weeks of instruction.
   - Students from different areas of the city and of different abilities are randomly grouped. There is an effort to separate fifth- and sixth-grade students when possible.

8. **What are the academic advantages for a gifted student who attends the Lab School?**
   - Teachers cited the following academic advantages: (1) a widening and deepening of the knowledge acquired in the regular classroom, (2) exposure to higher level skills (e.g., critical thinking, creative thinking, problem solving, research, and decision making) that permit gifted students to use their talents, (3) the academic motivation that results from working with all high-ability students, (4) exposure to technology training that would not be possible in the home school, and (5) opportunities to learn both independently and as a group member.

9. **What are the social advantages for a gifted student who attends the Lab School?**
   - Teachers cited the following social advantages for students: (1) the opportunity to interact with students with similar, unique interests, (2) the opportunity to work with students of equal or greater intellectual abilities (a student may no longer be the "top" student resulting in intellectual and emotional growth), (3) an excellent experience for students from schools with smaller numbers of identified students to meet other gifted students.

10. **Is there sufficient instructional time given the time required for transporting students, and is the lost instructional time offset by the experiences at the Lab School?**
    - The instructional day for most regions of the city begins at 9:00 a.m. and ends at 1:15 p.m. with a 30-minute lunch break. Students from the Western Branch area arrive at 9:30 a.m.

- Teachers said students from outlying areas such as Western Branch lose more instructional time. Teachers generally agreed, however, that the instructional time is sufficient.
- Teachers suggested the following to increase instructional time: (1) locate the school more centrally or offer the program at several sites and (2) transport students directly to the Lab School rather than have students enter their regular classrooms first.
- Two teachers suggested that sixth-grade students are more likely to be at a disadvantage as a result of leaving the home school to attend the Lab School. This is due to the workload on the middle school level. These teachers suggested that perhaps fourth- and fifth-grade students would be the appropriate population to attend the Lab School.

11. **What is your perception of home school attitudes toward the Lab School in general?**
    - Lab School teachers indicated that attitudes vary among home-school teachers. They suggested that sixth-grade teachers are not as positive because more work is missed on that level when students attend the Lab School and because teachers believe the middle school can serve the needs of gifted students. All Lab School teachers expressed a desire for better communication between the Lab School and the home school.

12. **What is your experience and training in general and in teaching gifted students?**
    - Only two teachers have an endorsement for teaching gifted students. Two teachers have an endorsement in administration in addition to the elementary endorsement, and two teachers have the elementary endorsement.

13. **At one time Lab School teachers were rotated into the regular classroom. What are the advantages and disadvantages of rotating Lab School teachers?**
    - All teachers were aware that there was the possibility of being rotated from the Lab School into the regular classroom. Several teachers were told they would be rotated out after two or three years.
    - Teachers disagree with rotating Lab School teachers every two years. Most cited the need for at least three years to become proficient in teaching this group. Several noted that finding competent computer teachers for this setting would be difficult.

CONCLUSIONS:

The following conclusions are based on the responses of Lab School teachers interviewed:

1. The majority of students who attend the Lab School are above-average, high-achieving students.

2. The goals of the Lab School are to develop students' higher order thinking skills (e.g., critical thinking, creative thinking, problem solving, research, and decision making), to

promote cooperation and teamwork, and to provide a curriculum which does not duplicate the home-school curriculum.

3. There is an effort to develop curricula based on student interests. Areas of interest are determined from surveys of students and parents which are administered each year by the Lab School. In most cases Bloom's Taxonomy is the foundation for curriculum development (See Appendix 2, page 117). The computer technology curricula are integrated with the career education, problem solving/math, and science curricula to some extent. The career education and problem solving/math curricula are also integrated to some extent.

4. The Lab School curriculum is not articulated with the home-school curriculum. Any coordination of the two is limited to the fact that similar subjects are taught. There is an effort at the Lab School to avoid duplication of the home-school curriculum.

5. Acceleration is not a specific goal of the curricula at the Lab School but is available on a limited basis in that students in most classes have the opportunity to move through projects at a faster pace if necessary.

6. Opportunities for independent study are not a specific goal in Lab School classes and are limited at the Lab School. Most teachers are receptive to allowing independent study. Regular assignments, however, require most of the students' time since they only attend the Lab School once a week.

7. Lab School students receive 11 weeks of instruction from three teams of two teachers for a total of 33 weeks of instruction.

8. Academic advantages for students who attend the Lab School are as follows:
   - A widening and deepening of the knowledge acquired in the regular classroom
   - Exposure to higher level skills (e.g., critical thinking, creative thinking, problem solving, research, and decision making) that permit gifted students to use their talents
   - The academic motivation that results from working with all high-ability students
   - Exposure to technology training that would not be possible in the home school
   - Opportunities to learn both independently and as a group member

9. The social advantages for students who attend the Lab School are as follows:
   - The opportunity to interact with students with similar, unique interests
   - The opportunity to work with students of equal or greater intellectual abilities (a student may no longer be the "top" student resulting in intellectual and emotional growth)
   - An excellent experience for students from schools with smaller numbers of identified students to meet other gifted students

10. The amount of instructional time available is perceived to be sufficient for this age group.

Time is lost in transporting students to the Lab School. This group suggested locating the Lab School more centrally or in several communities to reduce the amount of time required for transporting students.

11. Attitudes among home-school teachers vary. Fifth-grade teachers tend to be more supportive as some sixth-grade teachers believe the needs of this group can be met in the middle school. Communication overall between the Lab School and the home school needs to be improved.

12. Experience and training among Lab School teachers varies. One-third of the teachers have an endorsement in teaching gifted students.

13. No formal system of rotating teachers in and out of the Lab School appears to be in place at this time. According to this group, rotation into the regular classroom after less than three years would undermine the effectiveness and efficiency of the instructional program at the Lab School.

RECOMMENDATIONS:

1. Modify the process for developing the Lab School curriculum so that teachers at the Lab School prepare a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
   - Has a heavy emphasis on the four core subject areas of math, science, social studies, and English with technology serving as a tool for research and presentations.
   - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.
   - Is integrated within the Lab School program.
   - Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
   - Follows the development process in place for the Department of Curriculum and Instruction.

2. Explore the possibility of locating the Lab School more centrally in the school division to increase instructional time.

3. Serve students in fourth and fifth grades rather than fifth and sixth grades at the Lab School.

4. Establish effective communication between the home school and the Lab School (e.g., encourage Lab School teachers and home school teachers to confer on a regular basis). Reinstate visitations by Lab School teachers with home-school teachers (one Lab School teacher per school every 9 weeks).

5. Clarify the personnel policy for rotating teachers from the Lab School into the regular classroom.

6. Require all current and new Lab School teachers to acquire the endorsement for teaching the gifted which is a minimum of 15 semester hours. The Virginia Department of Education recommends the following courses:
   - Characteristics and Identification of Gifted Students
   - Theory and Principles of Differentiating Curriculum
   - Creativity Can Be Taught
   - The Art of Teaching Thinking
   - Differentiating and Managing Instruction for the Gifted and Other Academically Diverse Learners in the Regular Classroom
   - Contemporary Issues and Research in Gifted Education
   - A required practicum

7. Provide staff developmental classes for home-school teachers in which Lab School teachers share strategies in working with gifted students.

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

INTERVIEW WITH THE LAB SCHOOL ADMINISTRATOR

INTERVIEW WITH THE LAB SCHOOL ADMINISTRATOR

PURPOSE OF THE INTERVIEW: On May 19, 1997, an interview was conducted with Dr. Rosemary Thompson, administrator at the Lab School, to gather information regarding the (1) type of student served by the Lab School, (2) the curriculum, (3) teacher selection, (4) academic advantages and disadvantages for students who attend the Lab School, (5) social advantages and disadvantages for students, (6) overall level of satisfaction among Lab School teachers, and (6) evaluation processes.

PERFORMANCE CRITERIA FOR SUCCESS: See Evaluation Proposal, page 32.

FINDINGS: See Summary of Interview, Appendix 3, page 118.

Dr. Thompson who is endorsed in both counseling and administration is in her third year as administrator of the Lab School.

1. **How would you describe the majority of the students served by the Lab School (i.e., profoundly gifted; moderately gifted; above-average, high-achieving students; average students; other)?**
   - The majority of students served fall into the categories of moderately or profoundly gifted.

2. **What are the goals of the Lab School curriculum?**
   - The major goal of the curriculum is to provide instruction beyond what is offered to the mainstream of students.
   - The curriculum is based on higher order thinking skills and is organized into themes that are integrated.

3. **How is the Lab School curriculum tied in with the core curriculum?**
   - A home school often shares a theme the Lab School is using.
   - The curriculum has not been linked yet with the Standards of Learning recently mandated by the Department of Education since they are currently being implemented in the home schools.

4. **What opportunities for acceleration are available at the Lab School (i.e., describe pacing of work for students)?**
   - Higher level thinking skills are emphasized for all students; acceleration is more appropriate for the home-school classroom.

5. **What opportunities are available for independent study at the Lab School?**
   - As with acceleration, independent study is more appropriate for the home-school classroom.

6. **Explain how students in the Lab School are grouped (i.e., different grade levels; different schools; different teams; different abilities)?**
   - Three teams of two teachers provide eleven weeks of instruction; students receive a total of thirty-three weeks of instruction.
   - Students from different areas of the city and of different abilities are randomly grouped. There is an effort to separate fifth- and sixth-grade students when possible.

7. **What are the academic advantages for a gifted student who attends the Lab School?**
   - Academic advantages include the opportunity to engage in higher order thinking skills, to acquire knowledge not possible in the home school, and to spend considerably more time in technology-related activities.
   - The academic advantages would be even greater if students could attend the program full time.

8. **What are the social advantages for a gifted student who attends the Lab School?**
   - The main social advantage is the opportunity for gifted students to be with students similar to themselves.

9. **Is there sufficient instructional time given the time required for transporting students, and is the lost instructional time offset by the experiences at the Lab School?**
   - Some instructional time is lost in transporting students, but instruction is intense while students are at the Lab School. Students receive 22 hours (three, seven hour days) of technology-related instruction which is considerable.
   - A more central location would reduce the amount of time that is lost.

10. **What is your perception of home school attitudes toward the Lab School in general?**
   - The home schools are supportive, but more involvement by the home school in the Lab School program would be beneficial. Efforts are being made to improve communication between the two (e.g., a monthly calendar is sent to home school).
   - The elementary guidance counselor would be more appropriate than the reading specialist as the contact in the home school.

12. **What is the experience and training of Lab School teachers in general and in teaching gifted students?**
   - The goal is to employ teachers with the gifted endorsement.

13. **At one time Lab School teachers were rotated into the regular classroom. What are the advantages and disadvantages of rotating Lab School teachers?**
   - An advantage of a rotation system would be that home schools would benefit from the expertise of teachers from the Lab School.

CONCLUSIONS:

The following conclusions are based on the responses of the Lab School administrator:

1. The majority of students who attend the Lab School are moderately and profoundly gifted students.

2. The goal of the Lab School is to develop students' higher order thinking skills through a curriculum which is based on themes that are integrated into the individual curricula of the Lab School.

3. The Lab School curriculum is not articulated with the home-school curriculum. Instructional themes from the Lab School may be shared with the home school.

4. Acceleration is not a focus of the Lab School curriculum since all students are encouraged to engage in higher order thinking skills. Acceleration is viewed as more appropriate for the home school.

5. Independent study is not a focus of the Lab School curriculum and is also viewed as more appropriate for the home school.

6. Lab School students receive 11 weeks of instruction from three teams of teachers for a total of 33 weeks of instruction. (Students begin attending the Lab School one week after regular school begins and finish one week before regular school ends.)

7. Academic advantages for students who attend the Lab School are the opportunity to engage in higher order thinking skills and to acquire knowledge not possible in the home school, especially in the area of technology.

8. The major social advantage for students who attend the Lab School is the opportunity to interact with students who have similar academic abilities.

10. The amount of instructional time available is perceived to be sufficient because of the intensity of the instruction provided. Some time is lost in transporting students to the Lab School. It was suggested that locating the Lab School more centrally would reduce the amount of time required for transporting students.

11. Home schools are supportive of the Lab School program. Communication overall between the Lab School and the home school needs to be improved.

12. The goal is to employ teachers who have an endorsement in teaching gifted students. Currently, one third of the teachers at the Lab School have this endorsement.

13. No formal system of rotation is currently in place. An advantage of rotation is that home schools could benefit from the expertise of Lab School teachers.

RECOMMENDATIONS:

1. Modify the process for developing the Lab School curriculum so that teachers at the Lab School write curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors for a multi-year period to ensure that the curriculum:
   - Has a heavy emphasis on the four core subject areas of math, science, social studies, and English with technology serving as a tool.
   - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.
   - Is integrated within the Lab School program.
   - Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
   - Follows the development process in place for the Department of Curriculum and Instruction.

2. Locate the Lab School more centrally in the school division to increase instructional time (currently four hours).

3. Clarify the personnel policy for rotating teachers from the Lab School into the regular classroom. Consider rotating teachers no more frequently than every three years.

4. Require all current and new Lab School teachers to acquire the endorsement for teaching the gifted which is a minimum of 15 semester hours. The Virginia Department of Education recommends the following courses:
   - Characteristics and Identification of Gifted Students
   - Theory and Principles of Differentiating Curriculum
   - Creativity Can Be Taught
   - The Art of Teaching Thinking
   - Differentiating and Managing Instruction for the Gifted and Other Academically Diverse Learners in the Regular Classroom
   - Contemporary Issues and Research in Gifted Education
   - A required practicum

5. Establish effective communication between the home school and the Lab School (e.g., make the elementary guidance counselor the primary contact in the home school).

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

INTERVIEWS WITH LAB SCHOOL STUDENTS

INTERVIEWS WITH STUDENTS

PURPOSE OF THE INTERVIEWS: Interviews were conducted with a random sample of fifty-one Lab School students on May 27, 28, 29, 30, and June 2. Interviews were conducted each day of the week to ensure that all schools were represented since students from each elementary and middle school attend the Lab School only one day of the week (e.g., students from Crestwood Middle and Great Bridge Middle attend the Lab School only on Monday). Interviews were conducted to obtain information related to the curriculum at the Lab School and satisfaction with the program.

FINDINGS: See Chart 2, page 60, and Appendix 4, page 120, which is a report of the interviews conducted on May 27, 1997.

CONCLUSIONS:

The following conclusions are based on the responses of Lab School students to the interview questions:

1. **How are the different classes at the Lab School related (for instance, the science and computer classes or problem-solving and career ed classes)?**

   Certain projects are shared with another class (e.g., students researched colleges in both the problem-solving and the computer classes).

2. **How are the things you learn in the Lab School related to what you learn in your home school?**

   The Lab School curriculum is not articulated with the home-school curriculum. Activities occasionally relate or overlap (e.g., students studied water pollution in both settings), but there is no planned relationship. Activities at the Lab School which relate to a topic from the home school are generally on a higher level and more in-depth.

3. **What opportunities do you have if you need to go at a faster pace in a class at the Lab School?**

   Students in most Lab School classes have the opportunity to work through projects at a faster pace.

4. **What opportunities do you have if you need to go at a faster pace in your regular classroom?**

   Students generally are required to work at the same pace in the regular classroom. Students who complete their assignments early assist other students, visit the library, or read.

CHART 2
INTERVIEWS WITH STUDENTS

	Tuesday Group (20 fifth-grade students) BRI, GRI, Hickory, SE, WBI	Wednesday Group (1 fifth-grade and 9 sixth-grade students) Camelot, Chittum, DCI, IRM, Treakle	Thursday Group (9 sixth-grade students) CRE, Hickory, WBM	Friday Group (4 fifth-grade and 2 sixth-grade students) Carver, CI, Hickory, SRI	Monday Group (6 sixth-grade students) CM, GBM
INTERRELATIONSHIP OF LAB SCHOOL CLASSES * Certain projects	Problem Solving and Computer classes* Career Ed and Computer* Science and Computer* Career Ed and Prob Solv*	Problem Solving and Computer classes* Very little relationship between classes	Problem Solving and Computer classes* Career Ed and Computer classes*	Prob Solv & Computer* 2 Computer classes* Science and Career Ed* Science and Computer classes*	Prob Solving and Computer classes* Prob Solving and Career Ed classes* 2 Computer classes*
RELATIONSHIP OF LAB SCHOOL CLASSES TO REGULAR CLASSES	Science (studied water pollution in both) Prob Solving (studied pos/neg nos. in both) Fundamentals the same but more complex at Lab School	Problem Solving and Math Science on a higher level & learn concepts sooner Lab School classes more interesting and challenging	Science (studied oceanography more in-depth here) Math (4 quadrant grid) Computer classes more advanced at Lab School and more time	Science but more advanced at Lab School Computer but more advanced at Lab School	Prob Solv (Escher drawings, but more complex) Studied Mayan civiliz at both schs Computer classes more advanced
ACCELERATION OPPORTUNITIES: LAB SCHOOL	Majority said students can go through projects at a faster pace in all classes	Majority said students can go through projects at a faster pace in all classes; often help slower students	Majority said students can go through projects at a faster pace in all classes	Majority said students can go through projects at a faster pace	Students were divided
ACCELERATION OPPORTUNITIES: HOME SCHOOL	Majority said students stay together	Majority said students stay together; read, help others, and go to library when done	Majority said students stay together & read or help others when done	Students were divided	Majority said only move ahead to homewk & reading
INDEPENDENT STUDY OPPORTUNITIES: LAB SCHOOL	Majority said students work independently on the same assigned projects and can be creative	Majority said teachers would likely allow an independent project; have not requested to do one	Majority said they work independently on the same assigned projects;have plenty to do anyway	Majority said they work independently on the same assigned projects	All said no; plenty to do already; work independently on same assignments & can be creative
INDEPENDENT STUDY OPPORS: HOME SCHOOL	Majority said no, do same projs independently, or do projs for extra credit	Majority said yes, usually for extra credit	Majority said yes, same proj more in-depth or projs for extra credit	Majority said yes but not encouraged: no extra credit & may not finish	Majority said work indep on same proj & do diff bk reports
ABILITY OF STUDENTS TO DO HOME-SCHOOL WORK	Majority said yes; regular classes on hold on Lab Day; fun activs, library; do impor work as homewk	Majority said yes; no impor assignments; stus do homework on Lab Sch day; miss art class	Majority said yes; games, movies, and fun activities in class on Lab Sch day	Majority said yes; review on Lab School day; no graded work	All said yes; some regular classes move on; no tests
LAB SCHOOL ACTIVITIES OF INTEREST	Majority said yes;	Majority said yes	Majority said yes; several said career unit was boring	All said yes	All said yes
LAB SCHOOL ACTIVITIES CHALLENGING	Majority said yes; enjoy classes that are not mapped out for them	All said yes; some more challenging; no time wasted; stay motivated	All said yes; like figuring out projects for themselves; also fun	Majority said yes	All said yes
WHAT STUDENTS LIKE BEST ABOUT LAB SCHOOL	Neat projects; students all on same level; leaving home school; hands-on activities; more computer time; computer class projects; problem solving; Bay Watchers Team	Computer classes; chance to be creative; designing and playing games; the projects; chemistry in the science class; career and college units; journals	Art projects; science; computer classes (more time and more advanced); being challenged; Bay Watcher unit; no gym; projects and experiments; having to figure out projects	Career unit; computers; Bay Watcher unit; teachers; college unit; planning for the future	Amount of time on computers; studying Mayan culture; experiments; independence; working with students of same ability; the challenge; subjects which are different from home school
WHAT STUDENTS LIKE LEAST ABOUT LAB SCHOOL	Some activities in career ed boring; lectures in problem solving boring; homework; research in science; leaving home school; lack of up-to-date computers in every class; returning to regular school	Career and college classes (over half the students); games	Career unit; late lunch	Science; too much writing in classes; having to leave Lab School	Being late for last class at home sch; already had some of activities in problem solv; too much writing; making up regular work on Monday
OVERALL SATISFACTION	All satisfied or very satisfied	All satisfied or very satisfied	All satisfied or very satisfied	All satisfied or very satisfied	All very satisfied
TERNAL VALUATION	All have completed surveys	All have completed surveys; teachers asked their opinions	All have completed surveys	All have completed surveys	All have completed surveys

5. **What opportunities do you have at the Lab School to work independently on special projects related to the topics studied?**

Students do not engage in independent projects at the Lab School. Students work independently on assigned projects and are given considerable creative leeway.

6. **What opportunities do you have in your regular classroom to work independently on special projects related to the topics studied?**

The majority of students have the opportunity to engage in independent projects in the home school. Independent projects, however, are usually voluntary and for extra credit.

7. **Does attending the Lab School affect your ability to do the work required in your regular classroom?**

Students are able to balance the workloads of the Lab School and their regular classrooms. In many cases students (especially fifth graders) indicated that they are able to keep up with their work in the regular classroom because academic activities are basically "on hold" in the regular classroom on Lab School Day. While this is an advantage for Lab School students, students in the regular classroom may be at a disadvantage academically.

8. **Are the activities offered at the Lab School of interest to you?**

Overall, the activities at the Lab School are of interest to the students. A number of students believe the career education class is more appropriate for older students and find the activities less interesting.

9. **Are the activities offered at the Lab School challenging to you?**

Students consider the activities at the Lab School challenging. They particularly enjoy projects in which the steps are not carefully outlined and they have the opportunity to be creative.

10. **What do you like best about the Lab School?**

Students like the following aspects of the Lab School:

- Engaging in interesting projects (i.e., participating as a member of the Bay Watcher team, studying Mayan culture)
- Working with students who are essentially on the same level
- Leaving the home school for a day to meet students with similar interests and abilities from other areas of the city

- Receiving advanced training, using advanced software, and spending more time on the computer than would be possible in the home school
- Planning for the future in the college and career units

11. What do you like least about the Lab School?

Students dislike the following aspects of the Lab School:

- Completing some specific activities which they consider boring (lectures in the problem-solving class, research in the science class)
- Arriving late for the last class at the home school (6th graders)
- Making up work missed at the home school on Lab School day (6th graders)
- The career education class (While some Lab School students expressed satisfaction with planning for the future, many voiced a lack of interest in the activities of the career education class.)

12. How would you describe your overall level of satisfaction with attending the Lab School (very satisfied, satisfied, not satisfied)?

The overall level of satisfaction among Lab School students is high.

13. What opportunities have you had previously to express your opinions about the Lab School?

Student opinions are a part of internal evaluations of the Lab School. Student surveys are administered at the end of each year.

RECOMMENDATIONS:

1. Modify the process for developing the Lab School curriculum so that teachers at the Lab School prepare a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
   - Has a heavy emphasis on the four core subject areas of math, science, social studies, and English with technology serving as a tool.
   - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.
   - Is integrated within the Lab School program.
   - Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
   - Follows the development process in place for the Department of Curriculum and Instruction.

2. Provide non-content subjects such as career education in conjunction with the four core subject areas using technology as a tool rather than offering a separate career education class.

3. Allow enough flexibility within the Lab School curricula to ensure that students have opportunities to design some of the learning experiences.

4. Explore the possibility of locating the Lab School more centrally in the school division to allow sixth-grade students to arrive on time for the last class at the home school.

5. Develop guidelines for using instructional time in the regular classroom on Lab School day. Guidelines should address the productive use of academic time for both groups of students (i.e., students who attend the Lab School and must make up the work and students who remain in the home school).

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

SURVEY OF PRINCIPALS

SURVEY OF PRINCIPALS

PURPOSE OF THE SURVEY: Surveys were sent in May 1997 to the twenty-one (21) elementary and middle school administrators whose fifth- and sixth-grade students attend the Laboratory School for the Academically Gifted (Lab School) to gather information regarding (1) type of student served, (2) the curriculum, (3) academic advantages and disadvantages for students who attend the Lab School, (4) social advantages and disadvantages for students, (5) impact of the pull-out program on the home school, (6) overall level of satisfaction among principals, (7) other appropriate interventions for serving academically gifted fifth- and sixth-grade students, and (8) evaluation processes. Nineteen principals responded for a return rate of 91%.

PERFORMANCE CRITERIA FOR SUCCESS: See Evaluation Proposal, page 32.

FINDINGS: See Survey of Principals, Chart 3, pages 66-68.

1. With regard to population of students served, a high percentage of principals consider the students who attend the Lab School to be either above-average, high achievers (26%) or moderately gifted (58%).

   One principal who disagreed noted that their Lab School students stand out in the home school but that only a small percentage of the students score significantly higher on tests that measure intelligence.

2. With regard to the curriculum:
   - The majority of principals (68%) are of the opinion that the instructional program at the Lab School sufficiently challenges gifted students.
   - Approximately half the principals (53%) indicated the Lab School curriculum is not coordinated with the curriculum of the home school, and the remainder (47%) indicated they have no knowledge of whether the two are coordinated.

   One principal considers the lack of coordination of the two curricula to be a major concern.

   - The majority of principals (63%) are of the opinion that the home school is not better suited to serve gifted students.

   Some principals commented that this opinion is based on current circumstances in the home school. One principal said he really does not know what occurs at the Lab School and cannot compare the two programs.

   - A high percentage of principals (84%) are of the opinion that under current conditions the home school is not better suited to offer a differentiated instructional program.

   Principals commented that conditions include lack of teachers trained in education for the gifted; lack of

CHART 3
SURVEY OF PRINCIPALS

SURVEY RESULTS		RESPONSE		PERCENTAGES
1.	This a principal survey.			
2.	How would you describe the majority of students from your school who attend the Laboratory School for the Academically Gifted (Lab School)?	A.	Profoundly gifted students (intellectual aptitude is well advanced beyond age group - IQ of 140 or more).	11%
		B.	Moderately gifted students (intellectual aptitude is advanced beyond age group)	58%
		C.	Above-average, high-achieving students (intellectual aptitude is only slightly advanced, but motivation is significantly greater than age group)	26%
		D.	Average students (intellectual aptitude and motivation are average)	5%
		E.	Other	0%
3.	In your opinion, does the instructional program offered at the Lab School sufficiently challenge gifted students (i.e., exposes students to knowledge they would not learn in the regular classroom and is of sufficient substance and rigor)?	A.	Yes	68%
		B.	No	32%
4.	Is the Lab School curriculum coordinated with the curriculum of the home school?	A.	Yes	0%
		B.	No	53%
		C.	No Knowledge	47%
5.	In your opinion, is the home school better suited overall to serve its gifted students?	A.	Yes	32%
		B.	No	63%
		C.	Blank	5%
6.	Are there obstructions to offering a differentiated instructional program in the home school (e.g., lack of resources, insufficient number of students, inability to provide the same quality of instruction)?	A.	Yes	84%
		B.	No	16%
7.	Are opportunities for acceleration (i.e. meeting curricular goals at an earlier age or a faster pace than is typical) available in the home school for students who attend the Lab School?	A.	Yes	42%
		B.	No	58%
8.	Are opportunities for independent study available in the home school for students who attend the Lab School?	A.	Yes	68%
		B.	No	32%
9.	Based on your knowledge, how would you rate the instructional program of the Lab School?	A.	Excellent	0%
		B.	Above Average	32%
		C.	Average	47%
		D.	No Knowledge	21%

SURVEY RESULTS		RESPONSE	PERCENTAGES
10.	In your opinion, do students who attend the Lab School experience greater academic success overall as a result of participating in the program?	A. Yes	37%
		B. No	63%
11.	Can the majority of students who attend the Lab School manage the academic demands of the Lab School and the regular classroom?	A. Yes	100%
		B. No	0%
12.	Is the Lab School student at a disadvantage in the home school because a day is missed?	A. Yes	32%
		B. No	68%
13.	Is the loss of instructional time in transporting students to the Lab School offset by the Lab School experiences?	A. Yes	58%
		B. No	37%
		C. Blank	5%
14.	In your opinion, do students who attend the Lab School experience greater social success as a result of participating in the program?	A. Yes	16%
		B. No	79%
		C. Blank	5%
15.	How does removing students to attend the Lab School affect the academic progress of non-identified students on the pull-out day?	A. Positively	11%
		B. Negatively	16%
		C. No Impact	73%
16.	How does removing students to attend the Lab School affect the grade level program at the home school (e.g., pacing of instruction; school cohesiveness)?	A. Positively	0%
		B. Negatively	37%
		C. No Impact	58%
		D. Blank	5%
17.	How are Lab School students grouped in the home school?	A. Clustered	47%
		B. Placed randomly in classrooms across the grade level	53%
		C. Grouped together in one classroom in the grade level	0%
		D. Other	0%
18.	What is your overall level of satisfaction with the Lab School?	A. Very satisfied	11%
		B. Satisfied	73%
		C. Not Satisfied	16%

SURVEY RESULTS		RESPONSE	PERCENTAGES
19.	If other options were also available, which of the following would you prefer for serving gifted fifth- or sixth-grade students from your school?	A. Laboratory School for the Academically Gifted (Lab School)	37%
		B. A pull-out program in the home school which provides a differentiated instructional plan	21%
		C. A differentiated instructional plan provided in the regular classroom in the home school	37%
		D. Other	5%
20.	Have you participated previously in evaluations of the Lab School (e.g., surveys, interviews)?	A. Yes	16%
		B. No	84%
21.	Under the current Lab School program, should fourth-grade students attend the Lab School (along with fifth-grade students) rather than sixth-grade students?	A. Yes	74%
		B. No	26%

monetary resources; lack of lab equipment; scheduling obstacles; insufficient numbers of students; diverse population of students.

- The majority of principals (58%) indicated there are no opportunities for acceleration at the home school.

- The majority of principals (68%) indicated that opportunities for independent study are available at the home school.

One principal who disagreed commented, "No one, to my knowledge, is providing independent study."

- A high percentage of principals (79%) rated the instructional program of the Lab School as average (47%) or above average (32%).

3. With regard to academic advantages and disadvantages for students who attend the Lab School:
   - The majority of principals (63%) said that students do not experience greater academic success as a result of attending the Lab School.

   Principals who disagreed commented that Lab School students demonstrate higher level thinking skills and benefit from being with students with similar intellectual abilities with whom they must compete academically.

   - All principals agreed that students who attend the Lab School can manage the academic demands of the Lab School and the regular classroom.

   - The majority of principals (68%) do not consider Lab School students to be at a disadvantage in the home school because of the day missed.

   - The majority of principals (58%) said the Lab School experiences offset the instructional time lost in transporting students to the Lab School.

4. A high percentage of principals (79%) said students do not experience greater social success as a result of attending the Lab School.

5. A high percentage of principals (73%) said there is no impact (positive or negative) on non-identified students who remain in the classroom on the pull-out day.

6. The majority of principals (58%) said removing students to attend the Lab School has no impact on the grade-level program (e.g., pacing of instruction; school cohesiveness) at the home school.

   One principal commented that teachers use that day to work individually with non-identified students, for independent study, and in enrichment activities for advanced students who did not qualify for the pull-out program.

7. Principals indicated that students who attend the Lab School are either clustered at the home school in several classrooms in the grade level (47%) or placed randomly in classrooms across the grade level (53%).

8. A high percentage of principals (84%) responded that they are satisfied (73%) or very satisfied (11%) with the Lab School.

One principal commented that increased communication between the Lab School and the home school is needed and that fourth-grade students should attend the Lab School.

9. The majority of principals (58%) responded that if given other options they would prefer either a pull-out program in the home school which provides a differentiated instructional plan (21%) or a differentiated plan of instruction in the regular classroom (37%) over the current pull-out program at the Lab School (37%).

Two principals commented that the quality of education being provided at the Lab School should be available to all students, and one suggested that a differentiated curriculum in the home school would more likely achieve this goal.

Principals generally commented that additional resources including trained personnel would be necessary to offer the program in the home school and that it would be important to provide equitable programs among all schools.

10. A high percentage of principals (84%) said they have not participated previously in evaluations of the Lab School.

11. A high percentage of principals (74%) responded that students in fourth and fifth grades would be a more appropriate population of students for the Lab School than students in fifth and sixth grades.

- Eighty percent (80%) of middle school principals agreed.
- Fifty-seven percent (57%) of K-5 principals agreed.
- Eighty-six percent (86%) of intermediate school (3-5 or 4-5) principals agreed.

A K-5 principal who disagreed commented that fourth-grade students are not mature enough to handle missing a day of instruction and homework. This principal would prefer a visiting teacher to instruct gifted students one day a week for 1 ½ to 2 hours. This principal, however, also said that students in sixth grade should remain at the home school.

CONCLUSIONS:

The following conclusions are based on the responses of principals:

1. In the majority of schools, students who attend the Lab School are perceived to be moderately gifted.

2. There appears to be no coordination of the Lab School and home-school curricula.
   - Approximately half the principals said there is no coordination.
   - The remaining half said they have no knowledge in this area.

3. Opportunities for acceleration are not available in the majority of schools.

4. Opportunities for independent study are available in the majority of schools.

5. According to the principals who have knowledge of the quality of the instructional program at the Lab School (79%), the quality is "average" or "above average."

6. In the majority of schools, the Lab School curriculum is believed to sufficiently challenge students.

7. In the majority of schools, students are not perceived to experience greater academic success overall as a result of attending the Lab School.

8. The majority of students who attend the Lab School can manage the academic demands of the Lab School and the regular classroom.

9. In the majority of schools, students are not perceived to be at an academic disadvantage in the home school because of the day missed.

10. In the majority of schools, the Lab School experiences of students are believed to offset the instructional time lost in being transported to the pull-out program.

11. In all home schools, Lab School students are either clustered in several classrooms in the grade level or placed randomly in classrooms across the grade level.

12. In most schools, there is no impact (positive or negative) on non-identified students who remain in the classroom on the pull-out day.

13. In the majority of schools, there is no impact (positive or negative) on the grade-level program at the home school (e.g., pacing of instruction, school cohesiveness).

14. In the majority of schools, students are not perceived to experience greater social success as a result of attending the Lab School.

15. A high percentage of principals are satisfied (73%) or very satisfied (11%) with the Lab School.

16. Under current conditions, gifted students could not be served better in the home school than in the Lab School. The following conditions were cited by principals:
    - Lack of teachers trained in education for the gifted
    - Lack of monetary resources for materials and supplies
    - Lack of appropriate equipment for higher level projects
    - Space restrictions
    - Inflexibility of scheduling to accommodate differentiated programs
    - Insufficient numbers of students to justify differentiated instruction
    - A diverse population of students with a variety of instructional needs

17. The majority of principals would prefer to serve gifted students in the home school rather than the Lab School if other options were available.
    - The majority of those who prefer serving students in the home school would elect to serve students through a differentiated plan of instruction in the regular classroom rather than through a pull-out program in the home school.

18. Feedback from principals has not been requested on a routine basis.

19. Most principals would prefer that the Lab School serve gifted fourth and fifth graders rather than fifth and sixth graders.

RECOMMENDATIONS:

1.. Retain the Lab School as a one-day, pull-out program.

2. Modify the process for developing the Lab School curriculum so that teachers at the Lab School prepare a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
    - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.
    - Has a heavy emphasis on the four core subject areas of math, science, social studies, and English with technology serving as a tool for research and presentations
    - Is integrated within the Lab School program.
    - Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
    - Follows the development process in place for the Department of Curriculum and Instruction.

3. Provide a systematic training program on the graduate level for teachers which offers strategies for teaching gifted students in order (1) to meet the instructional needs of gifted students when they are in the regular classroom as well as at the Lab School and (2) to allow

non-identified students to benefit from the unique instructional strategies that often are reserved only for gifted students.

4. Explore the possibility of offering acceleration opportunities at the home school for students who are academically gifted; decisions should be coordinated by principals and the Department of Curriculum and Instruction.

5. Send students in fourth and fifth grades to the Lab School rather than fifth and sixth graders. Serve students in sixth grade in the home schools by restructuring the middle school schedule and providing gifted resource teachers in middle schools.

6. Establish an advisory group for the Lab School comprised of representative principals, teachers, and supervisors to serve for a three-year term.

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

SURVEY OF HOME-SCHOOL TEACHERS

SURVEY OF HOME-SCHOOL TEACHERS

PURPOSE OF THE SURVEY: Surveys were sent in May 1997 to a random sample of sixty fifth- and sixth-grade teachers whose students attend the Laboratory School for the Academically Gifted (Lab School) to gather information regarding (1) type of student served, (2) the Lab School curriculum, (3) academic advantages and disadvantages for students who attend the Lab School, (4) social advantages and disadvantages for students, (5) impact of the pull-out program on the home school, (6) overall level of satisfaction among home-school teachers, and (7) other appropriate interventions for serving academically gifted fifth-grade and sixth-grade students. Thirty-nine home-school teachers responded for a return rate of 65%.

PERFORMANCE CRITERIA FOR SUCCESS: See Evaluation Proposal, page 32.

FINDINGS: See Survey of Home-School Teachers, Chart 4, page 76-77.

1. With regard to population of students served, approximately half the home-school teachers (54%) said students are moderately gifted.
   - The remainder of teachers indicated students are above-average, high-achieving students (33% of teachers), average students (8% of teachers), or profoundly gifted (5% of teachers).

   Teachers commenting indicated their Lab School students represent a mixture of abilities.

2. A high percentage of home-school teachers (74%) said students could not be served better in the home school.

   Teachers who prefer the Lab School cited (1) the struggle to challenge gifted students in the regular classroom given the varying levels of ability, (2) the additional resources available at the Lab School, (3) the opportunity for students to interact with students from other schools, (4) the lack of sufficient numbers of gifted students in some sixth-grade programs, and (5) the belief that instruction, resources, and experiences would not be equal in all programs if they were offered at the home schools.

   Teachers who prefer serving gifted students in the home school commented (1) that a pull-out program of instruction in the home school would provide continuity, (2) that a home-school program would alleviate the "tight" time schedule of fifth grade, and (3) that students complain of boredom at the Lab School.

3. With regard to the curriculum at the Lab School:
   - Approximately half the home-school teachers (52%) said the Lab School curriculum is not coordinated with the curriculum of the home school; over one-third (38%) of home-school teachers said they have no knowledge of whether the two curricula are coordinated.

   Teachers who commented (1) said the home school is not informed or consulted regarding the Lab School curriculum, (2) noted that Lab School activities do not tie in with the regular classroom and that a resource

CHART 4
SURVEY OF HOME-SCHOOL TEACHERS

SURVEY RESULTS		RESPONSE		PERCENTAGES
1.	This is a teacher survey.			
2.	How would you describe the majority of students from your classroom who attend the Laboratory School for the Academically Gifted (Lab School)?	A.	Profoundly gifted students (intellectual aptitude is well advanced beyond age group - IQ of 140 or more)	5%
		B.	Moderately gifted students (intellectual aptitude is well advanced beyond age group -IQ of 140 or more)	54%
		C.	Above-average, high-achieving student (intellectual aptitude is only slightly advanced, but motivation is significantly greater than age group)	33%
		D.	Average students (intellectual aptitude and motivation are average)	8%
		E.	Other	0%
3.	In your opinion, is the home school better suited overall to serve its gifted students?	A.	Yes	26%
		B.	No	74%
4.	Is the Lab School curriculum coordinated with the curriculum of the home school?	A.	Yes	10%
		B.	No	52%
		C.	No knowledge	38%
5.	Are there obstructions to offering a differentiated instructional program in the home school (e.g., lack of resources, insufficient number of students, inability to provide the same quality of instruction)?	A.	Yes	74%
		B.	No	26%
6.	Are opportunities for acceleration (i.e., meeting curricular goals at an earlier age or a faster pace than is typical) available in the home school for students who attend the Lab School?	A.	Yes	49%
		B.	No	51%
7.	Are opportunities for independent study available in the home school for students who attend the Lab School?	A.	Yes	54%
		B.	No	46%
8.	In your opinion, do students who attend the Lab School experience greater academic success overall as a result of participating in the program?	A.	Yes	44%
		B.	No	56%
9.	Can the majority of students who attend the Lab School manage the academic demands of the Lab School and the regular classroom?	A.	Yes	90%
		B.	No	10%
10.	Is the Lab School student at a disadvantage in the home school because a day is missed?	A.	Yes	28%
		B.	No	72%
11.	Is the loss of instructional time in transporting students to the Lab School offset by the Lab School experiences?	A.	Yes	67%
		B.	No	26%
		C.	Blank	7%

SURVEY RESULTS		RESPONSE	PERCENTAGES
12.	In your opinion, do students who attend the Lab School experience greater social success as a result of participating in the program?	A. Yes	28%
		B. No	69%
		C. Blank	3%
13.	How does removing students to attend the Lab School affect the academic progress of non-identified students on the pull-out day?	A.. Positively	15%
		B. Negatively	28%
		C. No impact	54%
		D. Blank	3%
14.	How does removing students to attend the Lab School affect your classroom program (e.g., pacing of instruction; classroom cohesiveness)?	A. Positively	5%
		B. Negatively	51%
		C. No impact	41%
		D. Blank	3%
15.	How are Lab School students grouped in the home school?	A. Clustered in several classrooms in the grade level	31%
		B. Placed randomly in classrooms across the grade level	64%
		C. Grouped together in one classroom in the grade level	0%
		D. Other	3%
		E. Blank	3%
16.	What is your overall level of satisfaction with the Lab School?	A. Very satisfied	10%
		B. Satisfied	49%
		C. Not satisfied	31%
		D. Blank	10%
17.	If other options were also available, which of the following would you prefer for serving gifted 5th- or 6th- grade students from your school?	A. Laboratory School for the Academically Gifted (Lab School)	51%
		B. A pull-out program in the home school which provides a differentiated instructional plan	28%
		C. A differentiated instructional plan provided in the regular classroom in the home school	10%
		D. Other	8%
		E. Blank	3%
18.	Have you participated previously in evaluations of the Lab School (e.g., surveys, interviews)?	A. Yes	3%
		B. No	95%
		C. Blank	2%

teacher in the home school could conduct advanced level activities in the home school by pulling out gifted students a few hours a week, and (3) emphasized the need for coordination between the two curricula and a correlation with the Standards of Learning.

- A high percentage of home-school teachers (74%) are of the opinion that under current conditions the home school is not better suited to offer a differentiated instructional program.

Teachers cited the following conditions: (1) lack of time to individualize instruction for a select group of students, (2) unfavorable reactions from other students when gifted students are given special work and the need to provide the same quality of instruction for all students, (3) as many as thirty students in a classroom which teachers consider too many, (4) lack of sufficient numbers of gifted students or the resources to provide a differentiated instructional program. (5) a number of activities on the fifth-grade level already which interrupt instructional time in the core areas (e.g., DARE, family life, physical education, strings, Humanities as a resource, and art), (6) limited staff, and (7) teaming/scheduling issues in sixth grade.

- Approximately half the teachers (51%) said opportunities for acceleration are not available at the home school.

One teacher said she provides challenging extension projects or activities for the gifted and highly motivated students rather than accelerating students.

- Approximately half the teachers (54%) said opportunities for independent study are available at the home school.

4. With regard to academic advantages and disadvantages for students who attend the Lab School:
   - The majority of home-school teachers (56%) indicated that students who attend the Lab School do not experience greater academic success overall as a result of participating in the program.

   - A high percentage of home-school teachers (90%) said students can manage the academic demands of the Lab School and the regular classroom.

A teacher commented that students should (and can) manage the academic demands of both schools but that she has been told for many years not to give Lab School students work on Lab Day, a practice with which she strongly disagrees. Another teacher agreed saying students manage the work because no new instruction or tests are given on Lab School day which she considers to be a wasted day for instruction in the home school.

One teacher commented that her students manage just fine even though instruction continues as planned in the home school because a detailed list of everything covered on the Lab School day (although a lot of work for the teacher) is provided to students.

- A high percentage of home-school teachers (72%) said students are not at a disadvantage in the home school because a day is missed.

One teacher who disagreed said that students are sometimes at a disadvantage but that the real disadvantage is to the rest of the class who are held back one day a week so that Lab School students do not get behind.

A teacher commented that parents have complained that students miss resource programs such as art and PE.

- The majority of home-school teachers (67%) said the loss of instructional time in transporting students to the Lab School is offset by the Lab School experiences.

A Western Branch teacher commented that students have too much travel time and that the program should be more centrally located.

5. A high percentage of home-school teachers (69%) said students do not experience greater social success as a result of attending the Lab School.

6. Approximately half the home-school teachers (54%) said that removing students to attend the Lab School has no impact on the academic progress of non-identified students on the pull-out day. Fifteen percent (15%) indicated the impact on non-identified students is positive.

7. Approximately half the home-school teachers (51%) indicated that removing students to attend the Lab School negatively impacts the classroom program (e.g., pacing of instruction; classroom cohesiveness). The remainder said there is no impact (41%), the impact is positive (5%), or they had no response (3%).

Teachers who commented generally indicated they have been told not to introduce new material on the Lab School day which they consider unfair to non-identified students. One teacher said the impact on the home-school program is even greater with the new reading series which requires more work to keep pace.

One teacher who commented said she believes a balance could be achieved if there were more communication between teachers from the two schools, indicating that in nine years of teaching she has never spoken to a Lab School teacher concerning her students.

Teachers who commented generally indicated that activities in the home school should not be "on hold" on Lab School day and that Lab School students should be required to keep up with the work given in the home school. As one teacher said, "It is extremely difficult to plan every single week for one day to be unimportant to some students and still not be a waste of time for other students."

One teacher commented that students who remain in the classroom tend not to take the work as seriously and to misbehave more.

8. A high percentage of home-school teachers (64%) said Lab School students are placed

randomly in classrooms across the grade level in the home school. The remainder (31%) indicated students are clustered in several classrooms in the grade level or responded "other" (3%).

9. The majority of home-school teachers are satisfied (49%) or very satisfied (10%) with the Lab School. The remainder are not satisfied (31%) or had no response (10%).

A teacher commented that communication with home-school teachers and parents each nine weeks is needed, noting that the equivalent of two weeks per grading period at the Lab School is a large block of time without communication between the two programs. This teacher also said that field trips need to be coordinated since her students attended the Marine Science Museum twice this school year.

A teacher who identified herself as a former teacher in the pullout program, former summer school teacher of the gifted, former writer of Lab School curriculum, and currently a classroom teacher with Lab School students said, "...it seems (students') time would be better spent staying in their home school and having a resource person who could tie it together a bit more."

10. Approximately half the home-school teachers (51%) indicated they would prefer the Lab School if other options were available. The remainder would prefer either a pull-out program in the home school which provides a differentiated instructional plan (28%) or a differentiated instructional plan provided in the regular classroom in the home school (10%).

A teacher said she prefers the Lab School because all gifted students are more likely to be exposed to the same instruction and resources.

A teacher said she prefers a pull-out program in the home school because it solves the problem of travel time and provides more opportunity for communication between the two instructional teachers especially with regard to monitoring student progress.

A teacher said the program should be eliminated for sixth-grade students since gifted students in sixth grade could be served in the home school.

11. A high percentage of home-school teachers (95%) said they have not participated previously in evaluations of the Lab School (e.g., surveys, interviews).

CONCLUSIONS:

The following conclusions are based on the responses of home-school teachers:

1. Home-school teachers are divided regarding the population of students who attend the Lab School. Approximately half consider the students to be moderately gifted. One-third consider students to be above average and high achieving; a small percentage consider the majority of students to be either profoundly gifted or average.

2. There appears to be no coordination of the Lab School and home-school curricula.

- Approximately half the home-school teachers said there is no coordination.
- More than one-third have no knowledge in this area.

3. Home-school teachers are divided as to whether opportunities for acceleration are available in the home school.

4. Home-school teachers are divided as to whether opportunities for independent study are available in the home school.

5. In the majority of home-school classrooms, students who attend the Lab School are not perceived to experience greater academic success overall as a result of participating in the program. Apparently the Lab School experiences are perceived to have no impact on the regular academic program.

6. The majority of students who attend the Lab School are able to manage the academic demands of the Lab School and the regular classroom.

7. In the majority of home-school classrooms, students are not perceived to be at an academic disadvantage because of the day missed.

8. In the majority of home-school classrooms, the Lab School experiences of students are perceived to offset the instructional time lost in being transported to the pull-out program.

9. In most home-school classrooms, students are not perceived to experience greater social success as a result of participating in the program.

10. In most schools, students who attend the Lab School are placed randomly in classrooms across the grade level.

11. In the majority of home-school classrooms, the pull-out program is perceived to have a positive impact (15%) or to have no impact (54%) on the academic success of non-identified students.

12. Home-school teachers are divided, however, regarding whether removing students to attend the Lab School has an impact on the classroom program (e.g., pacing of instruction, classroom cohesiveness).
    - Approximately half the teachers believe the impact is negative (51%). Comments of teachers reflect their concerns about requirements to keep home-school activities "on hold" on Lab School day and about the lack of communication with the Lab School.
    - The remainder believe there is no impact (41%), believe the impact is positive (5%), or offered no opinion (3%).

13. The majority of home-school teachers are satisfied (49%) or very satisfied (10%) with the Lab School.

14. Teachers believe that under current conditions the home school is not better suited to offering a differentiated instructional program. Conditions cited include the following:

- Lack of time to individualize instruction for a select group of students and to provide the same quality of instruction to gifted and non-identified students
- Current class sizes of students with diverse instructional needs
- Lack of sufficient numbers of gifted students
- Lack of resources to provide a differentiated instructional program
- Numerous programs on the fifth-grade level already which interrupt instructional time in the core subject areas (e.g., DARE, family life, physical education, strings, Humanities as a resource, and art)
- Inadequate staffing
- Teaming/scheduling issues in sixth grade.

15. Home-school teachers are divided as to whether they prefer the Lab School over other options if they were available.
- Fifty-one percent (51%) prefer the Lab School.
- Twenty-eight percent (28%) prefer a pull-out program in the home school which provides a differentiated instructional plan.
- Ten percent (10%) prefer a differentiated instructional plan provided in the regular classroom in the home school.
- Eight percent (8%) prefer "other."

16. Communication between Lab School teachers and the home schools is rare but needed regarding the following:
- Curriculum issues (e.g., content, field trips)
- Student issues (i.e., absences, grades)
- Ninety-five percent (95%) of surveyed teachers had never participated in surveys and interviews regarding the Lab School

RECOMMENDATIONS:

1. Retain the Lab School as a one-day, pull-out program.

2. Modify the process for developing the Lab School curriculum so that teachers at the Lab School prepare a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
- Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.

- Has a heavy emphasis on exemplary content from the four core subject areas of math, science, social studies, and English with technology serving as a tool for research and presentations.
- Is integrated within the Lab School program.
- Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
- Follows the development process in place for the Department of Curriculum and Instruction.

3. Explore the possibility of offering acceleration and independent study opportunities at the home school for students who are academically gifted. Decisions should be coordinated by principals and the Department of Instruction.

4. Establish effective communication between the home school and the Lab School. Reinstate visitations by Lab School teachers with home-school teachers (e.g., one Lab School teacher per home school every 9 weeks).

5. Establish an advisory group for the Lab School comprised of representative principals, teachers, and supervisors. The advisory group should establish guidelines that (a) recommend appropriate classroom activities for the Lab School, (b) ensure worthwhile instruction for non-identified students on Lab School day, (c) define communication processes between the Lab School and home schools.

6. Provide a systematic training program on the graduate level for teachers which offers strategies for teaching gifted students in order (1) to accommodate more fully the instructional needs of gifted students when they are in the regular classroom and (2) to allow all students to benefit from the unique instructional strategies that often are reserved for gifted students.

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

SURVEY OF PARENTS

SURVEY OF PARENTS

PURPOSE OF THE SURVEY: Surveys were sent in May 1997 to a random sample of 196 parents of current students at the Laboratory School for the Academically Gifted (Lab School) to determine their level of satisfaction with the program. One hundred and six (106) surveys were returned for a return rate of 55%.

PERFORMANCE CRITERIA FOR SUCCESS: See Evaluation Proposal, page 32.

FINDINGS: See Survey of Parents, Chart 5, page 86-87.

1. A high percentage of parents (85%) said the instructional program at the Lab School sufficiently challenges their children (i.e., exposes the child to knowledge he would not learn in the regular classroom and is of sufficient substance and rigor).

   A parent who disagreed said that too much time is devoted to career and college choices since Lab School students typically intend to go to college and to pursue interesting careers. This parent suggested that the "best, most academically demanding, content-area courses of study" should be provided.

   A parent requested a "more meaningful evaluation of each student." This parent also suggested providing more time at the school, perhaps beginning earlier in the day, and serving grades 2-4 adding that the enrichment instruction at the home school for grades 2-4 is inadequate.

   A parent who strongly disagreed said he has decided to remove his son from the gifted program because of the lack of challenge.

2. Approximately half the parents (54%) indicated opportunities for acceleration (i.e., meeting curricular goals at an earlier age or a faster pace than is typical) are not available in the home school.

   One parent commented that the emphasis is on having students conform to grade level expectations rather than meeting the individual needs of students.

   A parent said that test data indicated her son could take Algebra in 7th grade, but the course was not available at his school.

3. The majority of parents (59%) said opportunities for independent study are not available in the home school.

   A parent commented that her "A" student consistently finishes work ahead of the class and is told to read during that time rather than being given more challenging work.

4. A high percentage of parents (78%) rated the instructional program of the Lab School as above average (51%) or excellent (27%).

CHART 5
SURVEY OF PARENTS

	SURVEY QUESTION		RESPONSE	PERCENTAGES
1.	This is a parent survey.			
2.	In your opinion, does the instructional program offered at the Lab School sufficiently challenge your child (i.e., exposes your child to knowledge he would not learn in the regular classroom and is of sufficient substance and rigor)?	A.	Yes	85%
		B.	No	14%
		C.	Blank	1%
3.	Are opportunities for acceleration (i.e., meeting curricular goals at an earlier age or a faster pace than is typical) available in the home school for your child?	A	Yes	43%
		B.	No	54%
		C.	Blank	3%
4.	Are opportunities for independent study available in the home school for your child?	A	Yes	39%
		B.	No	59%
		C.	Blank	2%
5.	Based on your knowledge, how would you rate the instructional program of the Lab School?	A.	Excellent	27%
		B.	Above Average	51%
		C.	Average	20%
		D.	No knowledge	2%
6.	In your opinion, does your child experience greater academic success overall as a result of participating in the Lab School program?	A.	Yes	67%
		B.	No	32%
		C.	Blank	1%
7.	Is your child able to manage the academic demands of the Lab School and the regular classroom?	A.	Yes	96%
		B.	No	4%
8.	Is your child at a disadvantage in the home school because a day is missed to attend the Lab School?	A.	Yes	26%
		B.	No	74%
9.	In your opinion, is the instructional time lost in transporting your child to the Lab School offset by the Lab School experiences?	A.	Yes	76%
		B.	No	24%
10.	In your opinion, does your child experience greater social success as a result of participating in the Lab School program?	A.	Yes	58%
		B.	No	42%

SURVEY QUESTION	RESPONSE		PERCENTAGES
11. What is your overall level of satisfaction with the Lab School?	A.	Very Satisfied	44%
	B.	Satisfied	44%
	C.	Not Satisfied	11%
	D.	Blank	1%
12. If other options were also available, which of the following would you prefer for your child?	A.	Laboratory School for the Academically Gifted (Lab School)	42%
	B.	A pull-out program in the home school which provides a modified instructional plan	26%
	C.	A modified instructional plan provided in the regular classroom in the home school	13%
	D.	Other	8%
	E.	Blank	10%
	F.	Bad Entry	1%
13. Have you participated previously in evaluations of the Lab School (e.g., surveys, interviews)?	A.	Yes	12%
	B.	No	77%
	C.	Blank	11%

A parent whose child has attended several different schools disagreed saying her rating would be "below average."

A parent noted that the gifted program in the state in which they lived previously was in the home school, began in kindergarten, was more individualized, and was more academically challenging with parental involvement in setting yearly goals.

5. The majority of parents (67%) said their children experience greater academic success overall as a result of participating in the Lab School program.

Several parents commented that their children would be bored without the Lab School which would affect grades and general enthusiasm for school.

A parent commented that the lack of integration of the Lab School experience with home-school activities makes it difficult to conclude that there is a direct effect on home-school performance. This parent said the Lab School and regular classroom are viewed as separate and unrelated by students, teachers, and the administration.

6. A high percentage of parents (96%) said their children are able to manage the academic demands of the Lab School and the regular classroom.

A few parents who disagreed complained that there was a lack of effort in the home school to make it easier for students to attend the Lab School.

7. A high percentage of parents (74%) said their children are not at a disadvantage in the home school because a day is missed to attend the home school.

Several parents who disagreed complained that new material was introduced on Lab School day leaving the student at a disadvantage when graded work was given on the material the next day. A parent said her child missed all social events because the events were held on Friday which was her child's Lab School day.

8. A high percentage of parents (76%) said the instructional time lost in transporting children to the Lab School is offset by the Lab School experiences.

A parent who disagreed said their family determined that the problems caused by attending the Lab School outweighed the actual amount of time spent at the school.

9. The majority of parents (58%) said their children experience greater social success as a result of participating in the Lab School program.

One parent noted a contrast her child has experienced--a resentment by home-school classmates because of "special" treatment but benefits from interacting with Lab School students with similar interests and abilities.

Another parent commented that he would appreciate guidance from the Lab School regarding how to deal with their son's social problem rather than a progress report that states the obvious, "doesn't get along with others."

10. A high percentage of parents are either very satisfied (44%) or satisfied (44%) with the Lab School.

A dissatisfied parent complained about not receiving information regarding the program.

11. If other options were also available, 42% of parents would prefer the Lab School, 26% of parents would prefer a pull-out program in the home school which provides a modified instructional plan, and 13% would prefer a modified instructional plan provided in the regular classroom in the home school.

A parent who described herself as an "enthusiastic supporter of the Lab School" said she nevertheless would prefer that her child experience accelerated instruction in a class with age peers on a daily basis, a sentiment that was echoed by several other parents.

A parent said there should be more cooperative effort between the home school and the Lab School rather than isolating the Lab School from the home school and that with a little "tweaking" a "great thing" could be much better.

A number of parents expressed appreciation that their children have had the opportunity to attend the Lab School. Several parents said students have benefited particularly from the computer training offered at the Lab School.

One parent suggested a five-day pull-out program at the home school independent of the regular curriculum.

Another parent expressed the desire for integrated curricula, home-school teacher training, and a gifted program with a broader scope in general.

12. A high percentage of parents (77%) said they have not participated previously in evaluations of the Lab School.

CONCLUSIONS:

The following conclusions are based on the responses of parents:

1. Most students are perceived to be sufficiently challenged by the Lab School program.

2. Parents are divided as to whether opportunities for acceleration are available in the home school.

3. Opportunities for independent study are not available in the majority of schools.

4. The instructional program at the Lab School is considered to be above average to excellent by most parents.

5. The majority of students are perceived to experience greater academic success overall as a result of participating in the Lab School program.

6. Most students are able to manage the academic demands of the Lab School and the regular classroom.

7. Most students are not at a disadvantage in the home school because a day is missed to attend the Lab School.

8. For most students the instructional time lost in being transporting to the Lab School is offset by the Lab School experiences.

9. The majority of students are perceived to experience greater social success as a result of participating in the Lab School program.

10. Satisfaction is high among parents of Lab School students.

11. Parents are divided as to whether they would prefer the Lab School or other options if they were available.

12. Feedback from this group of parents apparently had not been requested at the time of this survey (information from other sources in the evaluation indicated that questionnaires typically are sent to parents during the last few weeks of school).

RECOMMENDATIONS:

1. Retain the Lab School as a one-day, pull-out program.

2. Modify the process for developing the Lab School curriculum so that teachers at the Lab School prepare a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
   - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.
   - Has a heavy emphasis on the four core subject areas of math science, social studies, and English with technology serving as a tool for research and presentations.
   - Is integrated within the Lab School program.
   - Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
   - Follows the development process in place for the Department of Curriculum and Instruction.

3. Explore the possibility of offering acceleration and independent study opportunities at the home school for students who are academically gifted. Decisions should be coordinated by principals and the Department of Curriculum and Instruction.

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

REVIEW OF THE LAB SCHOOL CURRICULUM

REVIEW OF THE LAB SCHOOL CURRICULUM

Dr. Joyce VanTassel-Baska, Professor of Gifted Education at The College of William and Mary, served as an external consultant to review the Lab School curriculum units. On Tuesday, July 17, 1997, Program Evaluation Team members met with Dr. VanTassel-Baska at the Center for Gifted Education of The College of William and Mary to discuss the review.

FINDINGS AND CONCLUSIONS:

The following points are the **observations of Dr. VanTassel-Baska** regarding the Lab School curriculum:

1. Overall instructional goals and objectives for the Lab School curriculum were not evident from curriculum documents and should be established.

   - Both the home school and Lab School staff should be able to describe the instructional goals and objectives of the Lab School and to describe fully the relationship between the Lab School curriculum and the core curriculum.
   - Goals and objectives of the Lab School program and the curriculum units should be documented fully in writing.

2. The Lab School curriculum currently is not articulated with the core curriculum. Articulation with the core curriculum of the home schools is recommended (i.e., an organized alignment of the two curricula which focuses on the ordering of skill development for gifted learners).

3. The Lab School curriculum units are above average when compared to the curricula for gifted students observed in other school divisions. The following points, however, are suggested to enrich the curriculum and to extend the core curriculum:

   - Align the Problem Solving Unit and the Chesapeake Bay Unit to national and state standards for math and science to achieve exemplary subject-area content and to upgrade activities.
   - Include assessment segments in each curriculum unit.
   - Integrate the Technology Unit fully with the math and science units to increase the effectiveness of the unit as a tool for presentation and research.
   - When a new curriculum unit is developed, begin with an established curriculum (i.e., commercially prepared) which has been recommended by experts in the field of gifted education as appropriate for high ability learners and then modify to meet the instructional goals and objectives of the Lab School.

4. To upgrade the Lab School curriculum overall, a comprehensive three-phase assessment of the span and ordering of skill development in the Lab School curriculum is recommended:
   - Review of general features of the Lab School curriculum (e.g., assessment procedures)
   - Review of exemplary subject-area features in the curriculum (e.g., worthiness of content)
   - Review of differentiation for gifted learners in the curriculum (e.g., instructional strategies such as hypothesis testing)

   These review phases follow the curriculum assessment model recommended by the Center for Gifted Education at The College of William and Mary (see Appendix 5, page 125). The assessment should include classroom observations as well as a review of documents.

5. The Lab School is an appropriate model for delivering gifted education to this age group as long as the instructional program is of high quality.
   - A high quality instructional program is achieved through an established process for sound curriculum development and staff development.
   - Contrary to the opinions of many educational researchers currently appearing in the literature on gifted education, a high quality instructional program which results from sound curriculum development and staff development can be delivered effectively through any organizational model (e.g., inclusion, ability grouping, or pull-out program).

RECOMMENDATIONS:

1. Modify the process for developing the Lab School curriculum so that teachers at the Lab School prepare a multi-year curriculum cooperatively with regular classroom teachers and with advice from the instructional supervisors to ensure that the curriculum:
   - Is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.
   - Has a heavy emphasis on the four core subject areas of math, science, social studies, and English with technology serving as a tool for research and presentations.
   - Is integrated within the Lab School curriculum.
   - Allows some students to develop some concepts (e.g., geometry) and skills (e.g., technology) at an earlier age than in the general curriculum.
   - Includes goals and objectives, exemplary content, and appropriate instructional strategies for gifted learners.
   - Follows the development process in place for the Department of Curriculum and Instruction.

2. Retain the Lab School as a one-day, pull-out program.

3. Provide a systematic training program for teachers which offers strategies for teaching

gifted students to increase the pool of teachers available for Lab School positions which will help ensure a high quality instructional program at the Lab School.

4. Implement the following suggestions for enriching the Lab School curriculum and extending the core curriculum:
   - Align the Problem Solving and Chesapeake Bay Units to national and state standards for math and science.
   - Include assessment segments in all curriculum units.
   - Integrate the technology unit with the math and science units.
   - When developing new curriculum units, begin with commercially prepared units which have been recommended by experts in the field of gifted education as appropriate for high ability learners and then modify to meet the instructional goals and objectives of the Lab School.

5. Conduct a three-phase review based on the model of the Department of Gifted Education of The College of William and Mary through Chesapeake Public Schools Department of Curriculum and Instruction.

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

ANALYSIS OF FINAL ELIGIBILITY SCORES FOR CURRENT STUDENTS

ANALYSIS OF FINAL ELIGIBILITY SCORES FOR CURRENT STUDENTS

PURPOSE OF THE ANALYSIS: In May of 1997 a member of the Program Evaluation Team analyzed the final eligibility scores of a random sample of eighty (80) current fifth-grade students at the Laboratory School for the Academically Gifted (Lab School).

An analysis of standardized test scores for all current fifth-grade students also was conducted to determine the highest, lowest, and average scores on the Iowa Tests of Basic Skills and the Cognitive Abilities Test. Records of sixth-grade Lab School students were not included in either analysis because the final eligibility requirements were different at the time sixth-grade students were selected for the Lab School.

PERFORMANCE CRITERION FOR SUCCESS:
Ninety-five percent (95%) of a sample of Lab School students from the 1996-97 school year exhibit high ability and high achievement as evidenced by a final score of 18 or above on the eligibility matrix.

FINDINGS: See Chart 6, page 98, and Chart 7, page 99.

The final eligibility score for enrollment of a student in the Lab School is determined from weighted scores in the areas of achievement, ability, and classroom performance. Students who attended the Lab School in the 1996-97 school year were required to have a minimum final eligibility score of 18 for admission. Approximately 98% of the students in the analysis (78 of the 80) had a final eligibility score at or above the minimum score. In addition, the average final eligibility score for the eighty students in the sample was 23 (see Chart 6, page 98).

The analysis of scores for all fifth-grade Lab School students on the Iowa Tests of Basic Skills revealed the following (see Chart 7, page 99):

- The highest percentile score in each of the categories of Reading, Math, and Composite was 99.
- The lowest percentile score in Reading was 54, in Math was 61, and on the Composite was 76.
- The average percentile score in Reading was 92, in Math was 94, and on the Composite was 95.

The analysis of scores for all fifth-grade Lab School students on the Cognitive Abilities Test revealed the following (See Chart 7, page 99):

- The highest score in each of the categories of Verbal, Quantitative, and Non-Verbal was 150+.
- The lowest score for Verbal was 104, for Quantitative was 103, and for Non-Verbal was 97.
- The average score for Verbal was 126, for Quantitative was 126, and for Non-Verbal was 121.

CHART 6
SAMPLE OF FIFTH-GRADE STUDENTS
1996-1997

HOME SCHOOL	STUDENT SAMPLE #	ELIGIBILITY SCORE
BRI	3	29
CWI	4	21
SEE	6	19
HE	13	21
GRI	20	21
GBI	23	22
BRI	27	25
BRI	31	19
GBI	52	22
GBI	73	23
GTP	80	28
SEE	87	21
GBI	91	23
WBI	92	30
WBI	95	21
GRI	102	32
CWI	107	25
EWC	111	22
SEE	113	19
RBW	114	19

HOME SCHOOL	STUDENT SAMPLE #	ELIGIBILITY SCORE
HE	116	36
GRI	121	23
WBI	124	19
BRI	126	24
EWC	130	26
HEE	132	34
WBI	136	18
WBI	138	20
WBI	141	31
SEE	143	29
BR	152	21
DCC	153	22
PL	166	19
CWI	168	29
GWC	184	19
SRI	188	25
BRI	193	21
SEE	204	19
CWI	209	24
EWC	210	19

HOME SCHOOL	STUDENT SAMPLE #	ELIGIBILITY SCORE
SEE	213	22
WBI	214	23
SWE	217	21
EWC	222	20
PORT	229	26
WBI	244	21
SEE	249	21
WBI	250	21
WBI	256	28
GRI	261	24
EWC	264	19
DCE	268	25
BRI	276	20
NH	283	17
GBI	285	24
GBI	290	28
GWC	291	20
CWI	296	22
SEE	299	23
GBI	311	20

HOME SCHOOL	STUDENT SAMPLE #	ELIGIBILITY SCORE
GBI	314	33
DCE	315	19
BRI	316	36
DCE	317	32
GRI	321	21
GBI	328	21
WBI	330	29
DCE	335	22
EWC	341	19
BRI	342	22
GRI	346	21
GBI	348	21
HE	364	20
GB	367	22
GRI	369	8
WBI	378	19
GWC	383	22
WBI	388	24
BRI	392	22
CWI	396	22
TOTALS	**80 Students**	**23 (Avg. Score)**

CHART 7
IOWA TESTS OF BASIC SKILLS
ALL FIFTH-GRADE STUDENTS

	READING	TOTAL MATH	COMPOSITE
HIGHEST SCORE*	99	99	99
LOWEST SCORE*	54	61	76
AVERAGE SCORE*	**92**	**94**	**95**

*Percentile Scores

COGNITIVE ABILITIES TEST
ALL FIFTH-GRADE STUDENTS

	VERBAL	QUANTITATIVE	NON-VERBAL
HIGHEST SCORE	150+	150+	150+
LOWEST SCORE	104	103	97
AVERAGE SCORE	**126**	**126**	**121**

CONCLUSION:

A high percentage of students who attended the Lab School in the 1996-97 school year (98%) exhibited high ability and high achievement as evidenced by a final eligibility score of 18 or above, thereby satisfying the performance criterion for success. The average scores for all fifth-grade Lab School students on standardized tests (Iowa Tests of Basic Skills and the Cognitive Abilities Test) confirmed that most were students of high ability and high achievement.

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

INFORMATION FROM CENTRAL OFFICE ADMINISTRATORS

INFORMATION FROM CENTRAL OFFICE ADMINISTRATORS

PURPOSE OF THE DATA COLLECTION:

Information was obtained from the Department of Budget and the Department of Personnel to answer the following research questions:

1. How does the cost of serving a student in the Lab School compare with the cost of serving an age peer in the regular classroom?
2. (a) How are teachers selected for the Lab School, and (b) what changes have occurred in staffing since the program began?

PERFORMANCE CRITERIA FOR SUCCESS:

1. The cost of enrolling a student in the Lab School exceeds the cost of enrolling a fifth- or sixth-grade student in the regular program.
2. Teacher selection is based on (a) a teacher's demonstrated ability to create and implement a differentiated instructional plan and (b) formal training in the teaching of the gifted.

FINDINGS:

1. With regard to the cost of serving a student in the Lab School:
   - The budgeted per pupil cost for all students in the 1996-97 school year was $5,509 (see Chart 8, page 103, and Appendix 7, page 128). The additional budgeted cost for a Lab School student was $999.

2. With regard to teacher selection for the Lab School:
   - Teachers have been selected based on principals' recommendations for outstanding teaching.
   - An endorsement for teaching gifted students as recommended by the Virginia Department of Education has not been required of Lab School teachers. The last two teachers hired, however, have the endorsement.
   - The pool of applicants for openings at the Lab School traditionally has been small. In-house training of teachers to qualify them for positions at the Lab School was suggested as a way to increase the pool of applicants.
   - At the time of hiring, Lab School teachers have been informed of the possibility of being rotated into the regular classroom after two or three years at the Lab School. There is, however, no formal system of rotating teachers between the Lab School and regular classrooms.

CONCLUSIONS:

1. With regard to the cost of serving a student in the Lab School:
   - The cost of enrolling a student in the Lab School exceeds the cost of enrolling a fifth-

CHART 8
PER PUPIL COST COMPARISON

Budgeted Per Pupil Cost for All Students 1996-1997	Additional Budgeted Per Pupil Cost for Lab School Students	Total Budgeted Per Pupil Cost for Lab School Students	Percentage Difference
$5,509	*$999	$6,508	18%

*$406,402 (total cost of the Lab School) \ 407 (total number of Lab School students) = $999

or sixth-grade student in the regular program by $1,000, thereby satisfying the performance criterion for success. Four hundred and seven students are served by seven full-time staff making a one-day, pull-out program cost effective.

2. With regard to teacher selection for the Lab School:
   - The teacher selection process for the Lab School is not standardized with regard to the advertising of positions, recruitment of candidates, and selection of teachers.
   - Criteria related to qualifications for teaching gifted students (e.g., ability to create and implement a differentiated instructional plan) have not been specified.
   - The informal system of rotating teachers between the Lab School and regular classrooms results in uncertainty on the part of Lab School teachers each year.

RECOMMENDATIONS:

The following recommendations relate to teacher selection for the Lab School:

1. Establish a standard process for hiring Lab School teachers, including the advertising of positions, recruitment of candidates, and selection of teachers. Clarify the personnel policy for rotating teachers from the Lab School into the regular classroom.

2. Specify qualifications for teaching gifted students as part of the criteria for teacher selection (e.g., technology standards, past experience working with gifted students, and an endorsement in gifted education or an agreement to complete).

3. Provide a systematic training program on the graduate level for teachers which offers strategies for teaching gifted students to increase the pool of candidates for Lab School teaching positions.

CHESAPEAKE PUBLIC SCHOOLS

SUPPORTING DOCUMENTATION TO THE STUDY:

CONTACT WITH OTHER SCHOOL DIVISIONS

CONTACTS WITH OTHER SCHOOL DIVISIONS

The instructional departments of eight school divisions in the state were contacted in May 1997 to determine how gifted fifth and sixth graders are served. School division personnel were asked to respond to questions regarding the delivery format for gifted education, student identification point and selection criteria, teacher selection, full-time staff in gifted education, and the status of formal evaluations of the gifted program.

FINDINGS: See Chart 9, page 107, and Appendix 8, page 129.

CONCLUSIONS:

1. Pull-out programs are used by the eight school divisions contacted to serve gifted fifth-grade students.
   - Five school divisions have partial pull-out programs similar to Chesapeake's program (students attend one day per week).
   - Three school divisions have full-time pull-out programs.

2. Middle School honors courses are used by the eight school divisions contacted to serve gifted sixth-grade students.
   - One has a partial pull-out program in addition to honors courses.
   - Four have full-time pull-out programs in addition to honors courses.

3. All school divisions deliver an interdisciplinary (in some cases thematic) curriculum to gifted fifth- and sixth-grade students.

4. Points at which gifted fifth- and sixth-grade students are first identified vary among school divisions. All provide initial screening before fourth grade.

5. All school divisions use multiple criteria for selection as recommended by the Virginia Department of Education. Combinations of four or more of the following are used: ability, teacher observations, achievement, parental checklist, scholastic performance, and other (e.g., awards and honors, interviews).

6. In seven school divisions the curriculum for the gifted program is articulated with the core curriculum.

7. Eight of the school divisions contacted hire only teachers holding the endorsement in teaching the gifted. The Virginia Department of Education recommends that teachers in pull-out programs (teaching only students identified as gifted) hold an endorsement in teaching the gifted.

8. The number of full-time staff members dedicated to the gifted program varies among school

CHART 9
CONTACTS WITH OTHER SCHOOL DIVISIONS
EDUCATIONAL SERVICES FOR GIFTED FIFTH- AND SIXTH-GRADE STUDENTS

	Delivery Format*	Identification Point/ Selection Criteria	Articulation with Core Curriculum	Teacher Selection with Gifted Endorsement****	Number of Full-Time Staff in Gifted Education (K-8)	Formal Evaluation
Chesapeake	5th: Partial pull-out program** 6th: Partial pull-out program** and middle school honors courses	Identification: 3rd Grade Criteria: Multiple***	No	No	1 supervisor and 6 teachers in the pull-out program Total: 7	Yes (1996-97)
Virginia Beach	5th: Partial pull-out program** 6th: "Gifted" resource teachers; exploratory and honors courses; magnet school for gifted who qualify	Identification: 1st Grade Criteria: Multiple***	Partial pull-out program: No Magnet school: Yes	Yes	1 director; 1 coordinator; 51 elementary & middle school teachers; 31 elementary & middle school resource teachers Total: 84	Yes
Norfolk	5th: Partial pull-out program** 6th: Differentiated instruction in the regular classroom	Identification: Kindergarten Criteria: Multiple***	Yes	Yes	1 coordinator; 3 specialists; 12 elementary & middle school teachers Total: 16	No
Portsmouth	5th: Partial pull-out program** 6th: Middle school honors courses	Identification: Kindergarten Criteria: Multiple***	Yes	Yes	1 supervisor (50%); 5 elementary teachers and 1 middle school teacher Total: 6.5	No
Hampton	5th: Partial pull-out program** and differentiated instruction in the regular classroom 6th:Middle school honors courses	Identification: Kindergarten Criteria: Multiple***	Yes	Yes	1 curriculum leader (50%); 7 teachers in elementary pull-out program Total: 7.5	Yes (1994-95)
Suffolk	5th: Partial pull-out program** 6th: Partial pull-out program** and middle school honors courses	Identification: Kindergarten Criteria: Multiple***	No	Yes	1 coordinator; 2 elem teachers; 1 middle school teacher (40%); 1 resource teacher Total: 4.4	No
Newport News	5th & 6th: Full-time pull-out program in core courses in four centers	Identification: 2nd Grade Criteria: Multiple***	Yes	Yes	1 supervisor; 6 elementary resource teachers; 49 elementary & middle school teachers Total: 56	No
Henrico	5th: Differentiated instruction in the regular classroom; full-time program for those who qualify 6th: Middle school honors courses; international baccalaureate program for gifted who qualify	Identification: Kindergarten through 3rd grade Criteria: Multiple***	Yes	Yes	1 educational specialist; 28 elementary & middle school teachers; 5 elementary resource teachers; 8 middle school resource teachers Total: 42	No
Chesterfield	5th: Differentiated instruction in the regular classroom; full-time pull-out program for those who qualify 6th: Cluster grouped in middle school honors courses; full-time pull-out program for gifted who qualify	Identification: Kindergarten Criteria: Multiple***	Yes	Yes	1 instructional specialist; 2 consultants; 4 math teaching consultants; 15 elementary teachers; 13 middle school teachers Total: 35	Yes (1989-1990)

*All school divisions deliver an interdisciplinary (in some cases thematic) academic curriculum to gifted fifth- and sixth-grade students.

**Students are pulled from the regular classroom one day each week.

***A combination of 4 or more of the following are used: ability, observations, achievement, parental checklist, scholastic performance, and other (e.g., awards, honors, portfolio, interviews).

****Endorsement (at least 15 credit hours in courses related to education for the gifted) is recommended by the Virginia Department of Education and is required for teachers in pull-out programs in some school divisions. Teachers in school-based programs who provide differentiated instruction to both gifted and non-identified students typically are not required to be endorsed.

divisions ranging from 4.4 to 84 (see Chart 9, page 107). Chesapeake serves 407 students in fifth and sixth grades with 7 full-time staff members making the Chesapeake one-day, pull-out program cost effective (see Chart 8, page 103, and Appendix 7, page 128).

9. Three school divisions contacted have conducted formal evaluations of their programs for the gifted since 1990.

RECOMMENDATIONS:

1. Retain the Lab School as a one-day, pull-out program.

2. Modify the process for developing the Lab School curriculum so that it is correlated clearly with the regular curriculum applying higher thinking processes and problem-solving strategies.

3. Require all Lab School teachers to acquire the endorsement for teaching the gifted which is a minimum of 15 semester hours as recommended by the Virginia Department of Education.

4. Send students in fourth and fifth grades to the Lab School rather than fifth and sixth graders. Serve students in sixth grade in the home school by restructuring the middle school schedule and providing gifted resource teachers in middle schools.

CHESAPEAKE PUBLIC SCHOOLS

APPENDICES

APPENDIX 1
INTERVIEWS WITH LAB SCHOOL TEACHERS
MAY 19, 1997

1. **How would you describe the majority of the students served by the Lab School (i.e., profoundly gifted; moderately gifted; above-average, high-achieving students; average students; other)?**

TEACHER 1: A small percentage are profoundly or moderately gifted. Most students are excellent workers who are self-motivated high achievers. The difference in abilities is not a problem because I emphasize productivity and allow students to work at their comfort levels.

TEACHER 2: The majority of students are high achievers. The others would fall into the categories of profoundly or moderately gifted. Extension activities are provided for the very gifted.

TEACHER 3: A small percentage of students are profoundly gifted. Most of the students are high achievers. I have a few students whose placement in the program I question, and I believe there are more gifted students who are not being served.

TEACHER 4: The Chesapeake School Division's policy is to include as many students as possible in the gifted program. We essentially have a "bell curve" which means we have all types of students. This is a function of the screening process.

TEACHER 5: Not all of my students are highly gifted. Students from lower income areas do not demonstrate the giftedness of students from higher income areas. This usually does not present a problem since students from areas which are similar socioeconomically attend the same days.

TEACHER 6: Students are generally high achievers.

2. **What are the goals of the Lab School curriculum?**

TEACHER 1: To expose students to challenges they can handle that are above and beyond what is available in the home school; to provide the opportunity to learn now what would be possible later on; to offer topics that are interest to students

TEACHER 2: To develop higher level thinking skills and problem-solving abilities whatever the content; to develop the skills to work within groups

TEACHER 3: To expose students to higher level thinking skills; to provide more in-depth knowledge through hands-on and experiential learning; to teach a self-evaluating process; to develop students' critical thinking skills; to provide a differentiated curriculum; to provide the opportunity for sharing ideas through group work with students of similar ability levels

TEACHER 4: To provide a differentiated education from what is offered at the home school in areas such as technology, math, and science; to provide citywide opportunities for students to interact with similar students--in some small schools the atmosphere is limiting for gifted students who may be a very small percentage of the population

TEACHER 5: To provide opportunities for teamwork and cooperation; to build leadership skills; to teach students who may be used to dominating how to compromise

TEACHER 6: The original goals were to meet the needs of the highly gifted in an academic environment with technology, math, and science. I try to stay on the cutting edge with regard to technology.

3. **How do you develop the Lab School curriculum? (i.e., framework such as Bloom's Taxonomy; how topics are determined; use of a set of basic skills in an area; interrelationships of individual Lab School curricula)**

TEACHER 1: The Lab School curriculum is not necessarily developed from the core curriculum. I inherited the curriculum I teach and have strived to make it challenging and applicable. Topics are driven by student interests. We try to look at all levels of intelligence (e.g., nonverbal). All Lab School curricula are related (e.g., the career education component is related to the technology curricula).

TEACHER 2: Science is the broad category. We try to incorporate all types of science (e.g., biology, chemistry) into the curriculum and encourage the use of higher level thinking skills. The Chesapeake Bay was chosen as a topic in part because of the new museum which is an accessible resource. Students often like the topic more as we go along. They tend to prefer the computer classes.

TEACHER 3: You will find higher level strategies for working with gifted students throughout the science curriculum. The topic is given, and I look for ways to stretch my knowledge to meet the needs of gifted students. I do not see much integration of the curricula at the Lab School.

TEACHER 4: Bloom's is the foundation.' I have looked at the core curriculum over the years, and we tie into the core in a broad sense. We choose subjects not taught in the regular classroom such as psychology and chemistry. Topics are based on student interest with problem solving an integral component. At one time we consulted with William and Mary to select appropriate curricula.

TEACHER 5: This is my first year at the Lab School. Students have worked on multimedia presentations using the general theme of the Chesapeake Bay. More research is available to students through technology. Sometimes my classes involve straight technology since I teach computer skills. I invite students from other classes to work on the computers when space is available. We emphasize problem solving skills.

TEACHER 6: Frankly, I must first look at my budget given the cost of computer software. I am aware of Bloom's Taxonomy, but I do not usually begin from that perspective. The class is product oriented and focuses on problem-solving skills. There is an emphasis on teamwork. Also, I am constantly aware that my courses must be appealing to students and their parents to maintain their interest in the Lab School. Many of my students have returned to tell me of the impact this greater exposure to technology in the Lab School has had on their lives.

4. **How is the Lab School curriculum tied in with the core curriculum?**

TEACHER 1: There is no tie-in with the core curriculum.

TEACHER 2: We have tried to avoid repetition of the core curriculum although most students have been to the Marine Science Museum on field trips previously. Themes are more appropriate for a pull-out program such as this and represent less pressure to the

students. Also, inclusion would not work well because of the pressures on the classroom teacher. There are so many demands on the classroom teacher that she would not be able to accomplish as much as we can in this setting.

TEACHER 3: There is an emphasis on not teaching the core because home-school teachers complain if there is duplication. We try to provide hands-on learning and experiments.

TEACHER 4: We try to avoid any overlapping with the core curriculum. I have looked at the textbooks and talked with the students.

TEACHER 5: My labs provide more depth than is available in the core curriculum. I try to avoid duplication with the core curriculum.

TEACHER 6: I mainly try to ensure that there is no duplication with the core curriculum. There are some tie-ins in the area of math. There definitely are cross-curriculum tie-ins here at the Lab School.

5. **What opportunities for acceleration are available at the Lab School (i.e., describe pacing of work for students)?**

TEACHER 1: I emphasize productivity. Students work at their particular comfort levels within individual time frames and choose what goes into their portfolios.

TEACHER 2: Students work on the same topics at the same pace generally. I can provide extensions if a student is ahead, but the student must be highly motivated.

TEACHER 3: Instruction is not individualized to provide for acceleration, but students can go as far as they wish. Students often go beyond what is required by working at home on projects.

TEACHER 4: I have organized learning centers that feature games based on Bloom's Taxonomy for students who finish ahead of the others. Grouping of students provides the opportunity for students to benefit from one another.

TEACHER 5: We have tried to separate fifth and sixth graders, but it is not always possible. Students from more affluent areas produce so much work. Students have the opportunity to conduct more research on the Internet.

TEACHER 6: I have always designed my classes to deal with the need for some students to accelerate. Students are required to complete one project; instruction is very individualized.

6. **What opportunities are available for independent study at the Lab School?**

TEACHER 1: Students bring in information to share, but they do not generally work on independent projects.

TEACHER 2: Independent projects are difficult in this setting because of the time constraints.

TEACHER 3: Instruction is not individualized to provide for independent study, but students can go as far as they wish.

TEACHER 4: Students are very self-directed and often bring in research done on their home computers.

TEACHER 5: Students do not work on independent projects.

TEACHER 6: Instruction is individualized.

7. **Explain how students in the Lab School are grouped (i.e., different grade levels; different schools; different teams; different abilities)?**

Teachers explained the grouping of students as follows. Students rotate among three teams of two teachers. Selection of students for teams is random although efforts are made to separate fifth and sixth graders if possible. Students receive eleven weeks of instruction one day per week from each team for a total of thirty-three weeks of instruction. The Transportation Department selects the group of students to attend on a given day based on students proximity to each other.

Grouping of students varies among teams to allow flexibility in meeting instructional needs. The following team arrangements are currently in place:

- Weatherspoon and Mumma team to provide communications and computer instruction. On a given day each teacher has half the students in the morning and half the students after lunch.
- Bondurant and Psimas team to provide problem solving/math and computer instruction. On a given day each teacher has half the students in the morning and half the students after lunch.
- Northern and Moss team to provide science instruction. A student receives instruction from one of the two teachers for the entire day.

Additional comments regarding the grouping are as follows.

TEACHER 1: Mr. Mumma and I experimented with each keeping a group of students for five weeks and then switching, but we found that it was difficult for the students to work at the computer the whole time they are here.

TEACHER 2: Students receive instruction from either Ms. Northern or me. They do not receive instruction from both.

TEACHER 3: Fifth- and sixth-grade students are separated into two groups for science instruction.

TEACHER 4: I team with Ms. Psimas, and we are very flexible. We usually see each group of students for half the day, but we also vary the grouping (e.g., a teacher may have the whole group for two hours if the time is needed).

TEACHER 5: I team with Ms. Bondurant to instruct a group of students, but I occasionally allow students from other classes to come into the computer lab if there is space available. Ms. Bondurant and I separate fifth and sixth graders. Mr. Mumma and I share the Internet.

TEACHER 6: The grouping of students is not always the same from year to year and depends on the teachers. I believe it is important for a student to receive instruction from all six teachers during the year in case there are personality conflicts.

8. **What are the academic advantages for a gifted student who attends the Lab School?**

TEACHER 1: Lab School students strengthen their problem-solving techniques. They get a "jump" on what is to come later, can often bypass lower level activities, and receive extra instruction.

TEACHER 2: In the field of education for the gifted, enrichment is defined as widening the knowledge of students and acceleration is defined as deepening the knowledge. At the Lab School we widen or enrich the knowledge that students would receive in the regular classroom. An academic disadvantage of attending the Lab School is that sixth-grade students complain that they miss work given in the home school when they are here. Frequently, however, they add that it is easy to pick up the information once they return so I doubt that it is really that much of a problem.

TEACHER 3: Students are exposed to things they are not exposed to in the regular classroom or receive more in-depth instruction. The skills gifted students are exposed to are important if they are to use their talents.

TEACHER 4: A major advantage is the atmosphere that is available here giving students the opportunity to be with students from other communities. Gifted students perform better if they are with other gifted students. Inclusion would be very difficult because of the technology offered at the Lab School. Also, regular classroom teachers spend so much time on remediation that the higher level thinking needed by gifted students probably would not occur because of time constraints.

TEACHER 5: Students are challenged and have the opportunity to be with other bright children.

TEACHER 6: There are two academic advantages: (1) the technology couldn't be duplicated in the home school (students receive 72 hours of computers in a two-year period), and (2) the opportunities available to learn both independently and as a group member. I would suggest that more math be offered at the Lab School.

9. **What are the social advantages for a gifted student who attends the Lab School?**

TEACHER 1: Students may come in from four different schools. They are reluctant to interact with students from other schools at first, but I switch students around in the classroom and they benefit from the interaction.

TEACHER 2: A major social advantage is that students with the same interests have the opportunity to work together. Also, students are no longer the "top" students in the class, but instead they are very similar to all the other students.

TEACHER 3: One of my students made the statement that "when a gifted student does gifted work, he is not gifted anymore." It took me a while to totally understand what the student was saying. In essence the statement means that when the student is in the regular classroom, he is different or special but at the Lab School he is similar to all the other students. This setting provides the opportunity for gifted students to be with students who are the same or more intelligent and students have to "stretch" themselves as a result.

TEACHER 4: I have mentioned that students (especially minority students or students from smaller schools) have the chance to interact with students who are similar intellectually to themselves which is a big advantage.

TEACHER 5: Students have the opportunity to meet children who are just as bright as they are.

TEACHER 6: The main social advantage is the friendships that develop. Also, students from lower socioeconomic backgrounds benefit from interacting with the other students.

10. **Is there sufficient instructional time given the time required for transporting students, and is the lost instructional time offset by the experiences at the Lab School?**

TEACHER 1: Students from Western Branch and Hickory often do not arrive until 9:25 a.m., and we do lose instructional time with these groups. I am sure that students in these areas sometimes miss their buses if they are delayed at all in getting back to the schools.

TEACHER 2: I have plenty of time in my science class because the students are with me the whole time each day. We need the time in order to complete science experiments.

TEACHER 3: I think it would be better if Chesapeake's policy were similar to the one we had in Virginia Beach which was that students did not enter their regular classrooms before leaving for the Lab School. This could vary from school to school, but I know that in some cases students just get settled in the home-school classroom and then have to leave.

TEACHER 4: These students are eleven and twelve years old--of course there is sufficient instructional time. Also, we begin when students arrive, and we just keep on going. Students like changing teachers, and they enjoy getting out of the regular classroom where they are under more pressure.

TEACHER 5: Of course I would like to have more time, but this really is not a problem.

TEACHER 6: Originally, the policy was to avoid giving homework, and I think that should not have changed. I think sixth graders may be pushed somewhat and that they perhaps could have their needs met at the middle school. The Lab School ideally should serve fourth and fifth graders. I am sure the Western Branch students are tired after the bus ride. Spreading the Lab School into several labs in the city would be one solution.

11. **What is your perception of home school attitudes toward the Lab School in general?**

TEACHER 1: I have had very little communication or interaction with the home school. It is difficult getting grades from the home school, and I have had to get them from students. I don't think home-school teachers could tell you what students do here, and if a student is out for a prolonged illness we are not told. The perception appear to be that the Lab School is "play" and that nothing is done here. Our goal is to increase communication.

TEACHER 2: Teachers are pretty positive. Communication could be better. I would like to know if a student is struggling in the home school. Teachers on the sixth-grade level may be more negative because of the workload involved for middle school students.

TEACHER 3: There is a big gap. We do communicate with teachers in the home school if needed. Sixth-grade teachers probably think students' needs could be met in the middle school. The Lab School may be more appropriate for fourth and fifth graders.

TEACHER 4: It really depends on the teacher, but we are trying to improve communication with the home school. We contact home-school teachers and parents, and we emphasize that students' grades come first. We are trying newsletters and other information-sharing ideas.

TEACHER 5: I was in the regular classroom last year, and I know that I liked having Lab School students in my classroom as did most of the teachers. I think that middle school teachers do not work with sixth-grade Lab students to make up their work as they should or as much as the elementary teachers work with their students because of the middle school mind set of letting students manage their work themselves.

TEACHER 6: Attitudes vary from school to school. Some of the teachers don't like having to keep Lab School students with the other students because of the day missed. Other teachers are thrilled to have a place to send bright students. It all depends on the flexibility of the teacher.

12. **What is your experience and training in general and in teaching gifted students?**

TEACHER 1: I piloted an at-risk program at Crestwood Intermediate just before coming to the Lab School. I was a fifth-grade teacher. I am working on a Master's in Administration. I do not have the "gifted" endorsement. I love teaching in the Lab School and being able to engage in conversations with children.

TEACHER 2: I have a Master's in Gifted Education. I worked in a summer program for the gifted in Gloucester. I was trained to be a high school English teacher but went directly into a master's program after student teaching. I have prepared curriculum units for teaching the gifted.

TEACHER 3: I have an endorsement in gifted education. I worked five years in Virginia Beach in the gifted program and was at the Old Donation Center which is a partial pull-out program for gifted students. Virginia Beach offers good training in teaching gifted students with many opportunities for professional growth. Dr. Thompson has made available as many opportunities as possible considering the small staff at the Lab School.

TEACHER 4: I have a degree in psychology as well as a CAS in administration. I taught in Richmond in an "open classroom" and was at the demonstration school. I have taken between 6 and 9 credits in gifted education and have been at the Lab School for approximately 7 years.

TEACHER 5: I taught at Greenbrier Intermediate. I have been taking workshops in teaching the gifted as well as technology training.

TEACHER 6: I have a background in math, science, and computers. I am endorsed in grades four through seven and in administration and have a Master of Education degree. I have been at the Lab School the longest of any of the teachers, since 1985.

13. **At one time Lab School teachers were rotated into the regular classroom. What are the advantages and disadvantages of rotating Lab School teachers?**

TEACHER 1: Well, I wouldn't want to leave the Lab School. I like the communication and rapport in the Lab School. Rotating would prevent me from carrying out my plans for the Lab School students. A system of rotation might improve communication and rapport with the home schools because more teachers would have an understanding of the Lab School.

TEACHER 2: I don't like the two-year limit. It takes three or four years to improve. Lab School teachers, however, need more training in teaching gifted students.

TEACHER 3: I don't want to leave the Lab School, but I was told I would be rotated out after three years. I believe it takes more than two or three years to become really proficient as a teacher in a setting such as this.

TEACHER 4: It might be difficult getting computer teachers--they must be very knowledgeable. John Mumma and Dinah Baker (a former teacher) have taught me everything I know about computers. Actually, natural rotation has taken place. We have some new teachers this year, and it is good to have new people. Jennifer Psimas is new, and we work well together. I would not want to leave.

TEACHER 5: I think it would be a bad idea. I have been here one year, and I am just getting good in the computer lab. I was told that I would be rotated out after two years. Rotation should not occur until after at least three years.

TEACHER 6: This is a scary prospect for me. I have spent the last twelve years in the Lab School and have devoted myself to computer instruction for this age group. I would not like to go to the regular classroom and being a computer resource person at one of the schools would not provide the opportunities for instruction available here. Of course a disadvantage to being in this setting is that we have had a stream of supervisors.

Curriculum Chronicle

Taba's teaching strategies

1. CONCEPT DEVELOPMENT
   - A. Organize and reorganize in information
   - B. Categorize information
   - C. Label information
   - D. List information
   - E. Compare information
2. INTERPRETATION OF DATA
   - A. Gather information
   - B. Organize information
   - C. Analyze information
   - D. Infer and explain by:
     - . concluding
     - . generalizing
     - . making cause/effect relationships
     - . giving support or evidence
3. APPLICATION OF GENERALIZATIONS
   - A. Apply information
   - B. Predict from information
   - C. Judge information
   - D. Note effects
4. RESOLUTION OF CONFLICT
   - A. Interpret attitudes, feelings

REFERENCE: Taba, Hilda. *Teaching Strategies and Cognitive Functioning in Elementary School Children.* San Francisco State College, Coop Research Project, No. 2404, San Francisco: 1966

Bloom's Taxonomy of Educational Objectives

	SKILLS
KNOWLEDGE	
1. Knowledge of Specifics	define
. knowledge of terminology	recognize
. knowledge of specific facts	recall
2. Knowledge of Ways and Means of Dealing with Specifics	identify
. knowledge of conventions	label
. knowledge of trends and sequences	understand
. knowledge of classifications and categories	examine
. knowledge of criteria	show
. knowledge of methodology	collect
3. Knowledge of Universals and Abstractions in a Field	
. knowledge of principles and generalizations	
. knowledge of theories and structures	
COMPREHENSION	translate
1. Translation	interpret
2. Interpretation	predict
3. Extrapolation	explain
	describe
	summarize
	demonstrate
APPLICATION	
1. Use Abstractions in Specific and Concrete Siutations	apply
	solve
	experiment
	show
ANALYSIS	connect
1. Analysis of Elements	relate
2. Analysis of Relationships	differentiate
3. Analysis of Organizational Principles	classify
	arrange
	group
	interpret
	organize
	categorize
	take-apart
	compare
SYNTHESIS	design
1. Production of a Unique Communication	redesign
2. Production of a Plan for Operation	combine
3. Derivation of a Set of Abstract Relations	add to
	compose
	hypothesize
	construct
	translate
	imagine
EVALUATION	interpret
1. Judgments in Terms of Internal Evidence	judge
2. Judgments in Terms of External Evidence	criticize
	decide

REFERENCE: Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H. Krathwohl, D.R., *Taxonomy of Educational Objectives, Handbook I: Cognitive Domain.* David McKay Co., New York: 1956.

APPENDIX 3
INTERVIEW WITH LAB SCHOOL ADMINISTRATOR
May 19, 1997

1. **How would you describe the majority of the students served by the Lab School (i.e., profoundly gifted; moderately gifted; above-average, high-achieving students; average students; other)?**

The majority of students are moderately to profoundly gifted.

2. **What are the goals of the Lab School curriculum?**

The goal is to stay ahead of the mainstream. The curriculum previously consisted of mini-courses without connection and was loosely organized. We looked at student interests and developed a curriculum that would encourage higher order thinking skills based on themes that are related and integrated. The teachers were somewhat reluctant, but they cooperated to produce the thematic curriculum we have this year. We first tried a packaged curriculum but found it unsatisfactory. The curriculum is challenging and technology related. The career education curriculum was an old unit and is not as integrated.

3. **How is the Lab School curriculum tied in with the core curriculum?**

We provide a "month at a glance" calendar to the home schools so they are always aware of what we are doing. The home school often shares a theme the Lab School is using.

The school division is in a transitional period implementing the new Standards of Learning mandated by the Virginia Department of Education. Our curriculum, therefore, is not linked yet to the Standards of Learning. Future Standards of Learning for the gifted are a possibility.

4. **What opportunities for acceleration are available at the Lab School (i.e., describe pacing of work for students)?**

Students at the Lab School generally work at the same pace. The emphasis is on higher level thinking skills for all. Acceleration opportunities would be more applicable to the home school.

5. **What opportunities are available for independent study at the Lab School?**

As with acceleration opportunities, independent study opportunities would be more applicable to the home school.

6. **Explain how students in the Lab School are grouped (i.e., different grade levels; different schools; different teams; different abilities)?**

Students are randomly mixed in the classroom. Students from different schools, different grade levels, and of differing abilities are in the same classroom. Efforts have been made to separate fifth and sixth graders, but this is not always possible.

Transportation determines which zones are represented since students are picked up in areas of close proximity on a given day.

The majority of students arrive at 9:00 a.m. Students leave the Lab School at 1:20.
Students currently spend 11 weeks with each teaching team: 11 weeks with Weatherspoon (communication skills) and Mumma (computer technology), 11 weeks with Bondurant (math/problem solving) and Psimas (computer technology), and 11 weeks with either Northern or Moss (science).

7. **What are the academic advantages for a gifted student who attends the Lab School?**

Students who attend the Lab School are able to "stretch" beyond what they would be capable of in the home schools. They have more experiences that reduce their boredom, and they engage in higher order thinking skills.

Students have the opportunity to spend much more time in technology-related activities such as researching on the Internet.

A full-time program for these students would be outstanding. The talents of these children need to be nurtured and their creativity enhanced. Otherwise, gifted students will become unmotivated.

8. **What are the social advantages for a gifted student who attends the Lab School?**

Students have the opportunity to be with children similar to themselves.

9. **Is there sufficient instructional time given the time required for transporting students, and is the lost instructional time offset by the experiences at the Lab School?**

Some time is lost in transporting students, particularly Western Branch students. Instruction, however, is intense during the time students are here. The fact that Lab School students receive 22 hours (three, seven-hour days) of computer instruction indicates that the amount of instruction received in the area of technology is far beyond what would be available otherwise.

A more central location such as the Center for Science and Technology would reduce the time lost in transporting students.

10. **What is your perception of home school attitudes toward the Lab School in general?**

Home schools are generally supportive. The reading specialist in the home school is our contact and also does testing for selection. Now that elementary schools have guidance counselors, they probably would be the best contact since they see more students. We would like to see the home schools more involved in the program and have increased efforts to improve communication with the home schools.

11. **What is the experience and training of Lab School teachers in general and in teaching gifted students?**

Individual teachers can better answer this. We strive to hire teachers who meet the Virginia Department of Education requirement of a minimum of 12 credits in courses related to teaching the gifted.

12. **At one time Lab School teachers were rotated into the regular classroom. What are the advantages and disadvantages of rotating Lab School teachers?**

We are pleased with the teachers we have now and would not want to lose them. Home schools would benefit from the expertise of the teachers, but these teachers would not be able to accomplish as much in the home schools as they do here because of the many demands on the classroom teacher.

APPENDIX 4
INTERVIEWS WITH STUDENTS ON TUESDAY, MAY 27, 1997

1. **How are the different classes at the Lab School related (for instance, the science and computer classes or problem-solving and communications classes)?**

Group I: In the problem-solving class we research various colleges based on the careers we are interested in and students have the opportunity in the computer class to research the colleges further.

Group II: In the computer class we used a program for finding information on careers which is related to Mrs. Weatherspoon's career education class.

Group III: We looked up careers in the computer class based on what we learned in the career education class.

Group IV: We used the computer to find out more information about the Chesapeake Bay which we are studying in science.
We discussed jobs related to the topics we are studying in science.
In Mrs. Weatherspoon's class we discussed job possibilities and then researched colleges that would prepare us for the jobs in Mrs. Bondurant's class.

Group V: We gathered information for our portfolios from all the classes.

2. **How are the things you learn in the Lab School related to what you learn in your home school?**

Group I: Science is related.
In other classes things we learn in the Lab School are completely different.

Group II: We studied water pollution in both the Lab School and the home school.

Group III: We studied positive and negative numbers in the home school and then in Mrs. Bondurant's class, but what we did in the Lab School was much harder.
We have computer classes in the home school, but the classes here are very different because we have the opportunity to use WEB pages.

Group IV: We do much more here.
The things we do are more complex.
The things we do here are more difficult.
I think the home school work is more difficult.
It is helpful that what we do in the Lab School is related to what we do in the home school.

Group V: The fundamentals are the same.
It is more challenging in the Lab School.
I don't consider it more challenging here, but it is better here.
I think it is better at the home school.

3. What opportunities do you have if you need to go at a faster pace in a class at the Lab School?

Group I: If we finish a project, we can go ahead in Mr. Mumma's class.

Group II: In Mr. Mumma's class we can move ahead if we finish three projects.
In Mrs. Bondurant's class we work on problem-solving puzzles if we finish ahead of the others.

Group III: We can go at a faster pace in science and in problem solving. Mr. Mumma lets us work at our own pace; there are no stages.

Group IV: Ms. Moss lets us go ahead.

Group V: It depends on the class and the topic.
Mr. Mumma usually lets us go ahead.
Mr. Mumma and Mrs. Weatherspoon usually let us go ahead. The class stays together in the other classes.

4. **What opportunities do you have if you need to go at a faster pace in your regular classroom?**

Group I: No opportunities.
No opportunities.
We are able to go at a faster pace.

Group II: We usually stay together in our regular class.
Group III: We don't really work in stages in our regular class.
We have to wait if we finish faster; it's not like here.
Group IV: At our home school we have parallel packets for math that allow us to move ahead.
We are just told to read; we do not move ahead in the regular classroom.
Sometimes we have additional assignments on the board; other times we just read.
Our teacher like to have everyone working at the same pace.
Group V: We have some opportunity to move ahead.
Mostly we stay together.

5. **What opportunities do you have at the Lab School to work independently on special projects related to the topics studied?**

Group I: We can do independent projects in science and career education.
Group II: We work independently but on the same assigned project.
Group III: In Mr. Mumma's class we can design t-shirts and there is more individualized learning.
The learning is individualized in Mrs. Weatherspoon's class.
Group IV: We are usually on the same project.
We work on the same project, but we can use our own ideas.
We do the same project but in different ways.
We can bring in other projects we have worked on independently.
Group V: We write in journals. We do independent projects in Mr. Mumma's class.
We work independently on some projects, but everyone does the same project.

6. **What opportunities do you have in your regular classroom to work independently on special projects related to the topics studied?**

Group I: We do not have the opportunity to do independent projects.
We are able to do independent projects (2 students).
Group II: We have more opportunities than we have here.
Group III: We can do independent projects if we finish everything or if we need extra credit.
Group IV: We have the opportunity to do independent projects (3 students).
We do not do independent projects.
We work independently on the same projects.
Group V: We can do independent projects in science and social studies if we choose.
We do book reports every month.
We can do projects for extra credit.

7. **Does attending the Lab School affect your ability to do the work required in your regular classroom?**

Group I: My class goes to the library to research projects the day I attend the Lab School.
The teacher does not go ahead with instruction so I do not get behind.
Sometimes I do get behind.
My teacher helps me stay caught up.
Group II: I have double the work (2 students).
I just have trouble remembering to bring in my Lab School projects because I only attend once a week.
The teacher lets the class play games or do fun activities on Lab School days so it is easy to catch up (2 students).
Group III: It is not a problem (2 students).
They usually just review on Lab School day.
I have loads of work to make up and miss my music class. I also miss library time to research projects.

Group IV: I don't miss anything. The class does fun activities on Lab School days.
I can make up any work another day.
I miss library time. (2 students)

Group V: Catching up is not a problem. (3 students)
I can do most of the important things I miss as homework.

8. Are the activities offered at the Lab School of interest to you?

Group I: Yes (all students)

Group II: I am not as interested in the problem-solving class.
I like the computer classes and science class.
I like everything.

Group III: I like the computer classes and the problem-solving class.
I like Mr. Mumma's computer class and Mrs. Bondurant's problem-solving class.
Some of the activities are of interest. The career education class is a lot of work.
I like the computer classes and Mrs. Bondurants's class. Science is OK. Mrs. Weatherspoon's class is closest to home-school classes.

Group IV: They interest me--especially the information on colleges and jobs.
They are interesting because they help you learn about yourself.
I like the classes but some of the activities in the classes do not interest me.
Sometimes the activities are boring.
I learn a lot more by being here.

Group V: The activities help with my work at the home school and help us plan for the future.
I like the computers.
I like the computer classes and studying about careers and colleges. I would like to see more interactive activities with all classes hooked to the Internet. Some of the computers are outdated.

9. Are the activities offered at the Lab School challenging to you?

Group I: Yes (all students)

Group II: We took the pre-SAT test and that was very challenging.
I would say there is a mixture--some activities are very challenging, other are not.
The Lab School is challenging.

Group III: Mrs. Bondurant's class is the most challenging.
Mr. Mumma gives instructions but then lets the student do the project. I like that.
Some of the activities are challenging, and some are not.

Group IV: Mrs. Bondurant's class is challenging.
I had already learned what we are doing in computers and science so they weren't that difficult.
Mr. Mumma's class is hard.
Mrs. Bondurant's puzzles are challenging.
The projects we do are challenging.

Group V: The activities are challenging.
The activities are not really hard.
Some of the activities in some of the classes are challenging.

10. What do you like best about the Lab School?

Group I: The projects we do are "neat."
I like being in class with students who are on the same level. I like getting away from the home school.
I like the hands-on activities.
I like switching classes (3 students).

Group II: I like getting to use the computers a lot and having computer programs not available in the home school. (3 students)
I like the projects. (3 students)

Group III: I like Ms. Psimas' class. She doesn't tell us how to do everything.
I like Mr. Mumma's music project.
I like the fact that Ms. Psimas' projects are not all mapped out.
I like Mr. Mumma's class because it is challenging.
I like the computer classes.

Group IV: I like the computer classes.
I like the activities but not so much what we learn. The activities are fun.
I like working with the WEB site in computers.
The mazes in Mrs. Bondurant's class were fun, and I like the computer classes.

Group V: I like the Bay Watchers Team and the field trips. (2 students)
I like the "hands-on" activities.
I like Mrs. Mumma's and Ms. Psimas' computer classes.

11. What do you like least about the Lab School?

Group I: Some of the activities in Mrs. Weatherspoon's career education class are boring.
The lectures in Mrs. Bondurant's class are boring.

Group II: I don't like Mrs. Weatherspoon's career education class.
I don't like studying careers when I am only in 5th grade.
I didn't like having to interview for the career education class--I couldn't always find someone to interview.

Group III: The homework (3 students)
I like everything.
Science is a lot of work.
Mrs. Moss's class (science) is too easy--we just do research.

Group IV: I didn't like the career classes.
I don't like leaving the home school. I think time should be fit into the regular schedule for this program.

Group V: The computers need to be more up to date and more powerful with better software in all the classes.

12. How would you describe your overall level of satisfaction with attending the Lab School (very satisfied, satisfied, not satisfied)?

Group I: Satisfied
Satisfied
Very satisfied

Group II: Very satisfied
Very satisfied
Satisfied
Satisfied
Very satisfied

Group III: Satisfied
Very satisfied to satisfied
Very satisfied
Satisfied

Group IV: Satisfied
Satisfied
Satisfied
Very satisfied to satisfied
Satisfied

Group V: Satisfied
Satisfied
Satisfied

13. **What opportunities have you had previously to express your opinions about the Lab School?**

Group I: Teachers have asked our opinions. (all students)
Group II: Teachers have asked our opinions. (all students)
Group III: Teachers have asked our opinions. (all students)
Group IV: We were given questionnaires. (all students)
Group V: We have answered questionnaires. (all students)

APPENDIX 5

Assessment Criteria

General Curriculum Features
Phase I

Rationale and Purpose
- —substantive and worthy?
- —clear and understandable?
- —order of topics and concepts makes sense within and across grades?

Instructional Objectives
- —clear and understandable?
- —measurable?
- —related to overall rationale and purpose?

Activities
- —appropriate balance of teacher direction/student direction?
- —developmentally appropriate activities?
- —activities clarify, reinforce, and extend content?
- —numerous hands-on activities?

Instructional Strategies
- —varied strategies (e.g., inquiry activities, lecture, laboratory work, independent work)?
- —opportunities for open inquiry that include problem finding, problem solving, and decision making?
- —varied grouping approach including opportunities for small-group and independent work?
- —use of various types of questions (e. g., convergent, divergent, evaluative)?
- —worthwhile, related extension activities included?

Assessment Procedures
- —presence of pre-post assessment measures?
- —use of authentic assessment that measures attainment of the objectives?
- —criteria for student assessment stated?
- —assessment based on student's ability to get and to use information?

Materials/Resources
- —engaging style of presenting information?
- —background material for teachers, such as explanation of concepts and identification of students' common misconceptions?
- —bibliographies for teacher support and student extension?
- —supportive handout materials (informational, worksheets, etc.)?

Technology (if applicable)
- —actively engages students in higher order thinking skills and activities?
- —enhances and complements instruction?
- —provides simulations of models or experiments that cannot be experienced with real materials?

Exemplary Science Features
Phase II

Science Content
- —important science concepts covered in depth?
- —science is accurate and presented understandably?
- —topics linked to broad scientific concepts (intradisciplinary connections)?
- —topics linked to ideas outside of science (interdisciplinary connections)?
- —balance of qualitative and quantitative information?
- —balance of theoretical and practical science?
- —presence of moral, ethical, and historical dimensions of science and technology?

Science Process
- —opportunities for open-ended scientific investigation (not simply verification exercises)?
- —laboratory and field work integral to and integrated with the curriculum?
- —opportunities for students to work together to investigate a real world scientific technological problem?
- —students taught to build and test hypotheses?
- —allowance for questioning of assumptions and diverse opinions?

Tailoring for Special Populations
Phase III

Differentiation for High-Ability Learners
- —provisions for acceleration and compression of content?
- —use of higher order thinking skills (e. g., analysis, synthesis, evaluation)?
- —integration of content by key ideas, issues, and themes?
- —advanced reading level?
- —opportunities for students to develop advanced products?
- —opportunities for independent learning based on student capacity and interest?
- —use of inquiry-based instructional techniques?

A. Curriculum Responsiveness to the Intellectually Gifted
- —sufficiently advanced in content?
- —complex applications of concepts?
- —product demands appropriately designed?

B. Curriculum Responsiveness to the Science Prone
- —opportunities for in-depth, independent work on selected topics?
- —immersion in open-ended exploration?
- —opportunities to work with a mentor?

C. Curriculum Responsiveness to Girls
- —presence of information about contribution of women to science?
- —opportunities to read about women in science?
- —avoidance of bias and gender stereotyping in resource materials and career information?
- —use of varied teaching strategies, including hands-on, discussion, and cooperative learning?
- —use of conceptual organizers for teaching new material?

D. Curriculum Responsiveness to Minority Concerns
- —incorporation of effective social experiences?
- —global perspective with attention to non-Western cultures?
- —emphasis on analogical reasoning and associative thinking?
- —presence of information about contribution of minorities to science?
- —avoidance of bias and ethnic stereotyping in resource materials and career information?

E. Curriculum Responsiveness to Students with Disabilities
- —options for individualized programming?
- —opportunities for variety of response modes?
- —provision of tools for compensation?
- —use of varied formats for guided and independent practice?

Johnson, D. T., Boyce, L. N., & VanTassel Baska, J. (1995). Science curriculum review: Evaluating materials for high-ability learners. Gifted Child Quarterly, 36-43.

APPENDIX 6
Title of your session
GATE Lab School
Student Evaluation

Student_____Home School_____Day_____

The student's progress is rated using the following scale:
5 = consistently observed 2 = infrequently observed
4 = frequently observed 1 = not observed
3 = generally observed NE = not evaluated

I.	TASK COMMITMENT completes assigned tasks & projects; is prepared for class; motivated	5	4	3	2	1	NE
II.	CLASS PARTICIPATION contributes meaningfully to discussions; evaluates decisions; analyzes situations; communicates	5	4	3	2	1	NE
III.	GROUP SKILLS works well with others; cooperates; shows leader-ship skills; helper; demonstrates positive attitude; demonstrates appropriate behavior skills	5	4	3	2	1	NE
IV.	QUALITY OF WORK demonstrates elaboration & thoroughness; gives attention to detail; shows mastery of skills taught; listens & follows directions; shows creativity	5	4	3	2	1	NE

COMMENTS

_____
_____
_____

GATE Teacher_____Date_____

____Parent's Signature_____
(if checked)

____Attendance (checked if adequate)

MID-CYCLE EVALUATION
GATE LAB SCHOOL

Date:_____

Dear Parents,

Since this is the halfway point in our curriculum, it is our pleasure to inform you that your child, _____, is working at or above expectation level in the following area(s) at the GATE Lab School:

____group skills

____attendance

____responsibility

____out of class assignments

____quality class projects

____listening & following directions

____communication skills

____behavior

____productivity

____task & time commitment

____motivation

Comments:

_____

_____

_____

Teacher:_____

APPENDIX 7
EVALUATION OF LABORATORY SCHOOL FOR THE ACADEMICALLY GIFTED
BUDGETED EXPENDITURES

Salaries & fringe benefits for teachers	$286,119.00
Salaries for substitutes	3,861.00
Salary for instructional supervisor	62,512.00
Salary for secretary	20,688.00
Fringe benefits for supervisor and secretary	19,022.00
Total salaries & fringe benefits	**$392,202.00**
Supplies - paper, copier	1,000.00
General supplies - Lab School	7,200.00
General Supplies - Lab School supervisor	1,000.00
Total supplies - Lab School	**$9,200.00**
Transportation	$5,000.00
TOTAL LAB SCHOOL	**$406,402.00**

APPENDIX 8
TELEPHONE CONTACTS WITH OTHER SCHOOL DIVISIONS

Virginia Beach School Division
Conversation with Terri Skidmore, Secretary in the Office of Gifted Education, May 1, 1997
(Joe Burnsworth is the interim director and was unavailable: Ms. Skidmore has worked in the Office of Gifted Education for seven years.)

1. What is the format for delivering services to gifted fifth and sixth graders in your school division?
   - Fifth-grade students are served by a one-day pullout program at the Old Donation Center (grades 2-5) which offers intellectual and academic programs. Programs are also available for students whose test scores qualify them for a math/science program.
   - Sixth-grade students are served through exploratory programs which are offered at almost every middle school. Each middle school has a resource teacher for the gifted, and students also may take advanced level courses. After-school and Saturday courses are also available including a science program offered by Tidewater Community College.
   - Sixth-grade students may also apply to the Kemps Landing Magnet School which they attend full-time.
   - Curricula for gifted students in fifth and sixth grades are interdisciplinary and thematic. Fifth-grade students who qualify through audition also receive instruction in the visual arts and dance at the Old Donation Center one day each week.

2. When are fifth- and sixth- grade students in the gifted program first identified? What is the selection criteria?
   - Students are identified for the gifted program from the spring of first grade through the senior year.
   - Multiple criteria are used which include an ability test (currently a nonverbal abilities test on which a student must score in the 97th percentile), academic teacher observations, advanced courses taken, achievement tests such as the ITBS, GPA, parental rating, interview, and a portfolio in the arts area.

3. Is the curriculum for the gifted articulated with the core curriculum?
   - The Old Donation Center curriculum does not necessarily follow the core curriculum.
   - The magnet school curriculum is an accelerated version of the core curriculum.

4. Who teaches gifted fifth and sixth graders?
   - Teachers are selected by the principals of the Old Donation Center and the Kemps Landing Magnet School. Any instructor who teaches half time or more must have an endorsement in educating the gifted which consists of 12 credit hours in the area of education of the gifted.

5. How many staff members are dedicated to the gifted program?
   - Director of Gifted Education
   - Gifted Education Coordinator
   - 51 full-time elementary and middle school teachers
   - 31 full-time elementary and middle school resource teachers

6. Are gifted programs formally evaluated?
   The Office of Accountability recently audited the program. As a result of the audit, changes are being made in screening instruments, including the switch to a nonverbal abilities test, in order to identify more students.

Norfolk School Division

Conversation with Jane Anne Snyder, Gifted Education Specialist, May 1, 1997

1. What is the format for delivering services to gifted fifth and sixth graders in your school division?
   - Norfolk has chosen to identify gifted students in grades K-12 based on general intellectual aptitude.
   - Fifth-grade students are served through the Field Lighthouse program which is a one-day pullout program (3 schools have elected to offer the program at the home school).
   - Sixth-grade students are offered differentiated instruction within the regular classroom. Staff are assigned to work with teachers to provide the differentiated instruction but do not work directly with students. In most classes students are grouped according to achievement with gifted students placed in the high-achieving group. Gifted students are pulled from the regular classroom occasionally for special seminars.
   - Curricula for gifted students in fifth and sixth grades are interdisciplinary.

2. When are fifth- and sixth-grade students in the gifted program first identified? What is the selection criteria?
   - Kindergarten
   - Norfolk uses multiple criteria as required by the Virginia Department of Education to identify gifted students. Weighted scores on aptitude and achievement, portfolios, rating scale by teacher, rating scale by parents, and honors and achievement are used to obtain a total score.

3. Is the curriculum for the gifted articulated with the core curriculum?
   - Curricula for gifted students are articulated with the core curriculum. Curricula were recently rewritten in Norfolk and include a variety of models which feature rubrics (i.e., criteria clarified up-front with students), an emphasis on problem solving, and a social studies base.

4. Who teaches gifted fifth and sixth graders?
   - Norfolk has a staff of teachers who teach only gifted students. Teachers are endorsed in educating the gifted.

5. How many staff members are dedicated to the gifted program?
   - 1 senior coordinator
   - 3 specialists
   - 12 teachers (elementary and middle schools)

6. Are gifted programs formally evaluated?
   - Norfolk is currently working on an evaluation plan to determine the impact of the program on students.

Portsmouth School Division

Conversation with Erma Curtis-Evans, Supervisor for Gifted and Talented Programs, May 5, 1997

1. What is the format for delivering services to gifted fifth and sixth graders in your school division?
   - Fifth graders are served in a one-day pull-out program. Five gifted resource labs serve students based on geographical locations.
   - Sixth graders take middle school honors courses along with in-services and mini-conferences offsite.
   - Curricula for gifted students in fifth and sixth grades are interdisciplinary.

2. When are fifth- and sixth- grade students in the gifted program first identified? What is the selection criteria?
   - Kindergarten teachers are asked to nominate gifted students in the spring.
   - Identification is continuous in K-12.

3. Is the curriculum for the gifted articulated with the core curriculum?
   - At the request of the School Board, thematic units have been correlated with the Standards of Learning.
   - The Renzulli model and Bloom's Taxonomy at the three highest levels are used.

4. Who teaches gifted fifth and sixth graders?
   - Teachers with endorsements in educating the gifted.

5. How many staff members are dedicated to the gifted program?
   - Gifted and Talented Supervisor (50%)
   - 5 elementary teachers and 1 middle school teacher along with middle school and secondary teachers who teach honors and AP courses

6. Are gifted programs formally evaluated?
   - Portsmouth has a new program evaluator and anticipates an evaluation of the gifted program next year.

Hampton

Conversation with James Wilson, Curriculum Leader for the Gifted, May 16, 1997

1. What is the format for delivering services to gifted fifth and sixth graders in your school division?
   - Fifth-grade students receive differentiated instruction in the classroom; gifted students attend a pull-out program one day per week. The curriculum is being rewritten to cluster gifted students in the home school and continue the pull-out program.
   - Gifted sixth-grade students take middle school honors courses. The sixth-grade curriculum is being rewritten as a specific curriculum for this group and will be an extension of the core curriculum.
   - Current curricula for gifted students in fifth and sixth grades are interdisciplinary and thematic.

2. When are fifth- and sixth- grade students in the gifted program first identified? What is the selection criteria?
   - Students are first identified in the third grade or from Project Leap which is a guided-lesson program for first and second graders.
   - Multiple criteria are used, including standardized tests, ability, teacher rating, and achievement.

3. Is the curriculum for the gifted articulated with the core curriculum?
   - The curriculum for gifted students follows basic themes of the classroom.

4. Who teaches gifted fifth and sixth graders?
   - Teachers in the pull-out programs have endorsements for teaching gifted students; most also have masters degrees in teaching the gifted.

5. How many staff members are dedicated to the gifted program?
   - Curriculum Leader for the Gifted (50% of time)
   - 7 teachers in the elementary pull-out program
   - No middle school teachers are dedicated entirely to the gifted program

6. Are gifted programs formally evaluated?
   - In 1994-95 an external consultant from Virginia Teach evaluated the program. Curriculum initiatives mentioned are a direct result of the evaluation.

Suffolk School Division

Conversation with Jackie Walker, Coordinator of Special Programs, May 1, 1997

1. What is the format for delivering services to gifted fifth and sixth graders in your school division?
   - Fifth- and sixth-grade students are transported to the Center for Gifted Education one day each week.
   - Curricula for gifted students in fifth and sixth grade are interdisciplinary. Students who qualify also receive music and art enrichment one or two periods each week.
2. When are fifth- and sixth- grade students in the gifted program first identified? What is the selection criteria?
   - Students are identified during the second semester of kindergarten and then again in third grade. Students in the gifted program in fourth grade remain in the program.
   - Criteria used for selecting students are performance, in-class traits, rating scales, and awards and honors. Achievement is no longer used.
3. Is the curriculum for the gifted articulated with the core curriculum?
   - The coordinator expressed the need to work on the curriculum.
4. Who teaches gifted fifth and sixth graders?
   - Teachers are endorsed in educating the gifted.
5. How many staff members are dedicated to the gifted program?
   - Coordinator of special programs
   - 2 full-time elementary teachers and 1 part-time middle school teacher
   - 2 K-3 itinerant teachers
   - 1 full-time resource teacher
6. Are gifted programs formally evaluated?
   - No formal evaluations are conducted.

Newport News School Division

Conversation with Tommy Ellison, Supervisor of Education for the Gifted, May 1, 1997

1. What is the format for delivering services to gifted fifth and sixth graders in your school division?
   - Fifth and sixth-grade students are served in full-time programs for the gifted. Four centers operate within regular elementary schools. Gifted students are instructed by a team of teachers in the core courses but are heterogeneously grouped with their age peers in arts courses.
   - Curricula for gifted students in fifth and sixth grades are interdisciplinary.
2. When are fifth- and sixth- grade students in the gifted program first identified? What is the selection criteria?
   - Students are identified for the full-time program in 2nd grade based on multiple criteria which include aptitude, achievement, scholastic performance, and teacher rating scale.
   - Another group of students are served based only on scholastic performance.
3. Is the curriculum for the gifted articulated with the core curriculum?
   - Core courses are modified for individual student needs. Once students demonstrate that they have mastered the objectives of the core courses, they accelerate but not beyond two years. Newport News emphasizes enrichment and interaction with other students rather than focusing on moving students along.
4. Who teaches gifted fifth and sixth graders?
   - Teachers are endorsed in education for the gifted and teach only gifted students.
   - The supervisor and principals select teachers.

5. How many staff members are dedicated to the gifted program?
   - 1 supervisor
   - 6 resource teachers (K-5)
   - 49 elementary and middle school teachers

6. Are gifted programs formally evaluated?
   - Evaluations are informal and ongoing through an advisory board with representatives from each school. Supervisors, principals, and assistant principals observe classes on an ongoing basis also.

Henrico School Division
Conversation with Regina Schwab, Educational Specialist, May 13, 1997

1. What is the format for delivering services to gifted fifth and sixth graders served in your school division?
   - Fifth-grade students are offered differentiated instruction in the home schools and those who qualify attend a self-contained zone center (full-time program).
   - Sixth-grade students are offered advanced courses in the core content. An international baccalaureate program is available to students who qualify.
   - Curricula for gifted students in fifth and sixth grades are interdisciplinary.

2. When are fifth- and sixth- grade students in the gifted program first identified? What is the selection criteria?
   - Identification occurs in kindergarten through third grade to select the highly gifted (defined as more than two years advanced).
   - Multiple criteria (teacher checklist, grades, ability, achievement, and standardized test scores) are used.

3. Is the curriculum for the gifted articulated with the core curriculum?
   - Curriculum is articulated with the core curriculum.

4. Who teaches gifted fifth and sixth graders?
   - Teachers in the zone centers (full-time programs) have an endorsement for educating the gifted.

5. How many staff members are dedicated to the gifted program?
   - 1 Educational Specialist
   - 28 elementary and middle school teachers (includes 7.5 teachers in center programs)
   - 5 elementary gifted resource teachers (includes a math resource teacher for PreAlgebra in grade 5)
   - 8 middle school gifted resource teachers

6. Are gifted programs formally evaluated?
   - Evaluations are ongoing and include evaluation of areas such as staff development.

Chesterfield School Division
Conversation with Kathy Glenn, Instructional Specialist for Gifted Education, May 13, 1997

1. What is the format for delivering services to gifted fifth and sixth graders in your school division?
   - Fifth-grade students receive in-class differentiated instruction; gifted students are clustered. Gifted students who qualify attend a full-time center. Three centers serve thirty-five schools.
   - Students are reevaluated in sixth grade. Identified students are cluster grouped in the honors program, and gifted students who qualify attend a full-time center. One center serves eleven middle schools.
   - Curricula for gifted students in fifth and sixth grades are interdisciplinary.

2. When are fifth- and sixth- grade students in the gifted program first identified? What is the selection criteria?
   - Kindergarten
   - Multiple criteria

3. Is the curriculum for the gifted articulated with the core curriculum?
   - Yes. Standards of learning are used; curriculum guides at each grade level are extended, enriched, and accelerated.

4. Who teaches gifted fifth and sixth graders?
   - Teachers in the centers have endorsements in educating the gifted.
   - Teachers in school-based programs are not required to have "gifted" endorsements but must have experience and a demonstrated level of success in modifying the curriculum. Extensive training in teaching gifted students is provided in the school division.

5. How many staff members are dedicated to the gifted program?
   - Instructional Specialist for Gifted Education
   - 2 consultants to the specialist
   - 4 math teaching consultants
   - 15 full-time teachers in the elementary centers
   - 13 full-time teachers in the middle schools

6. Are gifted programs formally evaluated?
   - The program was evaluated by an external evaluator seven years ago.
   - The school division is in the process of developing an accountability model. Evaluations essentially have been ongoing through an Advisory Committee.

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Signature: Davida W. Mutter	Printed Name/Position/Title: Davida W. Mutter, Director of Staff Development and Program Evaluation
Organization/Address: Chesapeake Public Schools, 304 Cedar Road, Chesapeake, VA 23322	Telephone: (757)547-0914 FAX: (757)312-8610
	E-Mail Address: Date: December 8, 1998