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ABSTRACT
        A review of the draft Illinois Academic Standards was
conducted to identify changes to incorporate career-related and employability
aspects of the academic content. Activities included collection and review of
materials on state standards or equivalent state initiatives as well as
national and other initiatives. Promotion of the project's primary goal was
accomplished through the Illinois State Board of Education (ISBE) electronic
mail system and presentations by ISBE and project staff. Content review
committees with a total of 41 members reviewed draft standards booklets and
made recommendations. Recommendations and comments took two forms: one
targeted to format and wording of the standards booklets and another
regarding implementation of the standards. General recommendations included
elimination of the term "academic" throughout the standards; infusion of
career-related elements and contextual learning focus into the standards;
more concrete definitions of grade levels; and better definition of the
Applications of Learning (AOL). More specific recommendations were language
adjustments to the AOL and definition of the use of the standards with
special populations. Implementation issues concerned all committees who saw
needs for teacher preparation, staff development, and staff specialists in
careers and integrated interdisciplinary curriculum. (The 10-page report is
followed by these appendixes: timeline; electronic announcements;
informational brochure; committee membership list; recommendations and
comments by committee; evaluation forms; education to careers groups
recommendations; National Career Development Guidelines; and marked-up drafts
of the standards.) (YLB)

ETC REVIEW
OF THE DRAFT
ILLINOIS ACADEMIC STANDARDS

FINAL REPORT

A PROJECT FUNDED UNDER THE AUSPICES OF THE
ILLINOIS ACADEMIC STANDARDS PROJECT
ILLINOIS STATE BOARD OF EDUCATION
CENTER FOR POLICY, PLANNING
*AND RESOURCE MANAGEMENT*

AND CONDUCTED BY

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UNIVERSITY OF ILLINOIS
AT SPRINGFIELD

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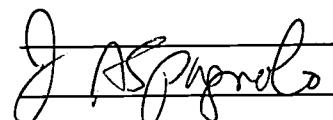
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ABSTRACT

Title of the Project: ETC Review of the Illinois Academic Standards

Timeframe: October, 1996 - January, 1997

Funding: $24,800

Institution Conducting Project: University of Illinois at Springfield

Principal Investigator: Rebecca Woodhull, Ph.D.

Project Goals and Objectives:
The primary goal of the project was to conduct a review of the draft Illinois Academic Standards for the purpose of identifying changes to incorporate career-related and employability aspects into the standards in keeping with the emphasis of the Illinois School Code which states that, "the primary purpose of schooling is the transmission of knowledge and culture through which children learn in areas necessary to their continuing development and entry into the world of work".

Objectives for the project were:
A. Review of Work Completed by ISBE and Others
B. Review National Databases and Research
C. Determine and Conduct a Field-based Review Process
D. Develop an Informational Brochure
E. Meet and Review Progress with ISBE Staff

Value/Importance of the Project:
The Academic Standards draft will have a substantive review by those educators involved in the Education to Careers Initiative of ISBE. Recommendations produced by this project will be used to determine the final set of state standards which will effectively drive future instruction, and ultimately assessment, within the state's elementary, middle and high schools.

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ETC REVIEW OF DRAFT ACADEMIC STANDARDS

Executive Summary

The project was conducted between October, 1996 and January, 1997, for the purpose of promoting awareness and field review of the draft Illinois Academic Standards. To this end research, public information activities and seven Education To Careers field review committees were conducted by the Illinois State Curriculum Center, University of Illinois at Springfield.

The project resulted in an enhanced awareness of the field regarding the Illinois Academic Standards Project through its promotion and committee selection process. Forty-one committee participants well represented the Education To Careers community throughout the state both geographically and contextually. Membership focused on teachers, counselors and administrators with experience in applied academic and integrated programs.

The recommendations of the committees were both general and specific with some recommendations for changes to the documents across discipline areas and some specific language recommendations. Implementation concerns were also expressed in the form of recommendations.

Major general recommendations included the elimination of the term "academic" throughout the standards documents; infusion of career-related elements and contextual learning focus into the standards and benchmarks, such as rewriting the Goal Descriptions to include careers and employability as reasons for learning the content, 3-6 benchmarks devoted to careers and employability in each Goal; appendices listing jobs related to the disciplines; inclusion of ETC representation on final reviews; need to define grade levels more concretely; and, infusion or better definition of the Applications of Learning within the standards.

More specific recommendations included language adjustments to the AOL; need for a definition of the use of the standards with special populations; need for elaboration on technology; need for additional alignment of action verb hierarchy; and, specific language recommendations appearing in the Addendum which give examples of changes needed in the standards and benchmark language.

Implementation issues were a concern of all committees and included recommendations and comments on the needs in areas such as teacher preparation, staff development, and, staff specialists in careers and integrated interdisciplinary curriculum.

The majority of the committees work was in making recommendations for language changes provided in the Addendum. The committees noted that these changes were illustrative and not comprehensive. Appendices E, F. G and the Addendum should be read for a comprehensive view of the ETC recommendations.

The participants expressed a sincere hope that their dedication to this effort would be useful, meaningful and visible within the final version of the standards.

January, 1997

Background of the Project

The draft Illinois Academic Standards were completed and made available for public comment and review in July of 1996. At that time staff of the ISBE as well as educational administrators in local districts expressed a concern that the standards appeared to not include career-related and employability standards currently found in elementary, middle and high school curricula. Such content is supported by ISBE's Education To Careers initiative and funding.

The need for career-development skills of Illinois secondary school graduates has been emphasized by Illinois business and industry employers as critical to our state's economic well-being. Legislation, federal and state-funded, provides for instruction emphasizing career development at both elementary and secondary levels. Since our expectation is for all students to become productive, employable citizens, the state standards for all students should, therefore, reflect such an emphasis in the state standards documentation. In support of this emphasis, the Illinois School Code states that:

"The State of Illinois, having responsibility of defining requirements for elementary and secondary education, establishes that the primary purpose of schooling is the transmission of knowledge and culture through which children learn in areas necessary to their continuing development and entry into the world of work."

The ISBE staff determined that a project to review the standards and make recommendations regarding adjustments to better highlight the career-related and employability aspects of the standards would be appropriate to augment the finalization of the standards.

To this end, the Illinois State Curriculum Center, a funded project of the ISBE that provides free curriculum resource services and materials to educators, was enlisted to conduct such a review and make recommendations to the standards.

Goals and Objectives of the Project

The primary goal of the project was to conduct a review of the draft Illinois Academic Standards for the purpose of identifying changes to incorporate career-related and employability aspects of the academic content.

A secondary goal was to inform and involve local teachers, counselors and administrators, who currently are actively engaged in instruction that combines academic and career content to achieve high performance, in a structured review process.

The objectives of the project were designed to review and build upon efforts by ISBE and other states to incorporate career-related content into state academic requirements for instruction and assessment. They included the following specific objectives:

A. Review Work of ISBE Committees and Others
B. Review National Databases and Research
C. Determine and Conduct a Field-Based Review Process
D. Develop an Informational Brochure
E. Meet and Review Progress with ISBE Staff

Project Timeline

Due to the timeframe of the project intensive activities occurred as is described in the following section. A project timeline can be found in Appendix A.

Activities Conducted

Research of State, National and Other Initiatives

Project staff collected and reviewed materials on state standards or equivalent state initiatives collected through an Internet search which provided on-line information and documents. In addition, a compact disc from McREL entitled, "The Systematic Identification and Articulation of State Content Standards and Benchmarks" provided by ISBE and reviewed. Numerous personal contacts at various state departments of education and the U. S. Department of Education were made by project staff. The intent of this review was to gain an overview of how other states had addressed career and employability content within their standards documents. These resource reviews also provided examples of specific language and sample content organizations and statements.

Additional resources were provided through statewide leadership groups including the Education for Employment (EFE) Systems Directors Leadership Council and the Illinois Vocational Association. These were in the form of position papers regarding each group's review of the Illinois draft standards document. Testimony provided at ISBE public hearings was also reviewed. These resources provided input regarding rationale, value, general structure, and organization for career and employability-related content.

Informational Activities

Promotion of the project's primary goal was accomplished through the ISBE email system and through presentations by both ISBE and project staff. Three notices regarding the project activities were sent via email in October and November (see Appendix B).

Project staff made presentations at a statewide EFE Systems Directors meeting, two regional (Regions 3 & 4) EFE administrators meetings in Springfield, a local advisory committee for the Quad Cities Tri-County EFE System, a staff inservice for the Sangamon Area EFE System, a statewide meeting of the Illinois Council of Vocational Administrators in Bloomington, and a Board of Directors meeting of the Illinois Vocational Association.

A flyer was produced and distributed statewide regarding both the project activities and a solicitation for committee nominations. A later informational brochure was developed (see Appendices B and C).

Throughout the project staff received calls in response to the project's informational flyers and emails from Illinois educators. Calls ranged from requests for additional information and copies of the standards to specific recommendations about changes needed in the standards, as well as questions on the review process and the anticipated results. Approximately 80 calls were logged.

Field-Based Review Committees

It was determined by ISBE and project staff that content review committees would be impaneled to review each content area. Panelists were solicited through: the ISBE's Votechnet email system, solicitations at statewide meetings of EFE regional administrators, personal contacts of ISBE and Curriculum Center staff, and the Illinois Vocational Association's ten affiliates.

Despite the short timeframe of this project the promotional activities produced an excellent set of nominees from throughout the state. A total of 111 nominations was received from EFE System Directors, principals, superintendents and self-nominations.

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An effort was made to develop a committee of five or six practicing educators from each discipline for which an Illinois draft standards booklet existed. Through a combination of over 200 emails, faxes and telephone communications, seven committees were established. Only one committee, the Physical Education/Health Committee had to be rescheduled. This was due to the original date coinciding with a major physical education conference. All committee meetings were one day in duration and held at the Illinois State Curriculum Center in Springfield. Participants were reimbursed for travel by the project when needed.

It had been recommended that each committee include an elementary and/or middle school representative to address the career development needs at those levels. Due to timelines it was impossible to do this consistently. It was decided to hold a seventh committee to be devoted to these areas.

A total of 41 committee members served. Although the majority were classroom teachers there was also representation from private business, counselors, principals, superintendents and special needs personnel. (See Appendix D for a list of committee members).

In addition to discipline and grade level equity, an attempt was made to enlist a diversity of geographic representations as can be seen in the following map.

M.......Career Development
S........Science
CD.....Career Development
FA.....Fine Arts
LA.....Language Arts
PE.......Physical Education/Health
SS.......Social Studies
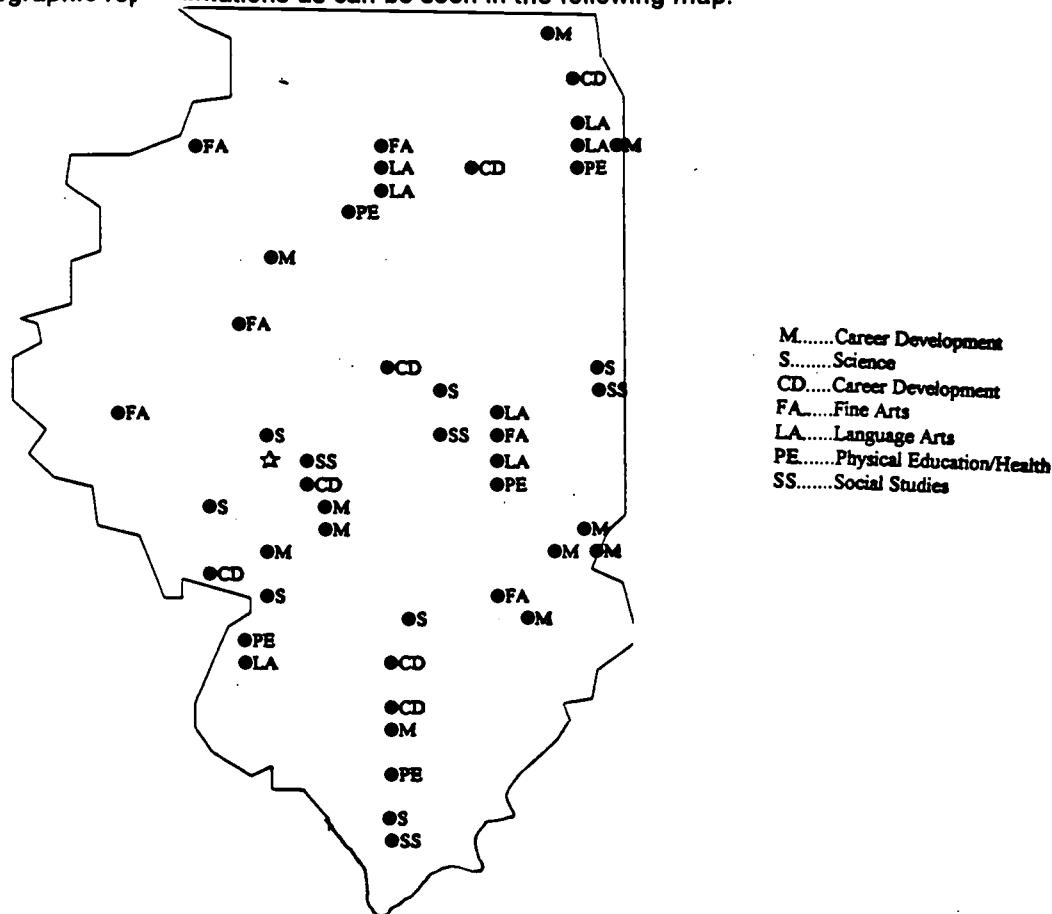
Cities represented on the committees include: Auburn, Berwyn, Bethalto, Carlinville, Carlyle, Champaign, Charleston, Danville, Dolton, Effingham, Elmwood, Granville, Herrin, LaSalle, Macomb, Marsielles, McHenry, Mendota, Midlothian, Moline, Murphysboro, Nashville, New Berlin, Normal, Odin, Paris, Patoka, Peoria, Peru, Rantoul, Riverton, Sesser, South Holland, Springfield, Teutopolis, Urbana and Wood River.

Each Content Review Committee was provided with the same set of objectives and agenda. Each group was provided with an overview of the Illinois Academic Standards Project and shown the companion videotape. It was interesting to note that only about half of the committee participants had seen the videotape prior to the meeting or had any substantive knowledge of the standards beyond what had been provided to them prior to the meeting. Others, particularly those in administrative or dual roles, were much more familiar with the standards booklets and had been involved in local reviews of the booklets.

The draft standards booklets were reviewed and recommendations were made. Those content recommendations are elaborated upon in the next section of this report as well as in Appendix E and the Addendum. (Please note that the Addendum contains the marked-up copy of the standards booklets and may not be appended to every copy of this report.)

The committees were instructed that although the main purpose of the review was to look specifically at the state goals, standards and benchmarks, any of their recommendations on which there was group consensus would be recorded and passed on to the final review process. As a result, there were several recommendations which apply more to the implementation process for the standards than the content.

The project staff was extremely impressed with the quality, experience and personal dedication of the committee members. Several members called with further comments as a follow-up to the meeting group discussion. Each committee was asked to provide an evaluation of the meeting. (See Appendix F for the evaluation form and results of the evaluation by committee). All committee members will receive copies of this report. Project staff provided names of two persons from each committee to ISBE for potential participation in the final review which will result in the standards document that will go to the Illinois State Board of Education for approval.

Results of the Activities

The results of the public information flyers, group presentations by project staff and email messages was a heightened awareness in the field of (1) the project goals, (2) a concerted involvement of the Education To Careers community in the draft review, and (3) a sincere effort by the ISBE to make the standards document relevant for all students.

Committee participants expressed appreciation to the ISBE for being given an opportunity to gain more ownership from local school "practitioners". They commended ISBE for actively seeking input from a career-oriented perspective.

The results of the committees' deliberations will be useful to the final review in determining how to incorporate career and employability content into the standards documents.

Each committee was guided by the same set of goals, objectives and agenda, however, with the consensus of each group, the discussion and method of operation varied somewhat. The end results of each committee's deliberations were remarkably similar. Each committee resulted in a set of general recommendations and comments, and a set of specific recommendations. The rough version of these appear in Appendix E.

The general recommendations and comments took two forms. One form was targeted to recommendations about the format and wording of the standards booklets. The second form was in recommendations regarding the implementation of the standards in the hope that ISBE will take these into consideration as it moves forward with revisions in school recognition, teacher preparation, certification and student assessment.

General recommendations summarized below are those that received support from more than one committee, except where noted.

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Specific recommendations involved enhancements, word modifications and additions of benchmarks within each of the booklets. In this the committees varied widely in the amount of specific changes recommended. The committees agreed that a one day meeting was insufficient to make an exhaustive set of specific changes. Therefore, some committees left it to the final committee review make content adjustments they described, while others made many specific wording changes. All of these appear in the Addendum to this report.

General Recommendations and Comments

1.   The primary recommendation across all seven committees was to eliminate the term "academic" throughout the standards. The reasons stated included the belief that this term alienated many teachers and could be used to exclude selected student groups from adherence to the standards.

A common criticism of the standards booklets was that the standards were adequately stated for the 20% - 30% of students who will go on to complete a four-year college degree but could be seen as exclusionary for the remaining 70 - 80% of the students unless more specifically referenced from a career-relevant perspective. These students will go directly into the workforce or pursue a one to two-year post-secondary program. Committee members agreed with the intention that the standards are, and should be, for "all students," but believed that the "academic" term further reinforces an exclusionary perception with educators who will implement the standards.

It was also noted that the accompanying videotape on the standards emphasized education as an essential element for meeting the needs of employers yet the standards did not reflect this. Employers want solid basic skills and the ability to use these skills productively. The standards as stated imply the use of the basic skills academically. Again, this was stated as a reason for adjusting the title.

The most commonly stated alternative was "State Education Standards." A second alternative was "State Learning Standards" followed by "Foundation Standards." Additional alternatives generated from the field have included "Life Long Learning Standards," "Knowledge Standards," and "Standards for All Students."

2.   All but one committee agreed that a career focus should be infused into the standards and not developed as a separate booklet. There was general agreement that technical training or skills standards should be separated but that career-related standards and benchmarks are relevant for all students whether they go directly to work after high school or pursue higher education.

The National Career Development Standards were provided to each committee. Two of the committees recommended that these be either infused into the benchmarks or provided as an addendum to each standards booklet. The Elementary and Middle School Career Development Committee developed a set of benchmarks as seen in Appendix E.

3.   Standards and learning should be contextual. Just as the standards and benchmarks relate content to students' everyday lives and needs of the world, they should also relate to students' future careers and the needs of the workplace. The committees believed that the standards should reflect an added career focus since the focus of our post-graduate lives is career-related.

4.   The standards documents need to emphasize in all parts of the booklets that career development and preparation are part of the primary purpose of schooling. Ways recommended to do this included:
  a.   Revise each goal description, i.e. "Why This Goal Is Important," to include careers in which the standard is essential.

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b.   Provide an appendix to each goal or discipline listing careers in which the standards are needed for entry into the field.

c.   Add a career standard to each goal, modify benchmark language and add more "e.g.'s" to the benchmarks to emphasize careers.

d.   Add language to goals and standards to emphasize the students' life roles as consumers and workers, e.g. we are all consumers of the fine arts when we purchase jewelry, clothing and home furnishings. The people who make these things will need to have mastered the fine arts standards to be employed.

5.   Several committees recommended that members from these committees should be represented on the final revision committees. In addition, one group recommended that counselors and special education personnel be included in the final committee review.

6.   Define grade levels in benchmarks. Most committee members found the lack of definition of grades disconcerting, especially in relation to IGAP testing. Although they recognized the intent of the ungraded benchmarks, they were not convinced it was useful to local teachers and curriculum planners.

7.   Many of the committees had difficulty identifying the usefulness of the Applications of Learning (AOL) section of the booklets. They recognized that the applications are intended to imply "methods of learning and using knowledge across disciplines" but believed that this element of the standards document would be lost in the implementation if not more fully stated.

Several comments noted that the AOL section could be interpreted as defining the primary goals of education. The general recommendation of many committees was to infuse the AOL back into the standards at some level so that the intent would not be lost.

Specific Recommendations

The majority of the specific recommendations were in wording changes. These appear in the Addendum. Those more specifically-stated recommendations that could be applied across the booklets, and that were made by more than one committee include the following.

1.   Change the AOL section on page ix to read "Making Academic and Workplace Learning Connections," and text of that paragraph to include ". . . to see the connections among lessons, subjects, __employability__ and everyday life."

2.   Include information in the documents as to how the standards are to be used with special education students.

3.   Include more definition regarding technology, media and multimedia. (Recommendations from the Technology Subgroup have done this.)

4.   Adjust the action verb hierarchy to eliminate inconsistencies across and within grade levels.

Implementation Recommendations

Each committee spent time in brainstorming and discussion. Many of their concerns and comments related to implementation of the standards and benchmarks. Listed below are those items that committees felt should be included in this report. They are not listed in a priority order but in order of frequency.

1.   Every committee was concerned with the teacher preparation and staff development aspects of the standards. Although the topics recommended below already appear

on many staff development agendas, the belief expressed by the committees is that it is not intensive enough and is not comprehensive across the state. Recommendations included:
- incorporating the standards into teacher preparation;
- expanding the VIP/AIP program to all teachers as a means to show teachers how academic content is used in the workplace;
- providing/requiring staff development on how to develop and teach interdisciplinary curriculum; and
- providing teacher preparation and staff development on cooperative and group learning, and, learning styles.

2.   Almost every committee emphasized the need for interdisciplinary curriculum to promote learning retention. One committee recommended an Interdisciplinary Coordinator position to work across the standards.

3.   Two committees as well as the EFE System Directors recommended a color-code or some graphic way make the career-related aspects of the standards documents stand out.

4.   Two committees recommended that there be personal student and school consequences to enforce the standards. This recommendation was targeted to eliminate social promotions as well as unprepared graduates who then have difficulty with higher education and/or job performance.

Less frequently cited recommendations included a need for:

--- evidence of a planned articulation of the standards with post-secondary education;
--- expansion of the Tech Prep program into middle schools; employment of elementary career education specialists;
--- a stronger show of support from the Superintendent's office to administrators for Education To Careers; and,
--- ISBE-sponsorship of an Internet Website to provide sample lesson plans related to the standards.

Additional comments and recommendations considered by this project but developed by statewide ETC-related organizations appear in Appendix G. These may be seen as supplemental and complementary to the recommendations of this project.

Participants Evaluation

Committee participants were asked to complete an evaluation of their experience with the project and the meeting. The summary results and the individual committee comments regarding their participation appear in Appendix G.

The participants believed the project to be needed and commended ISBE for contracting to accomplish an objective review by local teachers, counselors and administrators who will bear the major responsibility of implementation. Evaluation comments showed a high degree of commitment and enthusiasm for both the inclusion of career-related content and the process used with the committees.

Summary of Findings and Recommendations

The project resulted in an enhanced awareness of the field regarding the Illinois Academic Standards Project through its promotion and committee selection process. Forty-one committee participants well represented the Education To Careers community throughout the

committee participants well represented the Education To Careers community throughout the state both geographically and contextually. Membership focused on teachers, counselors and administrators with experience in applied academic and integrated programs.

The recommendations of the committees were both general and specific with some recommendations for changes to the documents across discipline areas and some specific language recommendations. Implementation concerns were also expressed in the form of recommendations.

Major general recommendations included the elimination of the term "academic" throughout the standards documents; infusion of career-related elements and contextual learning focus into the standards and benchmarks, such as rewriting the Goal Descriptions to include careers and employability as reasons for learning the content, and, appendices listing jobs related to the disciplines; inclusion of ETC representation on final reviews; define grade levels more concretely; and, infusion or better definition of the Applications of Learning within the standards.

Additional recommendations included language adjustments to the AOL; need for a definition of the use of the standards with special populations; need for elaboration on technology; need for additional alignment of action verb hierarchy; and, specific language recommendations appearing in the Addendum which give examples of changes needed in the standards and benchmark language.

Implementation issues were a concern of all committees and included recommendations and comments on the needs in areas such as teacher preparation, staff development, and, staff specialists in careers and integrated interdisciplinary curriculum.

The majority of the committees' work was in making recommendations for language changes provided in the Addendum. The committees noted that these changes were illustrative and not comprehensive.

The participants expressed a sincere hope that their dedication to this effort would be useful, meaningful and visible within the final version of the standards.

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APPENDIX A

Appendix A.

Act's	October				November				December				January			
	7	14	21	28	4	10	17	24	2	9	16	23	6	13	20	27
Research Activities																
a. Review State and National Databases	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
b. Review Original Positions					X	X	X	X	X	X			X		X	X
c. Review Testimony							X	X								
d. Review Internet Information	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Information Activities																
a. ISBE Email/Messages		X		X	X	X										
b. ISBE Meetings/Reports	X		X			X										
c. EFE Statewide meetings 9/11		17		29	6	14										
d. EFE Regions 3 and 4		18														
e. ICVA Meeting	10															
f. SAVER Meeting				31												
g. Quad Cities Meeting			21													
h. CAVC Meeting							19									
I. IVA Meeting					7											
j. Brochure Draft				X						X						X
k. Calls from Field																X
Field Based Review																
a. Screen, Select and Confirm Cmts.			X						X							
b. Science Committee Meeting					5											
c. Social Studies Committee Meeting					7											
d. Language Arts/English Committee Meeting						12										
e. Math Committee Meeting							18									
f. Fine Arts Committee Meeting								26								
g. El/Mdl Career Development										10						
h. Health/PE Committee Meeting										11						
i. Followup w/Committees											X					
j. Compile Evaluation Reports										X		X				
k. Analyze Data													X			
l. Compile Project Report													X			X

APPENDIX B

ETC Nominations Needed
To
Review Academic Standards
(Please note date changes)

The draft Illinois Academic Standards are available for review and comment. The ISBE Center for Partnerships and the Center for Policy, Planning and Resource Management are seeking input from the vocational and technical/ Education To Careers community regarding possible revisions needed to emphasize employability aspects within the Standards.

As part of this effort the Illinois State Curriculum Center is conducting a set of in-depth review team meetings for the purpose of making recommendations to the Academic Standards. The focus of the meetings is to identify employability and career-related language that may be incorporated into the final set of the state's standards. To receive a copy of the draft Standards call 800/387-1470.

The Curriculum Center is in need of your recommendations of educators who could serve on these review teams. There will be one team on each of the following standards: Language Arts, Mathematics, Science, Social Studies, Physical Education/Health and Fine Arts. Teachers (vocational or non-vocational) nominated should be able to identify academic content skills needed across occupational areas (e.g. "writing a resume" is a language arts standard that goes across all disciplines and jobs). It has been recommended that each team be 5 - 6 persons and that one member be an elementary or middle school teacher with experience in infusing career education into the curriculum. Please note that a nominee is not automatically on a review team. Member selections will be made based on need for that person's particular expertise and availability.

Meetings will be held in Springfield (unless the majority of the team is from one section of the state) in October and November with tentative dates as follows: Science-Nov. 5; Social Studies-Nov. 7; Language Arts- Nov. 12; Health/Physical Education-Nov. 14; Math-Nov. 18; and Fine Arts-Nov. 26. They will be completed in one day with a 9:30 am - 4:30 pm agenda. EFE regions may use Tech Prep Grants and other sources of funds to pay teacher substitutes and travel. If a nominee's attendance is restricted due to lack of EFE funds, stipends and travel will be provided.

Please submit nominations with the educator's name, standards topic he/she is qualified to address, position title, local address for correspondence, business and home telephone, and fax numbers, preferably by Oct. 28, to Dr. Rebecca Woodhull, ISCC, UIS, K-80, Spfld., IL 62794-9243. Her number is 800/252-4822, ext. 66377 and you can leave information on her voicemail; her fax is 217/786-6036.

ETC Nominations Still Needed

in Fine Arts, Health/PE and
Elementary and Middle School Career Education
to
Review Academic Standards
(Please note date changes)

The draft Illinois Academic Standards are available for review and comment. The ISBE Center for Partnerships and the Center for Policy, Planning and Resource Management are seeking input from the vocational and technical Education to Careers (ETC) community regarding possible revisions needed to emphasize employability aspects within the Standards.

As part of this effort the Illinois State Curriculum Center is conducting a set of in-depth review team meetings for the purpose of making recommendations to the Academic Standards. The focus of the meetings is to identify employability and career-related language that may be incorporated into the final set of the state's standards.

There will be one team for each of the following learning areas: Language Arts, Mathematics, Science, Social Studies, Physical Education/Health, Fine Arts and Elementary and Middle School Career Education. Teachers (vocational or non-vocational) nominated for the reviews will be able to identify academic content skills needed across occupational areas (e.g., "writing a resume" is a language arts element that goes across all disciplines and jobs). To ask for the complete set of four volumes of draft standards call 800/387-1470.

Committees will look at the draft Academic Standards in conjunction with the National Career Development Standards and Education to Careers Workplace Skills. It has been recommended that each team be 5-6 persons and that one member be an elementary or middle school teacher with experience in infusing career education into the curriculum.

Meetings will be held in Springfield in November and December on the following dates: Math - Nov. 18; Fine Arts - Nov. 26; Elementary/Middle School Career Education - Dec. 10 and Health/PE - Dec. 11. They will be completed in one day with a 9:30am-4:30pm agenda. EFE regions may use Tech Prep Grants and other sources of funds to pay teacher substitutes and travel. If a nominee's attendance is restricted due to lack of EFE funds, stipends and travel will be provided.

Recommendations from these committees will be submitted to the Illinois State Board of Education for consideration during its final internal review phase. The final set of standards will be approved by the ISBE by June of 1997.

For additional information on the ETC review of the standards, or, for technical assistance in conducting a local review, please contact Dr. Rebecca Woodhull, as soon as possible at the Illinois State Curriculum Center, K-80, University of Illinois at Springfield, Springfield, IL 62794-9243. Her number is 800/252-4822, ext. 66377 or 217/786-6377 and you can leave information on her voice mail; her fax number is 217/786-6036.

APPENDIX C

APPENDIX D

COMMITTEE MEMBERS

ATTENDING NOVEMBER 5
SCIENCE COMMITTEE

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**ATTENDING DECEMBER 11, 1996
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APPENDIX E

APPENDIX E

RECOMMENDATIONS AND COMMENTS
BY COMMITTEE

Each committee brainstormed its discussion and recorded general and specific recommendations. These are provided below in their raw data form to more fully explain and supplement the composite version stated in this report.

SCIENCE COMMITTEE
1. "Academic" is a sorting tool and goes against ISBE initiatives for ETC; use "Educational Standards" throughout document
2. Learning should be contextual.
3. Standards should apply theory to reality. ETC is the bridge between the two.
4. Career-related aspects must be recognizable or will not be included in local programs.
5. Add to Applications of Learning (see Shawn's text)
6. Add voc ed to the Learning Areas.
7. Need to define what voc ed is and make it a RECOGNIZABLE PART of the standards.
8. Recommend the use of field trips to reinforce learnig and/or inspire interest.
9. Students need an incentive to take the IGAP (or now a Prarie State exam).
10. Preservice/inservice is critical. Needed topics are integration, team teaching, developing thematic curricula, Teachers also need incentives (grad. credit, stipend, more supplies).
11. ETC should be promoted more as a primary purpose of schooling.

ENGLISH/LANGUAGE ARTS
1. Change title throughout to "Educational Standards"
2. Include teacher prep requirements
3. Integrate career-related language into standards
4. Develop separate booklet on specific career standards (Career development and guidance; workplace skills; state skill standards).
5. Refine Goal descriptions to include careers
6. Define grade levels in benchmarks and with IGAP testing.
7. Explain accommodations for special students.
8. Members from this committee should assist in final version.
9. Time is inadequate for this meeting to make all the changes needed-our recommendations are merely a sampling of what should be done comprehensively--all sections of the standards should reflect a career focus since the main focus of our lives is career related.

10. Group and collaborative learning should be emphasized throughout.
11. Adjust the action verb hierarchy. It is not consistent across or within grade levels.
12. Include a definition of multimedia.
13. Revise the description of "Using Technology" to be less vague.

MATH COMMITTEE
1. Change titles to "Education Standards."
2. This committee encourages teacher professional development in implementing the standards through the VIP/Academic VIP. This program is an excellent means of gaining insight as to why students need the standards in life and work settings. Teachers also need to learn how to "team."
3. The Standards should have enforced consequences for students and schools -- we should work toward a "0" defect rate of achievement.
4. Standards should emphasize use of both sides of the brain, creative and logical.
5. The state/schools need a paradigm shift in teaching to emphasize team teaching and interdisciplinary coursework. The standards do not speak to this and are set forth in a way that reinforced the traditional, less-than-effective, means of instruction today.
6. Career-related elements should be infused into the standards, not set aside in a separate booklet.
7. Use the term "team" instead of "group" to indicate sharing of responsibility.
8. Be more specific as to what technology is to be used in performing the benchmarks. Learning is 50% technique and 50% application.
9. Do we need to increase high school graduation requirements to accomplish the standards? Can more be done to give graduation/academic crdit for vocational classes that teach 51% math?
10. Math teachers get so many students who have not mastered previous content. There should be consequences for students who fail to achieve content--the teacher should be able to REJECT unprepared students.

FINE ARTS COMMITTEE
1. Elementary education should provide for exposure to the art forms.
2. Schools should employ an Interdisciplinary Coordinator to work across the standards with ETC. Interdisciplinary instruction is the key to success of the standards.
3. Eliminate the "Academic" title. Options include: Educational, Foundational or Learning Standards.
4. Standards should have consequences and social promotions eliminated.
5. High school benchmarks need clarifications as to their articulation with post-secondary education .
6. The word "group" should be replaced with "team" throughout.
7. The final review should add more real-world examples to the benchmarks.
8. Recommendations for careers within the discipline.

HEALTH/PHYSICAL EDUCATION COMMITTEE

1. There should not be a separate booklet for career-related standards; they should be integrated and integral to the state standards for all students.
2. Eliminate "Academic" in favor of "Education or Learning" Standards.
3. Under "Making Connections..." section, use "Learning Area;" and add "employability" or "career success."
4. Too often recess is viewed as meeting physical education standards in elementary grades. Pressure to include all standards falls to the high school. Standards should emphasize that all the health standards cannot be taught in one semester in high school.
5. The Illinois Attorney General's Office should be involved in the review due to it's interest in related areas.
6. Explanatory paragraphs in the Standards must emphasize that we are preparing students for "life-long learning" and "career opportunities."
7. The Standards document should reinforce that career-related instruction in the required subjects is part of the primary purpose of schooling to provide for "continuing development and entry into the world of work."
8. The National Career Development Standards should be included in some way--either infused or as an addendum to each discipline.
9. We encourage ISBE to look at the standards as a total set, not as isolated disciplines.

CAREER DEVELOPMENT COMMITTEE

1. Standards should focus on helping develop integrated curriculum.
2. Benchmarks should assist in promoting transfer of learning across grades.
3. The ISBE should spend its funds on staff development to teach teachers how to work with the applications of content and to accommodate learning styles.
4. We need to eliminate the "silos of learning" and focus on integrated curriculum even in the self-contained classroom.
5. Career education should not be seen as an add-on to the content but n application and a transfer to a real-life situation.
6. The AOL could be the State Standards.
7. Standards should encourage students to look at their own career-related strengths.
8. Do not develop a separate booklet for careers. They should be integrated into the standards.
9. Each Goal should include a statement as to why it is important to life and future careers.
10. Teacher preparation programs should include instruction on using career-related applications.

11.   AIP/VIP should be provided as an excellent means of professional development for elementary and middle school teachers.

12.   Tech prep programs should be expanded to middle schools.

13.   ISBE should sponsor a World Wide Website to provide lesson plans keyed to the Standards.

14.   Schools should provide qualified elementary career education specialist/counselors. Developmental counselors are well-suited to this job.

15.   Add a Standard for careers and life skills to each Goal and somehow highlight it so it will not be overlooked (e.g. circles, boldface).

16.   Change Making Connections.." to "Making Academic and Workplace Connections."

17.   Expand Goal descriptions to emphasize career and life utility of the Goal.

18.   Provide an appendix on careers related to each goal or discipline.

19.   Emphasize a broad spectrum of careers in applications.

Students should be able to:

A.   Analyze and select high school options related to careers (e.g. Tech Prep) based on their career aptitudes and interests.

B.   Keyboard.

C.   identify academic coursework/skills related to their career interest.

D.   Identify their career related strengths (e. g. interest inventory).

E.   Develop a Career Profile by 8th grade.

F.   Develop a Career Plan

G.   Describe how to get a job.

H.   Describe the importance of personal attributes in job-getting and keeping.

I.   Identify workplace etiquette.

J.   Describe the changing workplace and how jobs change.

K.   Demonstrate cooperative skills in working with others.

SOCIAL STUDIES

1.   Recommendations for careers within the discipline:

Political Systems--careers related to: diplomacy, civil service, social justice, mass communications.

Economic Systems--careers related to: business education, business administration, trade and industrial, social justice, mass communications, consumer education, agribusiness, family, advertising and marketing.

History--careers related to: museums, anthropology, tourism, reconstruction, civil service, law, mass communications media, fine arts, historical research and literary writing.

Geography--careers related to: travel, tourism, diplomacy.

Social Systems--careers related to: health service, civil service, social justice, psychology, mass communications, counseling, business, law.

2. Add paragraph related to career choices and opportunities across ALL BOOKLETS.

3. Need to include business Code of Ethics.

4. Career ed element needed for each area.

5. ETC should be infused throughout ALL BOOKLETS.

6. Benchmarks should include applications (e.g social studies-fill out tax forms).

7. ETC should be strongly stated as the primary purpose of schooling.

8. ISBE should note that the standards are taught in many courses, they are not courses of themselves.

9. Teacher training will make or break the success of the standards,

10. Recommend terminology of "workplace and careers" and "Career Opportunities".

11. Use "Education Standards" not "Academic."

EFE REGIONS 3 & 4

1. ETC teachers should be part of the Academic Standards development team at the state level. They should also be involved at the local standards review and implementation at local school levels.

2. Eliminate "Academic" in the title and throughout the document.

3. Add technology and computer literacy as standards.

4. Make the Standards document match the message of the Standards video. The video emphasizes needs of the employment community and its reliance on schools to provide content standards and instruction which will provide employable students. Infuse ETC as part of the Standards. Make it clear that ETC is part of the Standards.

5. ISBE needs to provide a stronger statement of commitment to ETC and make it known to schools administrators such as superintendents and principals.

6. Career preparation should be emphasized as being a part of the primary purpose of schooling. All students are in career-related education--the standards language should reflect this.

7. Applications of Learning could be combined in a separate booklet.

8. Use elementary interdisciplinary methods and integrate booklets.

QUAD CITIES TRI COUNTY ETC ADVISORY COMMITTEE

1. Careers should be integrated into all the booklets.

2. Consider a crosswalk with the workplace readiness skills.

3. Add emphasis to the career-related standards and benchmarks by color coding them.

4. Standards should emphasize standards for life and careers, not just to graduate or move to higher levels of learning.

5. Special population teachers and counselors should be included on future committees.

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6.   Eliminate the "academic" verbiage in favor of "Life-long Learning" or "Knowledge" Standards, or, "Standards for All Students".

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APPENDIX F

ACADEMIC STANDARDS REVIEW COMMITTEE
EVALUATION FORM

1) Were you given adequate information from the
   Curriculum Center to prepare you for this meeting?   __28__ YES __4__ NO
   If not, please explain what you would have needed that was not provided._____

   *Some people were nominated at the last minute, and as a result, did not

   have much notice before meetings. Others stated that they would have liked

   to have known more about what they would be doing prior to meeting.

2) Were the directions to the meeting adequate?   __36__ YES __0__ NO
   If not, please explain._____

   _____

   _____

3) Was the meeting site/accommodations adequate?   __34__ YES __0__ NO
   If not, please explain._____

   _____

   _____

4) Was the meeting worthwhile to you?   __37__ YES __0__ NO
   Please explain why or why not, briefly._____

   _____

   _____

5) What would you change in the standards that did not result as a recommendation from this
   meeting? _____see attached summaries_____

   _____

   _____

6) What is the most positive benefit this set of meetings can have on the standards?_____
   _____see attached summaries_____

   _____

ACADEMIC STANDARDS COMMITTEES
EVALUATIONS - LANGUAGE ARTS

1) Were you given adequate info.

Yes

No. I was asked to join the group just a few days before we were to meet. I would have liked more time to study and evaluate the standards so that I could come up with more insightful ideas. Lack of time was a consideration.

Yes, the info was adequate, but I didn't have enough time to prepare. Time was a key factor in completing the task.

Yes

No. A copy and more time prior to this meeting.

2) Were the directions to the meeting adequate?

Very good directions

Wonderful!

Yes. Excellent

Yes. Wonderful

Yes. Very good

3) Was the meeting site/accommodations adequate?

Yes

Yes

Yes

Excellent facilitator

Yes

4) Was the meting worthwhile to you?

I learned a lot about the goals and standards. Also, I've learned that the state is very unsure where it is going.

Yes.Good for thought processes

Yes. This was my first chance to become involved in the state standards

Yes

Yes. Knowing that change is still possible is an important idea to take back to the school district where I work. I also have a more developed sense of how neglected career concepts really are.

5) What would you change in the standards that did not result as a recommendation from this meeting?

I would make them horizontally and vertically developed.

6) What is the most positive benefit this set of meetings can have on the standards?

Having people take another look via our notes.

Thank you for a good work session

The changes that were made today could clarify the goals and standards that have been written. Facilitator did an excellent job.

new thought

Revision

Excellent facilitator!! Difficult position to hold.

ACADEMIC STANDARDS COMMITTEE
MATH

1) Were you given adequate info...?
Yes (9 times)

2) Were the directions to the meeting adequate?
Yes (9 times)

3) Was the meeting site/accommodations adequate.
Yes (9 times)

4) Was the meeting worthwhile to you?
Yes. It reinforced the importance of teaching connections between math and the rest of the world!
This meeting informed me of the math needs of industry. Thank you!
This was a great way to look at how to integrate vocational and academic teachers in the area of math.
Helped with understanding of goals and benchmarks much better than I've understood up to this point.
I was able to understand other people/occupations, view points.
To better understand the needs.
New outlook on accountability

5) What would you change in the standards that did not result as a recommendation from this meeting.
I would have a 4 year math requirement at the state level.
Use the five applications of learning with each set of standards.
There has to be some sort of feedback; so business people and educators can compare and adjust.
Math credit in vocational subjects-this is a local issue, however, it needs to be suggested. Get rid of anything lower than algebra I - students can take these lower classes for 'no credit'.

6) What is the most positive benefit this set of meetings can have on the standards?

Make them useful to teachers so that students learn
To influence change, more points of view
These meetings can clarify the standards for all citizens to understand
Opening the communication lines between teachers, academic and vocational-working as a team.
Hopefully-administrators, politicians and parents will be made aware that vocational and academics are not separate but need to work together.
Help teachers understand meaning of goals and benchmarks. Reinforce how all of the g & b are used in business & industry.
Correlation from applied math to vocational education.

ACADEMIC STANDARDS COMMITTEE
SOCIAL STUDIES

1) Were you given adequate info..?
Yes 2 times
No. Was only notified yesterday, but I was away from school Mon. & Tues.

2) Were the directions to the meeting adequate?
Yes (3 times)

3) Was the meeting site/accommodations adequate?
Yes (3 times)

4) Was the meeting worthwhile to you?
I think it will depend on what happens.
Yes
I feel strongly the work we did, if adopted, will help bridge academic standards.

5) What would you change in the standards that did not result as a recommendation from this meeting?
Education to Careers into Primary Purpose of Schooling & social science includes family sciences
Include Adult & Voc Ed clusters in "Academic" lists ie: transport, industrial, communication, health, etc.
Please look at System Directors recommendations in addition to our comments-they look good. Devise a separate advisory book for vocational areas.

6) What is the most positive benefit this set of meetings can have on the standards?
Infuse vocational into academics to set educational standards.
Incorporating vocational aspects into the standards.
-include voc-ed & career issues
-expand consideration of learning styles and applied skills.

ACADEMIC STANDARDS REVIEW COMMITTEE
FINE ARTS - NOVEMBER 26, 1996

1) Were you given adequate information..?
yes, 3 times
No, "None of us had any idea precisely what we would do today.

2) Were the directions to the meeting adequate?
yes, 4 times

3) Was the meeting site/accommodations adequate?
yes, 4 times

4) Was the meeting worthwhile to you?
I felt like I may have had an impact on this whole process.
Becky facilitated the meeting very well by creating an environment open to brainstorming, knew when to let group discuss and when to bring us back to task.
It was interesting to talk about educational issues of the day.
Discussing with fellow teachers was great.

5) What would you change in the standards that did not result as a recommendation from this meeting?
The name educational foundation standards
Nothing at this time-if something comes to me, I'll call.
"The name "academic"
Nothing

6) What is the most positive benefit this set of meetings can have on the standards?
Speaking to the needs of the vocational community.
Bringing diverse expertise to affecting learning standing (sic)
Talking with other people with similar concerns
Input from people who are directly involved with students.

ACADEMIC STANDARDS REVIEW COMMITTEE
CAREER DEVELOPMENT - DEC. 10, 1996

1) Were you given adequate information..?
Yes (6 times)
I was nominated at "the last minute" and the Curriculum Center was quick to respond with all I needed.

2) Were the directions to the meeting adequate?
Yes, (6 times)
Great

3) Was the meeting site/accommodations adequate?
Yes, (6 times)

4) Was the meeting worthwhile to you?
Yes (6 times)
I appreciated the opportunity to express my concerns and interests in Career Education and Academic Standards
It was beneficial to share ideas with personnel from various aspects of the educational experience.

5) What would you change in the standards that did not result as recommendation from this meeting.
Be more inclusive of career awareness on all levels

6)What is the most positive benefit this set of meetings can have on the standards?
Brainstorming with people from various educational positions and geographical areas
To emphasize the importance of career education to teachers and administrators
It may cause the infusement of career-related language into the standards which may cause teachers to be more aware of career education. Opportunity to discuss issues with a varied group of professionals interaction among group - got some good ideas
To include language in the Illinois Acadademic Standards that points out the importance of education as means to prepare our students for the workplace.

ACADEMIC STANDARDS REVIEW COMMITTEE
HEALTH/PE
DECEMBER 11, 1996

1) Were you given adequate information from the Curriculum Center to prepare you for this meeting?

Yes (4 times)

I would have liked to get a bit more focus for the group..ie knowing that I would be addressing this from the vocational/career based aspect.

2) Were the directions to the meeting adequate?

Yes, (5 times)

Excellent (2 times)

Yes, but give apporoximate distance from I-55 to Sheppard Road

3) Was the meeting site/accommodations adequate?

Yes, (5 times)

Good sandwich-need a fresh pot of coffee in the afternoon

Good lunch

4) Was the meeting worthwhile to you?

Yes (5 times)

Great to share ideas

I was told by fellow teachers that this was going to be a "snooze" but I found it fascinating

Yes, I feel that I was given a chance to give impact to standards

5) What would you change in the standards that did not result as a recommendation from this meeting?

Value-need for inclusion

Add values - site base learning

6) What is the most positive benefit this set of meetings can have on the standards?

Recognition of conflict-resolution skills as essential for continuation of a viable workplace

Only time will tell

It helped me clarify my ideas relevant to the state standards...

To include the concept that education is for employment

Making the standards applicable to all learners and removing the "wall" between academic and vocational learning standards.

APPENDIX G

ILLINOIS ACADEMIC STANDARDS:
A POSITION STATEMENT BY
THE ILLINOIS VOCATIONAL ASSOCIATION
BOARD OF DIRECTORS

The Illinois Vocational Association is supportive of rigorous state content standards for our schools and an accompanying recognition and certification process tied to student achievement of such standards. We recognize the difficulty in developing state content standards and appreciate the opportunity to participate in decisions regarding the final form of the standards.

We compliment the State Board of Education for its work thus far and its current effort to gain field reviews. In particular, we are pleased that special effort is being made by ISBE, through the Illinois State Curriculum Center, to have the Education To Careers (ETC) community review the standards and make recommendations for change. Approximately 40 excellent ETC teachers will have participated in these reviews to identify career and employability-related aspects within the academic foundations of the standards.

The standards must speak clearly to students. How often have we heard a student ask, "Why do I have to learn this?" When a student asks "Why do I have to take Algebra I, our only answer is "In order to take Algebra II." This is not an acceptable answer to most 12 - 16 year olds. An answer that does satisfy and motivate students is that what they learn will enable them to calculate interest on their cars, figure geometric dimensions for putting in a swimming pool next summer, or to upgrade their computer.

This life and career-based element of the state standards is critical not just to hold students' immediate attention while they are in the school building. It is important that they learn the content AND learn to apply the content because approximately 75% of our current high school population will seek employment immediately following high school. Most will go into the workforce as fulltime employees. Many will work for supplemental income while pursuing additional education in a setting other than a four-year educational institution, primarily at one our our excellent community colleges. It is therefore important that students recognize the value of academic content to both their lives and their future careers.

The standards as they are currently written speak primarily to the 20-25% of our students who will attend a four-year college or university. Yes, ALL students can benefit from such rigorous content no matter where they go or what they do after high school, but the way the standards are written currently excludes many students by the interpretation that will be given to them by teachers.

Our Association's comments on the standards as they are written are based in a deep and abiding concern that these standards will not speak to the student, nor will they adequately speak to the teachers. The primary reason is that they are called "academic" standards. The term "academic" to the general population means "educational content," which is an appropriate interpretation. However, in education circles it means something different. It means something that does not embrace the idea that content is meant to be useful to our lives. It means it is content to be learned because it is there. Teachers like that idea--"academic" teachers. Students don't.

We have an arbitrary wall in our schools that has been perpetuated by streams of legislated funding. There is an assumption that our content foundations, or standards, are learned in only one set of courses--the "academic" courses. Students easily recognize that their content foundations are learned in many different classes, especially those related to careers.

The exciting integrated coursework now being offered in our schools is motivating to students and also achieves rigorous standards. As an example, studies have shown that on standardized tests, students who took applied physics as part of a career-related set of courses, compared with students who took traditional physics do equally well, and, when looked at individually, show substantively greater gains in knowledge and understanding.

The Illinois Vocational Association recommends the following:

(1)   We recommend that the standards be re-titled to show that foundational content may be learned in any of the many courses offered as part of the curriculum. "Education Standards" speaks to all of us.

(2)   In concert with this recommendation we also believe the descriptions of why the State Goals are important should indicate why each goal is critical from a life-skills and career-perspective.

(3)   The benchmarks should be modified to include examples of career and life-related elements.

(4)   The Applications of Learning section in the standards is vague. It would be more appropriate to show career examples of these applications within the benchmarks.

(5)   The final review teams should include practicing teachers who can relate content to careers and life examples as well as non-educators who can critically review the final standards in light of their world-view.

(6)   The Regional Education for Employment System directors have developed a paper including additional specific recommendations that we recommend ISBE review as part of its finalization of the standards.

System Directors' Recommendations
Regarding Academic Content Standards
Meeting 9/10/96

1. It is crucial that individuals directly involved with State and Federally mandated Education To Careers (ETC) programs be part of the Academic Standards Review. To assure congruence with the current thrust of State programing, ETC must be addressed when creating educational standards.

2. The explanatory paragraphs in the Academic Standards document must emphasize that we are preparing students for "Life-Long Learning and Career Opportunities", not just for movement to the next course in sequence. Academic and career programs must be infused to develop well rounded graduates on the path to success in a rapidly changing society.

3. "Academic" in the Standards title reinforces the chasm of understanding which now exists between vocational ed and academic subject matter. The goal is to eliminate the turf and have a common ground of learning for ALL students. We recommend that the term "academic" be replaced with "educational" throughout the Standards documents.

4. Consistent terminology is needed to avoid confusing ourselves and others (now we use voc ed, occupational ed, technical ed, workplace skills, employability skills, career related skills, core skills, worksite education etc. interchangeably). We endorse the term "life-long learning and career opportunities" for use in the academic standards documentation.

5. Each State Goal should include an explanatory paragraph describing the goal's relationship to life-long learning and career opportunities. This may be a revision of the current wording or an additional paragraph. Perhaps the section "why this goal is important" is where this could occur.

6. An additional Application of Learning category should be added to emphasize Life-Long Learning and Career Opportunities. (This needs to be done with a great deal of support and input from ISBE just as the other standards booklets were developed by the design teams. The Systems Directors Ad Hoc Committee would be able to provide regional and local input/assistance too.)

7. All Standards and Benchmarks should be reviewed with the intent of revising/adding language or benchmarks to embed career-related examples.

8. Committees of elementary and secondary teachers of applied academic content should be convened to assist the Illinois State Curriculum Center in the review of the Standards for the above purposes.

9. Incorporate career and workplace skills into each booklet and highlight them in color plus add a clear linkage section for linking with occupational skills in each book

10. We need a clear message to all educators, administrators, business and community members that career and workplace readiness skills are important for all students and are incorporated throughout (all students means ALL) - Becky's brochure should help with this.

11. Joint presentations involving academic and vocational representatives should be made whenever possible.

12. Remind people that "the primary purpose of schooling is the transmission of knowledge and culture through which children learn in areas necessary to their continuing development and entry into the world of work". Also remind people that "each district shall make available to all students academic and vocational courses for the attainment of learning objectives."

13. Change integration examples to be academic and vocational working together rather than just academic subjects being correlated.

14. Link academic standards with Education-to-Careers by involving business and industry in the development activities.

15. Introduction does not indicate that these standards can be met through academic or vocational course work as the legislation indicates. Change verbiage to that effect.

16. Add a page to EACH booklet, composite set of all 4 books and each overview/executive summary describing the 4 types of standards - academic standards, occupational skills standards, National Career Development Guideline Competencies and workplace readiness skills - and how they are all 4 important for a student's preparation.

17. The National Career Development Guidelines include a comprehensive set of career competencies that should be included in the Standards booklets. Include lists of the National Career Development Guideline Competencies and workplace readiness skills in EVERY book or piece of documentation along with a chart showing the occupational skills standards, lists of the skills standards that are done, a timetable for the development of the other occupational areas and specific information on how each set can be obtained (a tear-out order form listing all of the occupational areas, etc.)

18. The occupational skills standards, National Career Development Guideline Competencies and workplace readiness skills need to have booklets printed by ISBE which go into each set in-depth as "companion guides" to the 4 existing booklets - the format doesn't have to be the same but the guides need to be clear, informative and contain specific examples of how each area can be taught and assessed (basically - what should student be able to do to demonstrate proficiency at various grade levels (career competencies and workplace skills) and/or program completion (occupational skills) at various exit points - ex. CNA, LPN, RN or Metals Levels I, II, III, IV, V, VI.

APPENDIX H

National Career Development Guidelines

Career Development Competencies by Area and Level

	Elementary	Middle/Junior High School	High School	Adult
Self-Knowledge				
	Knowledge of the importance of self-concept.	Knowledge of the influence of a positive self-concept.	Understanding the influence of a positive self-concept.	Skills to maintain a positive self-concept.
	Skills to interact with others.	Skills to interact with others.	Skills to interact positively with others.	Skills to maintain effective behaviors.
	Awareness of the importance of growth and change.	Knowledge of the importance of growth and change.	Understanding the impact of growth and development.	Understanding developmental changes and transitions.
Educational and Occupational Exploration				
	Awareness of the benefits of educational achievement.	Knowledge of the benefits of educational achievement to career opportunities.	Understanding the relationship between educational achievement and career planning.	Skills to enter and participate in education and training.
	Awareness of the relationship between work and learning.	Understanding the relationship between work and learning.	Understanding the need for positive attitudes toward work and learning.	Skills to participate in work and life-long learning.
	Skills to understand, and use career information.	Skills to locate, understand, and use career information.	Skills to locate, evaluate, and interpret career information.	Skills to locate, evaluate, and interpret career information.
	Awareness of the importance of personal responsibility and good work habits.	Knowledge of skills necessary to seek and obtain jobs.	Skills to prepare to seek, obtain, maintain, and change jobs.	Skills to prepare to seek, obtain, maintain, and change jobs.
	Awareness of how work relates to the needs and functions of society.	Understanding how work relates to the needs and functions of the economy and society.	Understanding how societal needs and functions influence the nature and structure of work.	Understanding how the needs and functions of society influence the nature and structure of work.
Career Planning				
	Understanding how to make decisions.	Skills to make decisions.	Skills to make decisions.	Skills to make decisions.
	Awareness of the interrelationship of life roles.	Knowledge of the interrelationship of life roles.	Understanding the interrelationship of life roles.	Understanding the impact of work on individual and family life.
	Awareness of different occupations and changing male/female roles.	Knowledge of different occupations and changing male/female roles.	Understanding the continuous changes in male/female roles.	Understanding the continuing changes in male/female roles.
	Awareness of the career planning process.	Understanding the process of career planning.	Skills in career planning.	Skills to make career transitions.

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Overhead 5.2

Chew (1992)

ADDENDUM
MARKED UP DRAFTS

This document is arranged in a logical sequence, giving increasing detail on what students should learn and be able to do. There are several terms used throughout.
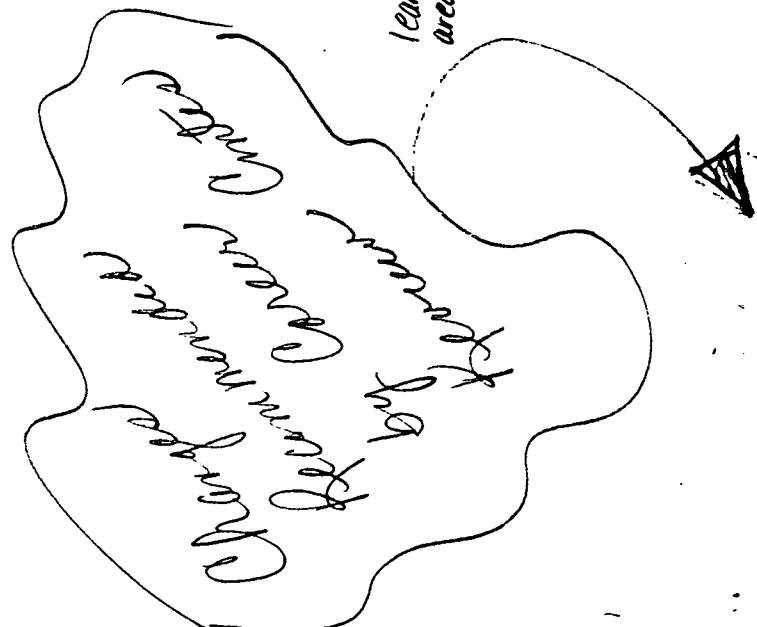
LEARNING AREA: A learning area is ~~an academic~~ *Stake Mandated* subject or discipline. The learning areas addressed by the writing teams are English Language Arts, Mathematics, Science, Social Science, Physical Development and Health and Fine Arts. A supplementary draft of advisory goals and standards for Foreign Languages is also being distributed.

APPLICATIONS OF LEARNING: Applications of learning are significant methods of learning and using knowledge which cross ~~academic~~ *learning* ~~disciplines.~~ *areas* The ability to use these skills will greatly influence students' success later in life.

The five applications of learning are explained below:

- **Solving Problems** - Problem solving is a key mechanism in which students learn to investigate problems and to formulate and propose solutions supported by reason and evidence.

- **Communicating** - Understanding lessons is ~~on~~ly the beginning of education. Students ~~al~~so must be able to express and receive ~~in~~formation and ideas accurately and ~~cle~~arly in oral and written forms. In fact, ~~co~~mmunication reinforces learned lessons, ~~he~~lping students to use facts and ~~inf~~ormation to build further knowledge.

- **Using Technology** - Technology, particularly ~~te~~lecommunications and computer ~~tec~~hnology, puts a wealth of information ~~an~~d expertise at students' fingertips. ~~Sk~~illed use of technology creates a gateway

to relevant, up-to-date information well beyond the walls of the classroom.

- **Working on Teams** - Learning is an intensely individual activity, but students also need to know how to contribute as members of teams or work groups. This aspect of learning is essential to adult life. *and workplace learning*

- **Making Academic Connections** - Every ~~subject~~ is related in some fashion to others. Students must learn to place information within a larger setting—to see the connections among lessons, subjects and everyday life. *including career success.*

GOAL: A goal is a broad statement of knowledge and/or skill to be attained within a learning area. Goals organize subject matter within learning areas. Each goal in this draft has an explanation of why it is important and how it relates to life beyond school. **A comparison of the proposed goals with those adopted in 1985 appears in Appendix A.**

ACADEMIC STANDARD: An academic standard is a specific statement of knowledge and/or skills within a goal. ~~Academic~~ Standards clearly define the learning needed to achieve a goal. They state specifically what students should know and be able to do as a result of their education ~~to be~~ *productive citizens.*

LEARNING BENCHMARKS: Learning benchmarks are progress indicators for measuring students' achievement of ~~an academic~~ standard. The benchmark levels are early elementary school, late elementary school, middle school (junior high school), early high school and late high school.

Learning benchmarks also can be seen as bridges between the stated standards and the measurements that will be used to determine

General Recommendations
for All Disciplines
1. Delete "academic" terminology.
2. Infuse 3-6 career-development and employability examples
3. Note careers (both entry-level and higher levels) that require a foundation in the discipline. This can be in the Goal Description and/or "Notes" section.
4. Provide an appendix listing the Nat'l Career Development Guidelines.
5. Emphasize student roles of consumer and worker in relation to the content.
6. Each Goal Description should note the value of that Goal's accomplishment to the workplace and students' career options.

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formulate health-related requirements for careers (e.g. a firefighter needs to climb)

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
19.A.3 Demonstrate the difference between efficient and inefficient movements (e.g., opposition, speed, distance) in individual and group physical activities.	**19.A.4** Analyze efficient movement through self-assessment and peer observation of individual and group physical activities (e.g., lay-ups, football spiral, volleyball pass).	**19.A.5** Use the principles of efficient/inefficient movement to conduct a self-assessment while performing an individual or group physical activity.	JOD/Health Occup Physical Therapy "Movement" Coach/Trainer Exercise Spec. Safety Technician Risk Manager
19.B.3a Define and apply rules for age-appropriate physical activity. **19.B.3b** Identify and apply basic strategies (e.g., offense, defense) in selected games, activities and sports.	**19.B.4a** Explain and apply rules for age-appropriate physical activity. **19.B.4b** Compare and apply strategies in selected games, activities, and sports (e.g., efficiency and effectiveness of strategies, one on one vs. zone defense; pass, set and spike).	**19.B.5** Analyze and apply detailed rules and detailed strategies (e.g., officiate, coach) in selected games, activities and sports.	
19.C.3 Demonstrate complex applications of motor, non-motor and manipulative skills (e.g., lay-ups, hurdles).	**19.C.4** Demonstrate the general knowledge of rules, basic skills and basic strategies of a variety of games, sports, dance and leisure activities.	**19.C.5** Demonstrate detailed knowledge, intermediate skills and advanced strategies in self-selected physical activities which include two individual sports, a team sport and a dance.	Describe the relationship of/principles of physical achievement and career development.

STATE GOAL 20

Understand how to assess, achieve and maintain physical fitness for continuing health.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Know and apply the physiological principles and components of health-related fitness.	**20.A.1a** Use vocabulary associated with physical fitness (e.g., sleep, rest, exercise, relaxation). **20.A.1b** Identify characteristics of being fit (e.g., flexibility, muscular strength).	**20.A.2** Describe healthful benefits that result from regular participation in physical activity.
B. Assess individual fitness levels.	**20.B.1** Explain immediate physiological effects of physical activity (e.g., faster heartbeat, increased pulse rate, increased breathing rate).	**20.B.2a** Determine heart rate before and after physical activity. **20.B.2b** Compare components of health-related fitness as they relate to fitness testing.

WHY THIS GOAL IS IMPORTANT

Regular physical activity is necessary to sustain fitness and health. Students need to apply training principles—frequency, intensity, time and type (FITT)—to achieve their personal fitness goals. Fitness expectations need to be appropriately established on an individual basis; realistic plans need to be based on the health-related components of endurance, strength, flexibility, cardiorespiratory fitness and body composition. By learning and applying these concepts, students can develop lifelong understanding and good habits for overall health and fitness.

[handwritten annotations]

Exercise requiring these skills include physical

Therapy, movement therapy, coaching and fitness.

and identify specific requirements of them for maintenance of and health in everyday life personal

NOTE: The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.

PHYSICAL DEVELOPMENT AND HEALTH

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
20.A.3a Explain physiological terminology (e.g., target heart rate, fatigue, recovery rate) used when describing effects of exercise.	**20.A.4a** Demonstrate various types of fitness training programs (e.g., circuit training and aerobic interval).	**20.A.5** Demonstrate the principles of training from a personal fitness plan.	*Identify and apply coping skills for stress reduction.*
20.A.3b Identify the principles of training (e.g., F-I-T-T).	**20.A.4b** Report the effects of the principles of training on fitness levels (e.g., F-I-T-T).		
20.B.3a Monitor their individual heart rates before, during and following light, moderate and vigorous physical activity.	**20.B.4a** Monitor, collect and analyze physiological data (e.g., heart rate, pulse, recovery rate, blood pressure).	**20.B.5a** Collect and analyze physiological data over a period of time.	
20.B.3b Prepare and assess an individual fitness profile, including physical activity participation levels, and determine individual fitness needs (e.g., health-related components). *including coping skills for job-related stress)*	**20.B.4b** Assess an individual fitness profile (e.g., raw scores and physical activity level).	**20.B.5b** Assess their individual fitness status. *Compared to the demands of an occupation of their choice*	
	20.B.4c Analyze behaviors (e.g., smoking, exercise, alcohol consumption) that affect individual physical fitness.		

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS

20.C.3a Explain how to set individual short-term fitness goals based on an individual fitness profile.

20.C.3b Apply the principles of training (F-I-T-T and interval vs. circuit) to individual short-term fitness goals.

20.C.3c Explain which physical activities would be appropriate for an individual physical fitness plan to match individual fitness needs.

20.C.3d Identify opportunities for regular participation in physical activities.

20.C.3e Demonstrate safe and effective warm-up and cool-down activities.

Describe how/why these activities are used in a workplace (e.g. warm-ups at factories to reduce on-the-job injuries).

EARLY HIGH SCHOOL LEARNING BENCHMARKS

20.C.4a Explain how to set both short-term and long-term fitness goals based on individual profile data and group data.

20.C.4b Describe and demonstrate fitness training programs that are beneficial and available.

20.C.4c Design and implement a personal fitness program (short- and long-term).

20.C.4d Apply criteria to assess an individual fitness plan.

LATE HIGH SCHOOL LEARNING BENCHMARKS

20.C.5a Explain how to set short-term and long-term fitness goals using individual fitness profiles, group data and current research.

20.C.5b Use physical fitness data to monitor an individual fitness plan (e.g., short-term, long-term).

20.C.5c Explain how future changes in one's life affect physical activity (e.g., age, illness, injury). *+ repetitive workplace activity.*

20.C.5d Demonstrate improved health-related fitness (e.g., reduced heart rate, reduced heart recovery rate, reduced body fat percentage) through an individually designed physical fitness program.

NOTES

STATE GOAL 21

Develop team-building skills by working with others through physical activity.

As a result of their schooling, students will be able to:

WHY THIS GOAL IS IMPORTANT

As members of teams, students need to fill the role of leader at times and participant at other times. Knowing how to follow procedures, accept leadership from others, participate actively and lead when appropriate will serve the student on and off the playing field. Students need to know the elements of teamwork (communication, decision making, cooperation, leadership) and how to adjust individual needs to team needs and be able to recognize each member's contributions, including their own.

[handwritten annotations]

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Demonstrate responsibility during group physical activities.	**21.A.1** Describe ways of being responsible for one's actions in group physical activities.	**21.A.2** Demonstrate responsibility for one's actions in group physical activities.
B. Demonstrate participatory and leadership skills during planned group physical activity.	**21.B.1a** Recognize individual differences and similarities among peers in physical activities, emphasizing safe participation.	**21.B.2a** Demonstrate participation in a variety of physical activities that require individual contributions to a team.
	21.B.1b Demonstrate sharing, cooperation and concern for others while participating in physical activity (e.g., sharing equipment, taking turns).	**21.B.2b** Work constructively with a partner or small group to reach specific goals during physical activity (e.g., time on task, completion of task).

NOTE: The "e.g.'s" are meant as *examples only.* There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.

PHYSICAL DEVELOPMENT AND HEALTH

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
21.A.3 Follow responsible decisions made by others (e.g., officials, coach) during physical activity. *(supervisors, employers, co-workers)* *(OSHA, employers, co-workers)*	**21.A.4** Demonstrate decision-making skills, both independently and with others, during physical activities, applying rules and following through with the decisions made.	**21.A.5** Demonstrate individual responsibility through use of various team-building strategies in physical activity settings (e.g., etiquette, fair play, self-officiating, coaching, organizing a group activity).	*All these are employability skills*
21.B.3 Identify and apply successful team-building skills in physical activity (e.g., roles of group members, group unity, trust, communication) considering strengths and limitations of self and others.	**21.B.4a** Recognize and demonstrate the role of the individual as a member of a group during physical activity (e.g., leader/follower, active participant).	**21.B.5a** Develop strategies that encourage the unique abilities and potential of others during physical activities.	
	21.B.4b Apply higher-level team-building skills (e.g., trust building, problem solving, achieving a common goal) to achieve specific goals in physical activities.	**21.B.5b** Apply team-building skills to achieve group/team goals.	

STATE GOAL 22

Understand principles of health promotion and the prevention and treatment of illness and injury.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD

A. Explain the basic principles of health promotion, illness prevention and safety.

[handwritten annotations]

WHY THIS GOAL IS IMPORTANT

Nutrition, exercise, rest, hygiene and safety are the bases for personal health. From an early age, students can recognize healthy habits and understand why they are important; as they become more sophisticated in their understanding, they learn and can adopt a variety of ways to minimize illness and enhance health. Students who develop an effective understanding of basic health promotion can establish the foundation for personal health and well-being long after completing school *and into later + family life. This goal will help students as they grow + mature in school + beyond.*

[handwritten in margin]

*Career Planning
interest in clubs
nutritionist, safety
technician and physical
therapist, occupational
therapist, food inspector.*

EARLY ELEMENTARY LEARNING BENCHMARKS

22.A.1a Describe signs and symptoms of common childhood illnesses (e.g., fever, rashes, coughs, congestion).

22.A.1b Identify methods of health promotion and illness prevention (e.g., obtaining immunizations, hand washing, brushing and flossing teeth, eating practices, sleep, cleanliness).

22.A.1c Identify dangerous situations and safety methods to reduce risks.

LATE ELEMENTARY LEARNING BENCHMARKS

22.A.2a Describe benefits of early detection and treatment of illness.

22.A.2b Demonstrate strategies for the prevention and reduction of illness (e.g., practicing cleanliness, making healthy food choices, acknowledging the importance of immunizations and regular health screenings).

22.A.2c Describe and compare health and safety methods that reduce the risks associated with dangerous situations (e.g., wearing seat belts and helmets, using sunscreen).

NOTE: _The "e.g.'s" are meant as examples only._ There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
22.A.3a Identify and describe ways to reduce health risks common to adolescents (e.g., exercise, diet, refusal of harmful substances).	**22.A.4a** Compare and contrast communicable, chronic and degenerative illnesses (e.g., poliomyelitis, cancer, arthritis).	**22.A.5a** Assess strategies for managing contagious, chronic and degenerative illnesses (e.g., regular health exams, proper treatment, support systems).	
22.A.3b Identify how positive health practices and relevant health care can help reduce health risks (e.g., proper use of medication, immunization, proper diet and exercise).	**22.A.4b** Predict results of effective health promotion and illness prevention (e.g., reduction in stress, improved fitness, lessened likelihood of injury and illness~ *and effects on employability*.	**22.A.5b** Analyze the effectiveness of health promotion and illness prevention methods using data from actual situations (*e.g. analyze workplace absentee records*.	
22.A.3c Explain routine safety precautions in practical situations (e.g., in motor vehicles, on bicycles, in and near water, as a pedestrian).	**22.A.4c** Demonstrate basic procedures in injury prevention and emergency care (e.g., first aid, CPR).	**22.A.5c** Research and report in oral and written forms how the prevention and control of health and safety problems have been altered by research and medicine (e.g., product testing; control of polio; advanced surgical techniques; improved treatments for cancer, diabetes and heart disease} ~ *workplace fitness centers*.	

PHYSICAL DEVELOPMENT AND HEALTH

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
22.B.3 Describe how the individual influences the health and well-being of the community (e.g., volunteerism, disaster preparedness, proper care to prevent the spread of illness). *(and the workplace)*	**22.B.4** Explain social and economic effects of health problems on individuals and society (e.g., cost of health care, reduction in productivity, *workmen's comp).*	**22.B.5** Analyze how public health policies and laws function to prevent and control illness (e.g., product and food labeling, food safety and handling, school immunizations).	*Careers in Public Health* *Food inspector* *Restaurant Mgr.* *Environmental Spec.* *Describe public health agencies, their roles + careers they generate.*
22.C.3 Assess environmental conditions that affect the immediate area and develop solutions to correct environmental problems *(e.g. examine local businesses + factories)*	**22.C.4** Compare how individuals, communities and ~~states~~ prevent and correct health-threatening environmental problems (e.g., inspection, education, legislation). *governmental agencies* *Identify workplace hazards.*	**22.C.5** Analyze how environmental conditions can affect health on a large scale, e.g., acid rain, oil spills, solid waste contamination, nuclear leaks, ozone depletion). *or in the workplace.*	

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STATE GOAL 23

Understand human body systems and factors that influence growth and development.

WHY THIS GOAL IS IMPORTANT

To achieve healthful individual development, students need to understand human anatomy and physiology, nutrition, stages of growth and development, avoidance of harmful actions, and the characteristics of good health habits. Early learners begin with basic recognition of body systems and growth stages; as they progress, they understand how systems work together and how individual actions affect health. Even as they themselves grow and develop, students can learn to enhance the process throughout their school years.

Learners will be able to apply the effects of health-related actions to success in the workplace.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Describe and explain the structure and functions of the human body systems and how they interrelate.	**23.A.1** Identify selected body systems, their basic parts and functions (e.g., muscular, skeletal, circulatory, respiratory, digestive, nervous).	**23.A.2** Describe how body systems function and interact with each other (e.g., blood transforming nutrients from the digestive system).
B. Explain the effects of health-related actions on the body systems.	**23.B.1** Identify healthy actions that influence the function of body systems (e.g., cleanliness, proper diet, exercise).	**23.B.2** Differentiate between positive and negative effects of health-related actions that affect body systems (e.g., cleanliness, exercise, diet).
C. Describe factors that affect growth and development.	**23.C.1a** Explain how individual differences among people occur in growth and development (e.g., height, weight). **23.C.1b** Identify stages in growth and development (e.g., stages of the life cycle from infancy to old age).	**23.C.2** Identify factors affecting growth (e.g., nutrition, inherited characteristics, illness).

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
23.A.3 Explain how body systems are influenced by environmental conditions (e.g., sun and skin cancer, air pollution and respiratory illness).	**23.A.4** Explain how body system functions can be maintained and improved (e.g., exercise, nutrition, safety, *workplace behavior + fitness*).	*Explain the need for fitness related to a future career goal.*	
23.B.3 Explain the effects of health-related actions upon body systems (e.g., exercise, orthodontics, avoiding smoking and alcohol use).	**23.B.4** Explain and predict immediate and long-term effects of health habits on the body systems (e.g., diet/heart disease, exercise/ fat reduction, stress management/ emotional health).	**23.B.5** Explain the effects of healthy living on individuals and on the genetic transfer to future generations *(eg. smoking, drugs, radiation)*. *Explain effects ... in the workplace.*	
23.C.3 Describe the relationships among physical health factors during adolescence (e.g., the effects of fatigue on physical and mental performance, effects of nutrition on growth). *in daily living or the workplace*	**23.C.4** Describe changes in physical health and body functions at various stages of the life cycle (e.g., childhood, adolescence, adulthood, advanced age). *Describe how these changes may cause changes related to the workplace (eg, lose job due to arthritis or age).*	**23.C.5** Research and assess how the aging process affects body systems (e.g., vision, hearing, immune system).	

STATE GOAL 24

Promote and enhance health and well-being through the use of effective communication and decision-making skills.

WHY THIS GOAL IS IMPORTANT

From an early age, students need to know how to communicate their health needs and request help from adults. They also need to know how and why personal decisions can affect their own health and well-being. Consideration for the needs of others becomes part of health promotion as well. Students who can clearly identify and communicate about health-related issues—and can make healthful personal decisions—will benefit as they grow and mature in school and *beyond.*

These skills are needed at school, at home and in the workplace.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

identify

as well as how to make those decisions.

as responsible citizens (community members / employees - co workers, etc.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Demonstrate procedures for positive communication, resolving differences and preventing violence.	**24.A.1a** Differentiate between positive and negative behaviors (e.g., talking, pushing, name calling). **24.A.1b** Identify positive verbal and nonverbal communication skills (e.g., body language, manners, listening) essential to health and well-being.	**24.A.2a** Describe causes and consequences of conflict among youth. **24.A.2b** Demonstrate positive verbal and nonverbal communication skills (e.g., polite conversation, attentive listening, non-threatening listening, body language).
B. Apply decision-making skills related to the protection and promotion of individual health.	**24.B.1** Describe how decision making affects health (e.g., personal differences in making decisions, how circumstances help determine actions, how to seek adult assistance).	**24.B.2** Explain a decision-making process as it applies to setting and achieving individual health goals (e.g., identifying problems, goal-setting strategies).
C. Demonstrate skills essential to enhancing health and avoiding dangerous situations.	**24.C.1a** Identify behaviors that are risky, threatening or harmful to themselves and others (e.g., not talking to strangers, not taking medicine from strangers). **24.C.1b** Demonstrate refusal skills (e.g., how to use support systems to reinforce refusals).	**24.C.2a** Demonstrate ways to avoid and reduce harmful or threatening situations. **24.C.2b** Describe situations where refusal skills are necessary (e.g., saying no to tobacco and alcohol use, avoiding physical abuse and exploitation).

PHYSICAL DEVELOPMENT AND HEALTH

PHYSICAL DEVELOPMENT AND HEALTH

(handwritten left margin): to the business + the individual — workplace — and the workplace

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
24.A.3a Demonstrate methods for solving interpersonal differences without harm (e.g., differentiate between safe and dangerous activities, listening, reasoning). **24.A.3b** Analyze possible causes and consequences of conflict among youth in schools and communities. **24.A.3c** Explain how positive communication helps to build and maintain relationships *at school, at home + in the workplace.*	**24.A.4a** Describe the causes and health consequences of conflict among individuals and groups (e.g., economic losses, threats to personal safety, *loss of job*). **24.A.4b** Explain how positive communication can be used to prevent and resolve differences and formulate strategies for effective conflict resolutions. *(e.g. harassment on the job)*	**24.A.5** Describe strategies to overcome communication barriers about health issues. *Describe the need for workplace ethics (e.g. confidentiality, dependability, accountability.)*	
24.B.3 Apply decision-making strategies and skills to attain individual health goals (e.g., brainstorm to develop alternative possibilities).	**24.B.4** Explain how decision making affects the achievement of individual health goals (e.g., consequences of decisions made, peer group reactions to decisions). *harassment at school, at home + in the workplace.*	**24.B.5** Relate immediate and long-term impacts of health decisions on the individual, family, *and* community *+ workplace (e.g. insurance, ADA, work benefits cost)*	
24.C.3 Demonstrate refusal and negotiation skills to avoid potentially harmful or exploitative situations. *(including those of the workplace or occupation or school) well as community).*	**24.C.4** Determine individual health strengths and weaknesses (e.g., exercise level, nutritional status).	**24.C.5** Formulate a plan for lifelong health (e.g., good nutrition, exercise, healthy choices). *formulate a plan for a healthy lifestyle in relation to your planned career.*	

Demonstrate a knowledge and sense of numbers and their represen- tations, including basic operations (addition, subtraction, multiplica- tion, division), ratios and propor- tions, by using multiple ways of obtaining exact values and estimates to understand patterns involving numbers and their applications.

WHY THIS GOAL IS IMPORTANT

The "language" of numbers and operations is at the heart of mathematical problem solving. It starts with the most basic operations (addition, subtraction, multiplication, division) and moves on to more abstract ideas and relationships. It serves in such diverse problem-solving situations as comparing unit prices on groceries, estimating materials for a construction job or predicting the trajectory of a rocket. In using this language, students must be able to combine mental mathematics with paper-and-pencil methods and use calculators and computers to solve problems in school and in practical situations.

NOTE: _The "e.g.'s" are meant as examples only._ _There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks._

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Demonstrate knowledge and use of numbers and their relations and representations in a broad range of settings from theoretical to practical.	**6.A.1a** Identify and compare whole numbers using the symbols <, >, or =, and the words "greater than", "less than", or "equal to", applying counting, grouping and place value concepts. **6.A.1b** Identify and compare fractions using concrete materials.	**6.A.2** Compare and order whole numbers, fractions and decimals, using concrete materials, drawings and mathematical symbols.
B. Investigate, represent and solve problems using number facts, operations (addition, subtraction, multiplication, division), algorithms and relationships.	**6.B.1a** Solve a wide variety of one- and two-step problems using the basic operations (addition, subtraction, multiplication and division) with whole numbers. **6.B.1b** Determine and use appropriate operation(s) to solve problems. **6.B.1c** Demonstrate, orally and in writing, various approaches to solve problems as individuals and as members of a problem-solving group.	**6.B.2a** Solve a wide variety of one- and two-step problems involv- ing single- and multi-digit whole numbers, fractions and decimals using the basic operations (addition, subtraction, multiplica- tion, division). **6.B.2b** Demonstrate, orally and in writing, various approaches to solve problems, noting the relative promise of each approach, as individuals and as members of a problem-solving group.

MATHEMATICS

MATHEMATICS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
6.A.3 Describe numbers, orally and in writing, in a variety of equivalent forms, (e.g., integers, fractions, decimals, exponential, scientific notation).	**6.A.4** Identify and apply the properties of the real number system and the properties of special numbers (e.g., i, π, square roots) through technology and applications.	**6.A.5** Perform operations on complex numbers and express results in the simplest form using contemporary technology.	*Math courses should have pre-requisite "skills", not courses passed.*
6.B.3a Solve practical problems involving whole numbers, integers and rational numbers; communicate the solutions orally and in writing as individuals and as members of a problem-solving group. *(eg. balance checkbook)*	**6.B.4** Select and use appropriate arithmetic operations in given situations, and apply criteria to verify the results using contemporary technology. *(eg. conduct essay comparisons for a cutter of choice; calculate mortgage options +fees; perform an income tax settlement; figure an amount monthly, passed budget)*	**6.B.5** Identify and apply numbers expressed in exponential, logarithmic and scientific notation; arithmetic results, orally and in writing, using contemporary technology.	
6.B.3b Apply primes, factors, divisors, multiples, common factors and common multiples in solving problems.			
6.B.3c Identify and apply real numbers, including π, squares, and square roots.			

Convert fraction + decimal to percentage

Convert metric numbers and "traditional" numbers using fraction or workplace situations (eg. pounds to kilos, and to metres, etc.)

(very obscured for most of them)

New advanced program (order in both direction)

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MATHEMATICS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
6.C.3a Solve problems with whole numbers, fractions, decimals, percents and proportions including selecting computational procedures (e.g., estimation, mental math, paper-and-pencil methods, calculators, computers).	**6.C.4** Identify the difference between exact values and approximations and determine which is appropriate for a given situation; present results orally and in writing. *(handwritten notes)*	**6.C.5** Describe, orally and in writing, the amount of error that may exist in a computation using estimates.	
6.C.3b Show evidence that computational results using whole numbers, fractions, decimals, percents and proportions are correct or that estimates are reasonable.			
6.D.3 Apply ratios and proportions, primes, factors and multiples to solve practical problems. *(handwritten notes)*	**6.D.4** Solve problems involving similarity (e.g., simple and compound interest, discounts and commissions) and probability (e.g., growth patterns, error tolerance) using ratios, proportions and percents. *(handwritten notes)*	**6.D.5** Compare and contrast numerical and geometric patterns of growth.	

STATE GOAL 7

Make, use and estimate measurements of objects, amounts and relationships and determine tolerable levels of error.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Measure and compare quantities using appropriate units, instruments and methods.	**7.A1a** Measure length, liquid volume and weight/mass with customary and metric systems. **7.A1b** Measure time using instruments (e.g., clocks, calendars) and units (e.g., seconds, days, years). **7.A1c** Identify coins and describe the relationship between them. **7.A1d** Read temperatures to the nearest degree from a Celsius and a Fahrenheit thermometer.	**7.A2a** Compare and convert units of measures for length, weight/mass, and volume within the customary and metric systems. **7.A2b** Calculate results for monetary problems involving dollars and cents.
B. Estimate measurements and determine tolerable levels of error in measurements.	**7.B1** Given a problem, describe possible methods for estimating a given measure as individuals and as members of a group.	**7.B2a** Communicate, verbally and in writing, possible methods for estimating a given measure, selecting proper units in both customary and metric systems individually and as members of a group. **7.B2b** Estimate conversions between units in the customary and metric systems.

WHY THIS GOAL IS IMPORTANT

Understanding time, money, distance, area and volume means understanding measurement. This is not only a daily skill, but also one that connects mathematical thinking with other academic fields. It includes the ability to estimate and to recognize when a measurement is "good enough" or when greater levels of accuracy are needed. Students must be able to use standard instruments (rulers, volume measures, timers and others) and techniques and the increasingly sophisticated means of measurement (often via computer) that are becoming available.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

MATHEMATICS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS
7.A.3 Apply the concepts and attributes of length, capacity, weight/mass, perimeter, area, volume, time, temperature and angle measures in practical situations. *Complete ten project of choice (using 2 or 3 previous benchmarks.)*	**7.A.4a** Apply units, domains/ranges and scales to describe and compare functions, numerical data and physical objects. **7.A.4b** Apply formulas in a wide variety of measurement applications (e.g., perimeter, area, volume, angle, time, temperature, mass, speed, density, monetary values). *and apply in practical situations (such as health care, landscaping, energy mgt, natural resource mgt, etc.*	*Complete a project (of choice) applying at least 4 bench marks in* *Apply formulas as about to determine the demographics of where to student lives.*
7.B.3a Estimate and apply measurement for description and comparison, constructing special measures where needed, individually and as members of a group. **7.B.3b** Select and apply instruments and units of measure to the degree of accuracy required in a particular situation.	**7.B.4** Measure quantity and value (e.g., speed, force, slope) using instruments including rulers, protractors, scientific instrumentation, calculators and computers, individually and as members of a group. *and apply in practical situations (such as mechanical electronic engineering.*	**7.B.5** Estimate area, volume or capacity of an irregular region, individually and as members of a group. *Complete project (of choice) using 7B benchmarks.*

7A.

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
7.C.3a Given a situation, construct a simple scale drawing.	**7.C.4a** Make indirect measurements using proportional reasoning.	**7.C.5a** Apply nonlinear scales (e.g., Richter, decibel, pH) to solve practical problems.	
7.C.3b Convert a simple scale drawing from one scale to another.	**7.C.4b** Interpret complex scale drawings including maps, globes and blueprints.	**7.C.5b** Analyze dimensions (e.g., linear measurements, area measurements, volume measurements) in applied measurement problems using conversion ratios within and between measurement systems.	
7.C.3c Use concrete and graphic models to find perimeters, areas, surface areas and volumes of two- and three-dimensional regions.	**7.C.4c** Convert within and between measurement systems and monetary systems using technology where appropriate.	**7.C.5c** Measure inaccessible distances and determine derived measures such as density by using proportional reasoning and indirect measurements, including applications of trigonometric ratios.	
	7.C.4d Determine how changes in one measure may affect other measures (e.g., what happens to the volume and surface area of a cube when the side of the cube is halved).		

*Identify correct
that will give tools
in this job.*

*and make a think
plan to include
milage, train a
expenses.*

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STATE GOAL 8

Identify and describe patterns and relationships in actual data, as well as solve problems and predict results using algebraic methods and symbols, tables, graphs, calculators and computers.

WHY THIS GOAL IS IMPORTANT

The algebraic approach is one of the central ways in which we represent and solve problems involving quantities. This approach can be used with problems as diverse as finding pricing patterns for goods and services, describing the behavior of a car as it speeds up or slows down, or understanding the changes in two chemicals as they react with each other. Students should be able to use algebraic methods to create tables and graphs. This activity should mirror the adult workplace, involving paper-and-pencil methods as well as calculators and computers.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Identify numerical relationships using variables and patterns.	**8.A.1a** Identify and describe simple patterns. **8.A.1b** Expand geometric and simple numeric patterns (e.g., odd/even, multiples of 5 and 5). **8.A.1c** Apply the concepts and symbols for equality and inequality. **8.A.1d** Write numerical sentence boxes to represent unknowns in a problem situation.	**8.A.2a** Identify and describe complex patterns. **8.A.2b** Extend, create and describe complex geometric and numeric patterns (e.g., perfect squares, multiples of 2, negative integers). **8.A.2c** Write and solve open number sentences using variables and write narrative descriptions of the open sentences. **8.A.2d** Represent equations with objects and pictures. **8.A.2e** Describe relationships using tables, graphs, symbols and words.
B. Analyze and describe numerical relationships using a variety of representations.	**8.B.1a** Solve problems involving pattern identification and completion of patterns. **8.B.1b** Extend a number or picture pattern individually and as members of a group.	**8.B.2a** Analyze a geometric pattern and express the results numerically, orally and in written text. **8.B.2b** Use graphing calculators, computer modeling and telecommunications to collect data, analyze information and graphically represent numerical relationships and patterns as individuals and as members of a group.

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
8.A.3a Apply the basic arithmetic operations and number properties (commutative, associative, distributive, transitive, identity, inverse, order of operations, and zero) to solve problems. **8.A.3b** Solve problems using linear expressions, equations and inequalities.	**8.A.4** Analyze terminating and repeating patterns, represent situations and describe properties using mathematical expressions, variables and operations.	**8.A.5** Solve various mathematical problems using models that employ variables and patterns.	*Written skills are important in all... Need to stress writing across the curr.* *State in benchmark what technology is to be used*
8.B.3 Predict and analyze functional relationships; make generalizations based on observed patterns; and communicate findings with tables, graphs and rules for patterns, using both traditional means and contemporary technologies, individually and as members of a group.	**8.B.4a** Represent and translate algebraic concepts and relationships with words, diagrams, graphs, tables, physical models, spreadsheets, vectors, matrices, equations and inequalities, individually and as members of a group. **8.B.4b** Identify and apply basic functions (e.g., absolute value, linear, quadratic, exponential and step functions) to describe numerical relationships.	**8.B.5** Identify and apply functions (e.g., exponential, inverse, radical, quadratic and higher degree polynomial, rational, parametric, polar, logarithmic, trigonometric, step and piece-wise functions) to describe numerical relationships, individually and as members of a group.	*Q = will all schools have the equipment to perform technology... These functions? (e.g. graphing calculators)* *Q = will technology by done?*

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
8.C.3 Explain and apply the basic arithmetic operations and number properties, extended to identity, order of operations, and zero.	**8.C.4** Apply the properties of numbers and operations (e.g., associative, commutative, distributive, transitive, identities and inverses) in algebraic settings derived from economics, business and industry and other practical situations.	**8.C.5a** Analyze and report the effects of changing coefficients, exponents and other parameters on functions and their graphs. **8.C.5b** Apply algebraic properties and procedures with structures such as matrices, vectors, functions and sequences using data found in business, industrial and consumer situations.	
8.D.3a Solve problems using symbolic representations of variables, expressions, equations and inequalities using graphs and tables. **8.D.3b** Propose and solve problems using proportions, formulas and functions. **8.D.3c** Describe concepts of exponents, perfect squares and square roots, using calculators.	**8.D.4** Formulate and solve linear and quadratic equations and linear inequalities algebraically and investigate nonlinear situations through graphs, tables and computer applications.	**8.D.5** Formulate and solve nonlinear equations and systems including problems involving inverse variation and exponential and logarithmic growth and decay using graphing, symbol manipulation and computer applications.	

demonstrate their fructeo of graphic Celestral powers moving object / potential and describe how they are used in the workplace (eg muestra carta).

STATE GOAL 9

Analyze, categorize and draw conclusions about objects and spatial relationships using geometric methods and drawings, sketches, graphs, models, symbols, calculators and computers.

WHY THIS GOAL IS IMPORTANT

Geometry provides important methods for reasoning and solving problems in one, two or three dimensions. Its applications are widespread in construction, mapping, architecture and elsewhere. Knowledge of geometry should include trigonometric functions, graphs, sets, networks, vectors and other factors. Use of this knowledge in science, engineering and technical fields requires the use of calculators and computers.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Demonstrate and apply basic geometric concepts in one, two and three dimensions.	**9.A.1a** Name familiar one-, two- and three-dimensional shapes (e.g., segments/lines/planes, circle/sphere, square/cube, triangle/pyramid, rectangle/rectangular solid).	**9.A.2a** Draw and build one-, two- and three-dimensional geometric figures.
	9.A.1b Draw two- and three-dimensional shapes.	**9.A.2b** Identify and describe how geometric figures are used in practical settings (e.g., construction, art, advertising).
	9.A.1c Identify and describe practical examples of geometric figures.	**9.A.2c** Use calculators and computers to investigate and represent geometric relationships, patterns, symmetry and design in two and three dimensions.
B. Identify, describe, classify and compare relationships within and among one-, two- and three-dimensional figures.	**9.B.1a** Identify and describe characteristics, similarities and differences of geometric shapes.	**9.B.2a** Identify similarities and differences among one-, two- and three-dimensional shapes.
	9.B.1b Sort, classify and compare familiar shapes.	**9.B.2b** Identify properties of geometric figures (e.g., parallel, perpendicular, similar, congruent, line symmetry).
	9.B.1c Identify and construct figures, symmetric along a line, using various concrete materials, individually and as members of a group.	

(handwritten note:) exceptions at both an entry level + advanced levels

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MATHEMATICS

MATHEMATICS

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
9.A.3a Demonstrate spatial sense by drawing or constructing two- and three-dimensional geometric figures including prisms, pyramids, cylinders, and cones.	**9.A.4a** Construct a model of a three-dimensional figure from a two-dimensional drawing and a two-dimensional representation of a three-dimensional object, with and without technology.	**9.A.5** Use geometric figures and their properties to model practical applications in various disciplines (e.g., architecture, arts, sciences).	
9.A.3b Design transformation images of shapes, figures and models.	**9.A.4b** Make transformation images, perspective drawings, tessellations and scale drawings, with and without technology.		
9.A.3c Analyze objects using tessellations, symmetry, congruence, similarity, scale, perspective, angles and networks and identify their applications in practical situations (e.g., tiling, art, fabric design).			
9.B.3 Identify, describe, classify and compare two- and three-dimensional geometric shapes, figures and models according to their attributes using contemporary technology.	**9.B.4** Use contemporary technology to recognize and apply relationships within and between geometric figures using classifications (e.g., parallel, perpendicular, similar, congruent, symmetric).	**9.B.5** Use contemporary technology to construct two- and three-dimensional models of objects that have practical and functional use.	

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
9.C.3a Construct and develop logical arguments about problems involving geometry.	**9.C.4a** Construct and test logical arguments for geometric situations using technology where appropriate.	**9.C.5a** Perform and describe an original investigation of a geometric problem and verify the analysis and conclusions to an audience.	
9.C.3b Develop and solve problems using geometric relationships and models, with and without technology.	**9.C.4b** Construct and communicate convincing arguments (both formal and informal) for geometric situations.	**9.C.5b** Apply physical models, graphs, coordinate systems, networks, vectors and other geometric methods, with and without technology, to develop solutions for games, problems and puzzles in applied situations and communicate results orally and in writing.	
	9.C.4c Develop and apply the concepts of Euclidean and non-Euclidean geometry to transform and solve problems. *(eg. airline fly patterns, determine line of sight in straightening a fairway (point (engine thongs))*		
9.D.3 Compute measures of sides and angles using proportions and right-triangle relationships.	**9.D.4** Analyze and solve problems involving triangles using trigonometric ratios (e.g., biorhythms, sound waves, tide variations) and communicate results orally and in writing. *Id. areas that real knowledge of these benchmarks (eg. surveying, navigator, cartography, physical weather, RAD technology)*	**9.D.5** Analyze and solve problems (e.g., engineering, survey) involving periodic patterns using circular functions and communicate results orally and in writing.	

STATE GOAL 10

Collect, organize and analyze data using statistical methods and tables, charts, graphs, calculators and computers to represent processes, to predict results and to interpret uncertainty and chance in practical applications.

WHY THIS GOAL IS IMPORTANT

The ability to deal with data—opinion polls, stock prices, tax rates, crime statistics, scientific studies, weather reports—grows more important each day. Students must be able to sort through data, make sense of the variables and patterns, and judge the reasonableness of any claims and interpretations that are being made. Even very young students can count objects and show their findings on charts and graphs. Older students gather, display and analyze data, turning it into information and knowledge applicable to concrete questions. At higher levels, students should be able to find sources of error and bias and to communicate and defend their own conclusions based on data and logical reasoning.

[handwritten annotation]

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Organize, represent, analyze and make conclusions from existing data.	USING DATA PROVIDED:	USING DATA PROVIDED:
	10.A.1a Organize and display data using pictures, tallies, tables, charts or bar graphs.	**10.A.2a** Organize and display data using pictures, tallies, tables, charts, bar graphs, circle graphs, line graphs, line plots, stem-and-leaf plots.
	10.A.1b Describe characteristics of the data.	**10.A.2b** Describe the data using mean, median, mode and range as appropriate with and without technology and report verbally and/or in writing the results, answering posed questions.
	10.A.1c Report verbally and/or in writing the results that answer questions about the data.	**10.A.2c** Make predictions and related decisions based on that data, verifying reasoning.
	10.A.1d Make predictions based on data trends.	
B. Formulate questions, design data collection methods, gather and analyze data and communicate findings.	**10.B.1a** Formulate questions of interest related to data.	**10.B.2a** Formulate questions of interest and determine and select ways of systematically collecting data appropriate to the questions.
	10.B.1b Explain what data could help answer a given question and design surveys or experiments to gather data.	**10.B.2b** Gather, organize and display data using previous methods plus circle graphs, line graphs, line plots, stem-and-leaf plots.
	10.B.1c Collect, organize and describe data using pictures, tallies, tables, charts or bar graphs and describe characteristics of the data.	**10.B.2c** Describe the data using mean, median, mode and range as appropriate, analyze the data and communicate the results verbally and in writing.
	10.B.1d Analyze data and communicate the results verbally or in writing.	**10.B.2d** Predict results and/or make relevant decisions based on the data gathered.

44   PRELIMINARY DRAFT FOR PUBLIC DISCUSSION AND REVIEW

PRELIMINARY DRAFT FOR PUBLIC DISCUSSION AND REVIEW

MATHEMATICS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
USING DATA PROVIDED:	**USING DATA PROVIDED:**	**USING DATA PROVIDED:**	
10.A.3a Construct, read and interpret tables, graphs and charts as a means to organize and represent data.	**10.A.4a** Represent and organize data by creating lists, charts, tables, frequency distributions, graphs and plots.	**10.A.5** ~~Construct a statistics-~~ based presentation, individually and as members of a group, to communicate the results of a project. *And determine what makes it valid and valuable.*	*output*
10.A.3b Compare the mean, median, mode and range with and without technology.	**10.A.4b** Analyze data using mean, median, mode, range, variance and standard deviation of a data set, with and without the use of technology.		
10.A.3c Test the reasonableness of an argument based on data and communicate findings.	**10.A.4c** Make predictions using interpolation, extrapolation, regression and estimation, with and without the use of technology.		
[handwritten notes]	*[handwritten notes]*	**10.B.5** Design a statistical experiment to answer a question about a realistic situation, conduct the experiment, use inferential statistics to interpret the data, and communicate the results, individually and as members of a group. *[handwritten notes]*	
10.B.3 Formulate questions, devise and conduct experiments or simulations, gather data, draw conclusions and communicate results to an audience, using traditional methods and contemporary technologies.	**10.B.4** Design and execute surveys or experiments, gather data to answer relevant questions, and communicate results and conclusions to an audience.		
[handwritten notes]	*[handwritten notes]*		

MATHEMATICS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
10.C.3a Determine the probability and odds of events using fundamental counting principles.	**10.C.4a** Propose and solve problems of chance using the principles of probability, including conditional settings.	**10.C.5a** Compute conditional probabilities and the probabilities of independent events.	
10.C.3b Analyze problem situations (e.g., board games, grading scales) and make predictions about results.	**10.C.4b** Design simulations to estimate probabilities, with and without technology.	**10.C.5b** Compute probabilities in counting situations involving permutations and combinations.	
	10.C.4c Propose and interpret discrete probability distributions, with and without technology.	**10.C.5c** Solve problems using the significance of randomness in calculating probabilities and interpreting statistics.	
		10.C.5d Make predictions using probability distributions, confirm or reject hypotheses, compare results to normal and bimodal distributions.	

SOCIAL SCIENCE

The social science draft goals and academic standards were developed using the 1985 State Goals for Social Sciences and a variety of national and state resources as well as local Illinois examples contributed by team members. A primary purpose of studying social science is to help people develop the ability to make informed and reasoned decisions as citizens and community members *apply to their career*.

Social science includes political science and law, economics, history, geography, and sociology as *psychology*

well as content related to the humanities, mathematics and the natural sciences. Students who achieve the academic standards for social science will have a broad understanding of political and economic systems. They will better understand events, trends, personalities and movements in state, national and world history. They will know United States and world geography. They also will grasp how the concepts of social science can help interpret human actions, *family relationships and career choices*.

APPLICATIONS OF LEARNING

Applications of learning are significant methods of learning and using knowledge which cross academic disciplines and are the skills which will greatly influence students' success later in life.

SOLVING PROBLEMS

Recognize and investigate problems; formulate and propose solutions supported by reason and evidence.

In social science, solving problems helps students to recognize that individual decisions and actions have consequences—and these consequences affect the way people, groups and nations associate with each other. Students of

social science are asked to analyze information from a variety of sources and to solve problems through a rational process based on goals and criteria.

COMMUNICATING

Express and Interpret Information and Ideas.

To gather a range of opinions and determine the best course of action, students must interpret information. To study and draw conclusions about social science issues, students need to have

a command of facts, be able to listen carefully to others, and be able to organize and explain their own ideas using various media.

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SOCIAL SCIENCE

USING TECHNOLOGY

Use appropriate instruments, electronic equipment, computers and networks to access information, process ideas and communicate results.

Technology today provides a channel through which students can gain knowledge of the past, information about today and hypotheses regarding the future. This technology includes databases, computer programs, on-line services and interactive telecommunications. It allows students to see and understand events and consequences that otherwise would be beyond their classroom and group.

WORKING ON TEAMS

Learn and contribute productively as individuals and as members of groups.

Social science is about people's interactions. Study in this field encourages students to listen carefully to the views of all members of a group and to represent their own points of view appropriately and effectively. The group benefits from the individual knowledge and skills of its members. Each individual—like each part of social science itself—holds an important relationship to the whole.

MAKING ACADEMIC CONNECTIONS

Recognize and apply connections of important information and ideas within and among academic learning areas.

Social science is a highly integrated set of disciplines. Understanding economics requires knowing mathematics; understanding geography requires knowledge of several sciences. Students must grasp that the connections between the parts of social science— and their relations to other academic areas— are the key to better understanding how people and groups interact. Students in social science must know data collection and analysis, library and field research, debate, discussion and decision making.

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Understand, analyze and compare political systems, with an emphasis on the United States.

WHY THIS GOAL IS IMPORTANT

The existence and advancement of a free society depend on the knowledge, skills and understanding of its citizenry. Through the study of various forms and levels of government and the documents and institutions of the United States, students will develop the skills and knowledge that they must have to be ~~contributing~~ citizens, now and in the future.

[handwritten: and position]
[handwritten: productive]
[handwritten: Possible career choices include social services &]
[handwritten: government agencies; careers in diplomacy; mass comm.]

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Describe and explain basic principles of the United States government.	**14.A.1** Identify the fundamental principles of government as expressed and implied in major documents (e.g., United States Constitution, Declaration of Independence, Gettysburg Address, Magna Carta, Mayflower Compact).	**14.A.2** Explain the importance of fundamental concepts expressed and implied in major documents (e.g., United States Constitution, Declaration of Independence, Gettysburg Address, Magna Carta, Mayflower Compact).
B. Compare and analyze the structures and functions of the political systems of Illinois, the United States and other nations.	**14.B.1** Identify local, state and national political systems (e.g., local councils, legislatures, Congress).	**14.B.2** Give examples of government responsibilities at the local, state and national levels and distinguish among them.
C. Describe and explain election processes and responsibilities of citizens.	**14.C.1** Identify the concepts of responsible citizenship (e.g., respect for the law, patriotism, civility).	**14.C.2** Explain why rights and responsibilities (e.g., voting, protection under law) are important to the individual, family, community, state and nation.

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
14.A.3 Explain how and why responsibility is distributed, shared and limited by the United States and Illinois constitutions and significant court decisions (e.g., Marbury vs. Madison).	**14.A.4** Describe and evaluate how local, state and national governments serve the purposes for which they were created.	**14.A.5** Research and report various positions on issues regarding the distribution of the powers and responsibilities of the federal system of government.	*Many careers in social science do not require a 4-yr. degree.*
	Review local government organizational charts to identify jobs that need skills in political systems.		*General for S.S. Recommendations*
14.B.3 Identify and analyze basic features of the political systems of Illinois and the United States.	**14.B.4** Compare and analyze the political systems of Illinois and the United States.	**14.B.5** Compare and analyze political systems among nations through analysis of significant contemporary political events and court decisions.	*① add career exploration benchmark to each goal.*
			② Include Business Code of Ethics
14.C.3 Identify and analyze historical issues involving rights, roles and status of individuals in relation to municipalities, states and the nation.	**14.C.4** Explain the meaning of participatory citizenship (e.g., *Bill of Rights*, volunteerism, voting) at all levels of government and society in the United States.	**14.C.5** Analyze the historical trends of voting rights from the first election in the United States up to the most recent national election.	*③*
		Describe professional ethical + legal standards related to careers.	

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
14.D.3a Identify and compare the roles and effectiveness of groups in influencing and shaping public policy and decision making.	**14.D.4a** Explain the roles and effectiveness of individuals in influencing and shaping public policy and decision making.	**14.D.5** Compare and contrast a variety of public policies and issues from the perspective of different individuals and groups.	
14.D.3b Explain roles and influences of individuals and interest groups in shaping a current debate on public policy, using information search methods and telecommunication networks.	**14.D.4b** Analyze roles and influences of individuals and interest groups in shaping a current debate on public policy and make predictions regarding possible results, using information search methods and telecommunication networks.		
14.E.3 Describe the relationship between national sovereignty and international interests (e.g., territory, natural resources, trade, use of technology).	**14.E.4** Compare and contrast relationships and tensions among members of the international community (e.g., sovereignty issues, international interests).	**14.E.5** Analyze the historical trends of United States foreign policy and report the findings in oral and written forms using technology to prepare and present the report, as individuals and as members of a design team.	

Identify careers in foreign policy (e.g. diplomat, UN interpreter) and Develop a Job description for a career in foreign policy.

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Understand, analyze and compare economic systems, with an emphasis on the United States.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Explain and compare how economic systems facilitate the exchange, production, distribution and consumption of goods and services.	**15.A.1** Distinguish between producers and consumers and explain how their choices affect business decisions.	**15.A.2** Describe and compare how segments of the economy interact (e.g., producers, consumers, government, currency, banking).
B. Analyze the effects of scarcity and choice on consumers.	**15.B.1** Describe how demand and scarcity affect people's choices about goods and services (e.g., energy, food, cars, jobs).	**15.B.2** Describe connections among price, quantity demanded and opportunity costs.

Continued on page 34

WHY THIS GOAL IS IMPORTANT

People's lives are directly affected by the economies of cities, states, nations and the world. All people engage in economic activity: buying, selling, producing and consuming. By understanding economic systems—and how economics blends with other social sciences, students will be able to make more-informed choices, prudently apply resources, and function as effective participants in the economies around them.

their families +
the workplace.

Careers in economic systems
emphasize the need for social
science studies.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
15.A.3 Identify and compare traditional, market and command economic systems. *Identify jobs involved in the economic sector/systems. (e.g. business, mass comm, marketing).*	**15.A.4a** Explain the roles of savings, investment and international trade in the circular flow of the economy.	**15.A.5a** Compare types of un-employment (e.g., fractional, structural, cyclical, seasonal) and propose ways to maximize employment and productivity.	
	15.A.4b Explain how economies (e.g., traditional, market, command) resolve problems (e.g., prices, incentives, profit, mandates).	**15.A.5b** Evaluate how monetary policy (e.g., taxing, spending, Federal Reserve System) affects government decisions. *Explain how taxes + regulations affect business + government decisions (e.g. tax forms, OSHA).*	
	15.A.4c Explain the costs and benefits of providing public and private approaches to economic issues (e.g., taxation, assistance programs, correction of market failure).		
15.B.3a Explain market forces (e.g., supply, demand, price, quality, features, opportunity cost, income, substitutes, complements).	**15.B.4a** Explain how interactions of supply, demand and current events affect shortages, surpluses and consumer prices.	**15.B.5a** Explain and evaluate the concept of elasticity as it applies to supply and demand and consumer decisions.	
15.B.3b Describe a market trend over time using information search methods and telecommunication networks.	**15.B.4b** Compare the costs and benefits of paying for consumer purchases through differing means (e.g., credit, cash).	**15.B.5b** Analyze how changes in inflation and interest rates affect consumers *and business.*	
	15.B.4c Analyze a current economic issue, using information search methods and telecommunication networks.	**15.B.5c** Describe how the relationship between aggregate supply and demand determines levels of unemployment and inflation.	

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
15.C.3a Analyze potential uses of a resource (e.g., iron ore, oil) showing the impact on supply of changes in the number of producers, prices of inputs and prices of related goods. **15.C.3b** Explain the effect on supply and demand when price changes.	**15.C.4a** Analyze how competition in the United States is maintained and how competition affects market structures (e.g., free enterprise system, monopoly, oligopoly (monopolistic and perfect competition). *small business entrepreneurship* **15.C.4b** Explain the importance of research, development, invention and entrepreneurship to the United States economy.	**15.C.5a** Analyze the relationship between Gross Domestic Product and natural as well as human resources. **15.C.5b** Compare Gross Domestic Product of the United States and other countries in relation to the productive resources each has available. **15.C.5c** Assess how the production of resources could be affected by current events (e.g., wars, revolutions, legislation).	
15.D.3a Explain how international trade affects consumers. **15.D.3b** Describe absolute/comparative advantages and how they form the basis for specialization and trade now and in the past. *Describe careers in international trade.*	**15.D.4a** Explain how transaction costs affect people's decisions to produce or consume. **15.D.4b** Describe the effects of trade barriers on the flow of goods and services among nations.	**15.D.5a** Analyze how exchange rates affect the flow of trade between nations. **15.D.5b** Assess the impact of government decisions related to trade (e.g., tariffs, limits, sanctions).	

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STATE GOAL 16

Understand and analyze events, trends, individuals and movements shaping the history of Illinois, the United States and other nations.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Describe and explain contributions of selected individuals throughout history.	**16.A.1** Identify contributions of selected individuals (e.g., founders, current leaders, business persons, athletes, artists) in the history of the local community.	**16.A.2** Describe the contributions of selected individuals in major eras of Illinois and United States history drawing information from a variety of traditional, electronic and on-line sources.
B. Explain the chronology and significance of major social, economic and political events throughout history.	**16.B.1** Explain the significance of events in the development of Illinois and the United States (e.g., settlement, statehood, wars, technological advancement).	**16.B.2** Describe and place in chronological order major events in the development of the community, Illinois and the United States.

WHY THIS GOAL IS IMPORTANT

George Santayana said "those who cannot remember the past are condemned to repeat it." In a broader sense, students who can examine and analyze the events of the past have a powerful tool for understanding the events of today and the future. They develop an understanding of how people, nations, actions and interactions have led to today's realities. In the process, they can better define their own roles as participating citizens.

and lifelong learners.

Students should be able to identify career opportunities which require this goal's skills (library art, historical research, law/trend analyzer (anthropologist))

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
16.A.3 Describe reactions of various individuals and groups to key events associated with the historical development of Illinois and the United States drawing information from a variety of traditional, electronic and on-line sources.	**16.A.4** Analyze contributions of individuals (e.g., business and political leaders, scientists, scholars, reformers) to the development of modern economic eras in the United States (e.g., agricultural, industrial, post-industrial), drawing information from a variety of traditional, electronic and on-line sources.	**16.A.5** Assess the long-term consequences of major decisions by leaders in various nations of the world, drawing information from a variety of traditional, electronic and on-line sources.	_Add More applications._
16.B.3 Explain the historic con-nections of the United States with other nations (e.g., immigration and migration of the 5th, 19th and 20th centuries; 20th century economic and political ties).	**16.B.4** Analyze key events and enduring issues that led to the framing and adoption of the _United States_ and _Illinois Constitutions_ (e.g., economic, political, social).	**16.B.5** Compare and contrast ← _explain_ varying interpretations of major events in selected periods of history.	

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
16.C.3a Summarize the basic characteristics of great empires and civilizations from 2000 BC - 450 AD (e.g., Greek, Roman, Chou, Persian, Mayan, Gupta, Tang, Islamic, Byzantine, Egyptian, Mali). **16.C.3b** Analyze and summarize, orally and in writing, major influences (e.g., scientific, economic, religious, political) on the development of civilizations 2000 BC - 450 AD.	**16.C.4a** Compare major intellectual periods from 450 - 1900 AD. **16.C.4b** Describe the rise and impact of political systems prior to the 19th century.	**16.C.5a** Analyze the creation and impact of structures of power and authority (e.g., democracy, communism, socialism, fascism) in the 20th century. **16.C.5b** Analyze the impact of major human-generated events that affected a wide segment of the world's population in the 20th century.	
16.D.3 Trace the historic origins of selected contemporary conditions in nations of the world other than the United States.	**16.D.4** Compare and evaluate selected scientific and technological developments (e.g., wheel, horse collar, steel plow, radio, automobile, airplane, computer) that have had a significant impact on the nation and the world.	**16.D.5** Apply criteria to assess the impact of selected 20th century social trends and technological innovations on people, societies and institutions (e.g., Sputnik, nuclear weaponry, plastics, voting rights).	Describe how the workplace was affected.
16.E.3 Describe the cultural, economic and political contributions of groups in Illinois and the United States.	**16.E.4** Analyze the effects of group immigration and migration patterns on the development of the United States. *Describe ↑ this affect a jobs in the U.S.*	**16.E.5** Analyze the roles played by selected groups in civic issues (e.g., citizenship, immigration policy, suffrage, civil rights) at significant periods in the development of the United States.	

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STATE GOAL 17

Demonstrate a knowledge of world geography, as well as an understanding of the effects of geography on society, with an emphasis on the United States.

WHY THIS GOAL IS IMPORTANT

The need for geographic literacy has never been greater or more obvious than in today's tightly interrelated world. Students must understand the world's physical features, how they blend with social systems and how they affect economies, politics and human interaction. Isolated geographic facts are not enough. To grasp geography and its effect on individuals and societies, students must know the broad concepts of spatial patterns, mapping, population and physical systems (land, air, water). The combination of geographic facts and broad concepts provides for a deeper understanding of geography and its effect on individuals and societies.

Career opportunities related to this goal should be afforded for students.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Locate, describe and explain places, regions and features on the earth using geographic terms, methods and representations.	**17.A.1a** Describe the physical characteristics of places, both local and global, using the spatial elements of point, line, area and volume (e.g., locations, roads, regions, bodies of water). **17.A.1b** Identify the characteristics and purposes of geographic representations (e.g., maps, globes, graphs, photographs) and be able to locate specific places using each.	**17.A.2a** Compare the physical characteristics of places (e.g., soils, land forms, vegetation, wildlife, climate, natural hazards). **17.A.2b** Demonstrate how to use maps (including mental maps) and other geographic representations and instruments to gather information (e.g., about people, places, and environments).
B. Analyze and explain characteristics and interactions of the earth's physical systems.	**17.B.1a** Identify various components of the earth's physical systems (e.g., atmosphere, lithosphere, hydrosphere and biosphere). **17.B.1b** Describe the physical components of ecosystems (e.g., climate, altitude, latitude, water, soil characteristics).	**17.B.2a** Describe physical and human processes (e.g., erosion, agriculture, settlement) that shape spatial patterns on the earth. **17.B.2b** Explain and compare how physical and living components interact in a variety of ecosystems (e.g., desert, prairie, flood plain, forest, tundra).

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SOCIAL SCIENCE

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
17.A.3a Explain how people use geographic markers and boundaries (e.g., hemispheres, meridians, continents, flood plains) to analyze and navigate the earth.	**17.A.4a** Answer complex geographic questions (e.g., how physical features have deterred or enabled migration) using mental maps of physical and human features.	**17.A.5** Use knowledge of maps and other geographic instruments and technologies to derive solutions to spatial problems (e.g., land use, ecological concerns).	
17.A.3b Explain how to make and use geographic representations (e.g., maps, graphs, charts, models, aerial photographs, satellite images) to provide and enhance spatial information.	**17.A.4b** Demonstrate how to use maps and other geographic instruments and technologies to analyze spatial patterns and distributions on earth.		
17.B.3a Explain how physical processes (e.g., climate, meteorology, plate tectonics, erosion, soil formation, water cycle, circulation patterns in the ocean) shape patterns in the environment and influence availability and quality of natural resources.	**17.B.4a** Explain the dynamics of the earth's physical systems (e.g., variation, productivity, constructive and destructive processes).	**17.B.5** Analyze international issues and problems using ecosystem and physical geography concepts.	
17.B.3b Explain how changes in components of an ecosystem affect the system overall.	**17.B.4b** Analyze trends in world demographics as they relate to physical systems. *Identify jobs and business that employ people with skill in geography. (eg, travel agents, cartographers, importers).*		

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STATE GOAL 18

Understand, analyze and compare social systems, with an emphasis on the United States.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Identify and compare characteristics of culture as reflected in language, literature, the arts and traditions.	**18.A.1** Compare folklore (e.g., songs, stories, fables) from different cultures and identify those included in the heritage of the United States.	**18.A.2** Analyze ways in which language, stories, folk tales, music, and artistic creations serve as expressions of culture.
B. Analyze the roles of groups and institutions in relation to people and societies.	**18.B.1** Compare the roles of individuals in group situations (e.g., student, committee member, team leader).	**18.B.2a** Compare roles of social institutions (e.g., educational, military, charitable, governmental) and describe the interactions of people with institutions.
		18.B.2b Describe the impact of media (e.g., print, electronic) on institutions (e.g., schools, governments).

WHY THIS GOAL IS IMPORTANT

A study of social systems has two important aspects that help people understand their roles as individuals and members of society. The first aspect is culture, consisting of the language, literature, arts and traditions of various groups of people. Students should understand common characteristics of different cultures and explain how cultural contributions shape societies over time.

The second aspect is the interaction among individuals, groups and institutions. Students should know how and why groups and institutions are formed, what roles they play in society, and how individuals and groups interact with and influence institutions.

Students should be able to study the family as a social system.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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SOCIAL SCIENCE

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
18.A.3 Explain and give examples of how language, literature, the arts, architecture, other artifacts and traditions contribute to the development and transmission of culture.	**18.A.4** Analyze the influence of cultural factors in developing pluralistic societies (e.g., customs, traditions, language, art, architecture).	**18.A.5** Compare and analyze ways that culture is affected by environmental, technological or social change. *Analyze how people join/review are affected by*	
18.B.3a Analyze the interaction of individuals, groups and institutions in situations drawn from the local community.	**18.B.4a** Analyze the various forms social institutions (e.g., educational, military, charitable, governmental) take and explain how they develop and change over time.	**18.B.5** Apply methods of social science inquiry (e.g., pose questions, collect and analyze data, make and support conclusions with evidence, report findings) to compare the development and functions of groups and institutions (e.g., schools, organizations, mass media) in practical settings.	*families* *add this to other bench- marks.*
18.B.3b Analyze the role of mass media (e.g., commercials, polls, news) in decision making.	**18.B.4b** Assess the influence of mass media on events and perceptions of the world.		

Visit and explore careers within your Civic Complex.
(eg. Courts, Jail, soc. svcs.)
mayor office.)

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SCIENCE

USING TECHNOLOGY

Use appropriate instruments, electronic equipment, computers and networks to access information, process ideas and communicate results.

Technology is invented and improved by the use of scientific principles. In turn, scientists depend on technology in performing experiments and studying the results. Science students learn to use a range of technologies: instruments, computer hardware and software, on-line services and equipment, primary source data and images, and communication networks. They learn how technology, in turn, is the result of a scientific design process that includes continual refinements and improvements.

WORKING ON TEAMS

Learn and contribute productively as individuals and as members of groups.

The practical application of science requires both individual and group efforts. Individuals bring unique insight and focus to the work of inquiry and problem solving. Working in groups, scientists pose questions, share hypotheses, divide their experimental efforts, and share data and results. Science students have the opportunity to work both ways—as individuals and as members of teams organized to conduct complex investigations and solve problems.

MAKING ACADEMIC CONNECTIONS

Recognize and apply connections of important information and ideas within and among academic learning areas.

Science has many disciplines, all interrelated. Understanding the functioning of cells depends on knowing chemistry; understanding chemistry depends on knowing physics. In the same way, science itself is highly dependent on mathematics—and it also relates strongly to medicine, geography, social trends and issues, and many other topics. Science, at its best, provides knowledge and skills that improve the understanding of virtually all subjects.

[handwritten note:] Vocational/technical education is an excellent tool to emphasize the rationale for academic excellence + its application to the workplace. These subjects also provide success for students in school + in the future.

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STATE GOAL 11

Understand and apply the methods of scientific inquiry and technological design to investigate questions, solve problems and analyze claims.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Explain the principles and practices of scientific research. _and vocational / technical studies_	**11.A.1a** Explain how knowledge can be gained by careful observation. **11.A.1b** Demonstrate accurate recording and reporting of observations. **11.A.1c** Demonstrate basic safety rules and procedures for science activities.	**11.A.2a** Compare different types of scientific investigations. **11.A.2b** Explain and demonstrate, using appropriate technology, why keeping accurate and detailed records is important. **11.A.2c** Demonstrate ways to avoid injury when conducting science activities.

WHY THIS GOAL IS IMPORTANT

The knowledge and skills learned in science enable students to pose scientific questions, use models to enhance understanding, make predictions, gather and work with data, use appropriate measurement methods, analyze results, draw conclusions based on evidence, communicate their methods and results, and think about the implications of scientific research. These are the bases for all science and are valuable skills for virtually all other facets of life.

NOTE: The "e.g.'s" are meant as _examples only._ There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
11.A.3a Demonstrate how to vary only one experimental component at a time and control external variables.	**11.A.4a** Compare various sampling techniques and their applications in experimental designs.	**11.A.5a** Justify when and how to use experimental designs that involve treatment and comparison (control) groups.	
11.A.3b Demonstrate ways to record and use data accurately, using appropriate technology.	**11.A.4b** Explain how peer review helps to assure the accurate use of data and improve the scientific process.	**11.A.5b** Investigate and evaluate the effect of scientific peer review in actual examples.	
11.A.3c Identify and reduce potential hazards in science activities.	**11.A.4c** Estimate and reduce the degree of risk involved in science activities.	**11.A.5c** Design procedures to eliminate or reduce risk in potentially hazardous science activities.	

STATE GOAL 11

Understand and apply the methods of scientific inquiry and technological design to investigate questions, solve problems and analyze claims.

Continued

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
B. Apply the steps and methods of scientific inquiry to conduct experiments and investigate research questions.	AS INDIVIDUALS AND AS MEMBERS OF AN INVESTIGATIVE TEAM: **11.B.1a** Develop questions on scientific topics. **11.B.1b** Collect data for investigation using measuring instruments. **11.B.1c** Record and arrange data into logical patterns and describe the patterns. **11.B.1d** Describe an observed event. **11.B.1e** Compare individual and group observations and results.	AS INDIVIDUALS AND AS MEMBERS OF AN INVESTIGATIVE TEAM: **11.B.2a** Formulate questions on a specific science topic and choose the steps needed to answer the questions. **11.B.2b** Collect data for investigation by applying a variety of scientific process skills (e.g., measurement, sampling procedures, recording methods). **11.B.2c** Construct charts and graphs to display data and use the data to produce reasonable explanations. **11.B.2d** Describe individual and group investigations clearly and accurately in oral and written reports.

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STATE GOAL 11

Continued

Understand and apply the methods of scientific inquiry and technological design to investigate questions, solve problems and analyze claims.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
D. Assess the credibility of scientific claims. *including those used for advertising*	**11.D.1** Explain why similar results are expected when procedures are done the same way.	**11.D.2** Explain why similar investigations may not conclude with similar results.

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
11.D.3a Analyze sources of error in repeated experiments that yield different or variable results. **11.D.3b** Analyze cases in which the work of science has been affected by sound (e.g., supported by valid reasoning) or unsound (e.g., biased) scientific practices.	**11.D.4** Evaluate claims made from actual experiments, taking into account methods, sample size, sources of error and existing scientific knowledge. *Evaluate Claims* *Made from scientific* *studies o used in* *advertising & marketing* *(eg. vitamins, weed control,* *weight loss, bright teeth)*	**11.D.5a** Evaluate the credibility of claims from actual experiments. **11.D.5b** Analyze the validity of scientific evidence and reasoning in a public policy issue.	

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STATE GOAL 12

Understand the facts and unifying concepts of the life, physical and earth/space sciences.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD

A. Apply concepts of systems within the sciences *and to today's technological workplace.*

integrate the new subject matter with technical application to promote life-long learning

WHY THIS GOAL IS IMPORTANT

A set of unifying facts and concepts connects and underlies the life, physical and earth/space sciences. These include the concepts of systems, form and function, change and constancy, and models and explanations. These concepts are useful in science and other fields. They help students understand what they observe in scientific experimentation and in nature. ~~They also allow students to relate new subject matter to material previously learned and to create deeper and more meaningful levels of understanding.~~

and in applied settings to prepare students for productive employment.

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EARLY ELEMENTARY LEARNING BENCHMARKS

Life Sciences *identify*
12.A.1a Describe and compare characteristics of living things in their region (e.g. trees, herbaceous plants, fungi, birds, insects, mammals).

Physical Sciences
12.A.1b Identify and compare various sources of energy (e.g., batteries, the sun).

Earth/Space Sciences *and identify*
12.A.1c Describe components and characteristics of the earth's land, water and atmospheric systems and familiar solar system objects (e.g., sun, stars, planets, moon).

LATE ELEMENTARY LEARNING BENCHMARKS

identify
12.A.2a Describe relationships among various organisms in their regional environment (e.g. predator/prey, parasite/host, food chains and webs).

identify
12.A.2b Describe and compare characteristics of different kinds of energy (e.g., mechanical, electrical, magnetic, light, heat, chemical).

12.A.2c Identify and explain natural cycles and patterns in the earth's land, water and atmospheric systems (e.g., rock cycle, water cycle, weather patterns) and in the solar system (e.g., the sun as the center of the solar system, the order of the planets, earth/moon relationship, orbits).

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
12.A.3a Analyze factors that influence the size and stability of populations (e.g., determine the influence that birth rate, death rate, migration patterns have on a population size). *[handwritten: technology (agricultural + industrial)]*	**12.A.4a** Compare physical, ecological and behavioral factors that influence interactions among organisms. *[handwritten: probability]*	**12.A.5a** Analyze and explain biodiversity issues and interactions related to organisms and the resources they need to survive. *[handwritten signature]*	
12.A.3b Explain interactions of energy with matter (e.g., changes of state due to heating and cooling; heat absorption and release when chemicals combine).	**12.A.4b** Apply the principles of energy conservation and entropy (e.g., chemical reactions, energy conversions) to naturally occurring systems. *[handwritten: and the technology which surrounds us.]*	**12.A.5b** Analyze reactant/product transformations in natural and man-made energy systems (e.g., detonation of a nuclear bomb, burning of fuel, decomposition of waste).	
12.A.3c Analyze and explain events, forces and effects occurring in the earth's land, water and atmospheric systems (e.g., volcanic eruptions, continental drift, sedimentation, tides, salinity changes, jet stream, ozone depletion) and in the solar system (e.g., phases of the moon, eclipses).	**12.A.4c** Analyze and compare interrelationships among the earth's systems (e.g., sea levels and coastal features, erosion and silting, land features and weather patterns) and among celestial objects (e.g., the moon and tidal action, the sun, planetary orbits).	**12.A.5c** Analyze and explain naturally occurring earth and space events (e.g., floods, earthquakes, droughts, heat waves, storms, precession, retrograde motion, sunspots, novas).	

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STATE GOAL **12**

Understand the facts and unifying concepts of the life, physical and earth/space sciences.

Continued

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
B. Apply concepts of form and function within the sciences. *and to technological systems in Today's Workplace*	*Life Sciences* **12.B.1a** Describe how objects are often made of component blocks or parts (e.g., buildings are made of wood or bricks; birds have feathers; people have bones, blood, hair, skin).	**12.B.2a** Explain how cells function as "building blocks" of organisms and determine the requirements for cells to live (e.g., use a pond water sample to test a single-celled organism's need for food, air, waste disposal).
	Physical Sciences **12.B.1b** Compare large-scale physical properties of matter (e.g., size, shape, color, texture, odor).	**12.B.2b** Describe and demonstrate the properties of the states of matter (e.g., solids, liquids, gases).
	Earth/Space Sciences **12.B.1c** Identify and describe diverse features of the earth (e.g., rocks, soil, clouds, snow, mountains, oceans) and characteristics related to the earth's position, rotation and revolution (e.g., day and night, seasons, length of year).	**12.B.2c** Describe and explain interactions of earth components (e.g., land, air, water) and solar system components (e.g., sun, planets, moons).
	12-B1D *Describe how Components (subsystems) can work together as systems to make changes on living issue.*	**12.B.2D** *Describe how the genetics of organisms can be altered to produce disease resistant strains of crops.*

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SCIENCE

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
12.B.3a Compare and contrast how different forms and structures reflect different functions (e.g., identify similarities and differences among animals that fly, walk or swim; compare structures of plant cells to those of animal cells).	**12.B.4a** Investigate and explain how cells and organisms react to stimuli and maintain stability (e.g. plant cells in salt solution, bacteria in contact with antibiotics, cell components for photosynthesis, respiration and waste removal, enzyme and hormone actions).	**12.B.5a** Test and draw conclusions about changes within cells and organisms in response to stimuli and changing environmental conditions (e.g., homeostasis, dormancy, cells reacting to the presence of various chemicals).	
12.B.3b Describe and demonstrate the chemical and physical characteristics of matter (e.g., atoms, molecules, compounds, mixtures, solutions).	**12.B.4b** Analyze the atomic and nuclear structure of matter (e.g., electron charge, mass, location, bonding properties, protons, neutrons, subnuclear particles), and the relationship of structure to function.	**12.B.5b** Analyze the properties of physical materials in relation to their physical and/or chemical structures.	
12.B.3c Describe and compare the properties and functions of the earth's component features (e.g., size, shape and age of the earth; land forms, minerals and rocks; fossils; lakes, rivers, oceans; groundwater) and solar system objects (e.g., sun, planets, planetary satellites, asteroids).	**12.B.4c** Analyze factors that affect the forms and functions of components of the earth (e.g., plate tectonics, climate) and the solar system (e.g., gravitational influences, chemical composition, chemical reactions).	**12.B.5c** Describe internal and external sources of energy that drive formation of the earth's features and those of celestial objects (e.g., solar/stellar radiation, naturally occurring radioactive isotopes, gravitational energy).	

Use an acidic fruit (lemon) to generate electricity

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BD Sketch and assemble a simple series circuit and decide how the circuit functions.

2B Sketch and assemble a series and parallel circuit and discuss voltage differences relative to Ohms law.

STATE GOAL 12

Understand the facts and unifying concepts of the life, physical and earth/space sciences.

Continued

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
C. Apply concepts of change and constancy within the sciences.	*Life Sciences* **12.C1a** Categorize living organisms in relation to each other using a variety of observable features (e.g., size, color, shape, backbone, cell structure). *Physical Sciences* **12.C1b** Describe and demonstrate examples of motion in the world (e.g., natural motions, man-made motions). *Earth/Space Sciences* **12.C1c** Identify repeating patterns of weather and climate (e.g., rain, snow, heat, humidity) and patterns related to the earth's motion in the solar system (e.g., day/night, seasons, annual events).	**12.C2a** Identify plant and animal features that help them live in different environments (e.g., specialized teeth for specialized foods, thorns, insulation for cold temperature). **12.C2b** Distinguish among different types of motion (e.g., uniform, variable, periodic). **12.C2c** Compare and explain short-term and long-term planetary and celestial variations (e.g., latitudinal effects on weather and climate, relative positions of planets and stars).

(handwritten) and Chart

(handwritten) Identify how many different Types of living organisms can be found in your school yard.

NOTE: The "e.g.'s" are meant as <u>examples only</u>. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
12.0.3a Compare characteristics of organisms produced from a single parent (e.g., bacteria, protists, some plants and animals) with those of organisms produced by two parents (e.g., most plants and animals).	**12.0.4a** Investigate and explain how new genetic combinations arise and produce visible effects (e.g., protein synthesis, dominant/recessive traits, probability of gene combinations, neutral and harmful gene effects, tracing the occurrence of a genetic disease in a family, using electrophoretic techniques for comparing specific DNA sequences).	**12.0.5a** Investigate and analyze, using contemporary statistical technologies, the transmission of genetic traits, diseases or defects.	*The behavioral verbs in 12.0.4c, 12.0.5c, 12.0.5a are different ... it actually measures ... Must be accompanied with a hands-on project to determine ... of comprehension has occurred.*
12.0.3b Apply the model of the gravitational force (e.g., relationships to mass and distance) to explain observed behaviors of objects.	**12.0.4b** Demonstrate the effects of electromagnetic and nuclear forces. (e.g., chemical bond strength, tensile strength, electromagnetic induction, radiation).	**12.0.5b** Develop models and explanations for effects of the forces of nature in natural or man-made systems.	
12.0.3c Explain the relationship of our sun to other elements of our galaxy (e.g., our sun as a normal-sized star, multiple star systems, star clusters, galaxies).	**12.0.4c** Analyze and compare the formation of galactic elements (e.g., fusion process in stars, gravitational condensation).	**12.0.5c** Analyze the evidence that supports models for explaining changes in the universe (e.g., red shift data, steady state and inflationary descriptions of the universe).	

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STATE GOAL 13

Understand connections and relationships among science, technology and society.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Explain the historical development and importance of science and technology.	**13.A.1a** Describe the lives and contributions of famous scientists and inventors. **13.A.1b** Identify and describe ways that science and technology affect people's everyday lives.	**13.A.2a** Explain the effects of significant scientific discoveries and technological innovations over the centuries. **13.A.2b** Identify and explain ways that science and technology have had and will continue to have an important influence on the lives and careers of everyone.
B. Explain conceptual relationships between science and technology.	**13.B.1a** Identify and use common scientific instruments and technology (e.g., thermometer, calculator, stopwatch, balance, magnifying glass, microscope). **13.B.1b** Compare the accuracy of measurements made with and without instruments.	**13.B.2a** Identify and explain ways that scientific knowledge drives technological developments. **13.B.2b** Demonstrate the use of scientific instruments and technology for various purposes and levels of precision (e.g., triple beam and electronic balances, graduated cylinders, timers, meters, calculators, computers).

WHY THIS GOAL IS IMPORTANT

Throughout history, technology has given humans the ability to change and improve their surroundings. Examples can be found in the areas of agriculture, sanitation, transportation and many others. Science advances technology; in turn, technology serves scientific inquiry and progress. Students who understand this relationship will better understand the processes of invention and design. They will also be able to appreciate the effects of scientific discovery and the applications of technology.

[handwritten annotations in margin]

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
13.A.3a Identify important contributions to science and technology that have been made by individuals/groups from various nations at various times.	**13.A.4a** Describe how scientific knowledge, explanations and technological designs may change with new information over time.	**13.A.5a** Research, analyze and report on the effects of scientific and technological breakthroughs that have occurred through long-term research, chance and cooperation.	
13.A.3b Provide examples of careers that use scientific and technological knowledge and skills.	**13.A.4b** Compare the knowledge and skills required for various science-related, science-affected and technical occupations.	**13.A.5b** Assess how scientific and technological progress has affected other fields of study and aspects of everyday life.	
13.B.3 Demonstrate how technology is useful in science for a variety of purposes (e.g., sample collection, storage and treatment; measurement; data collection, storage and retrieval; communication of information).	**13.B.4** Compare scientific inquiry and technological design including the purpose that each process achieves and how the processes are related.	**13.B.5** Analyze specific challenges created through international competition for increases in scientific knowledge and improvements in technical capabilities; propose and evaluate possible solutions; present results to an audience as individuals and as members of a research team.	

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Continued

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
C. Describe, ~~and~~ analyze relationships among science, technology and society in practical situations. *or Appropriate*	**13.C1a** Identify and compare ways that populations of living things, including people, depend on each other. **13.C1b** Identify renewable and nonrenewable natural resources. **13.C1c** Demonstrate ways to reduce, reuse and recycle materials. **13.C1d** Identify and describe ways that science and technology have been able to meet the needs of people (e.g., transportation, medicine, agriculture, sanitation, communication).	**13.C2a** Analyze how specific choices that humans make affect local, regional and world ecosystems. **13.C2b** Identify and explain ways that technology can increase or decrease the pace of natural changes in an ecosystem (e.g., irrigation, dams, rural electrification, highways, manufacturing). **13.C2c** Compare the relative effectiveness of reducing, reusing and recycling in actual situations. **13.C2d** Investigate the historical development and current status of specific examples of science and technology advancements; make predictions about future development; report findings in oral and written forms.

NOTE: *The "e.g.'s" are meant as* *examples only.* *There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

1

**SUGGESTED ADDITIONS
TO ACADEMIC STANDARDS
ENGLISH LANGUAGE ARTS**

STATE GOAL 1   Read with understanding and fluency.

Explanation should read:

Reading is indispensable. It is students' essential path to information and ideas in books, newspapers, magazines, manuals, letters, contracts and a host of other materials. Students who read well and confidently - strongly understanding content - have the foundation for learning in all other academic areas. They will be able to connect what they read to their experiences with lifelong learning and in developing career opportunities. They will have a growing base of knowledge from which to draw in many new situations.

Suggested Additional Benchmarks

Early High School: 1.A.4c Apply knowledge of terms and expressions and to show comprehension of instructions in conducting specific tasks related to workplace skills.

Late High School: 1.A.5c Identify and analyze terminology found in technical journals and demonstrate the ability to follow written directions in performing job related tasks.

Early High School: 1.C.4d Analyze and discuss technical journals, and demonstrate the ability to translate written instructions into action.

Late High School: 1.c.5d Quantitatively demonstrate the ability to monitor the reading of technical journals, newspapers, and magazines through the exhibition of technical skills discussed and illustrated in the readings.

STATE GOAL 3   Write to communicate for a variety of purposes.

Explanation should read:

> The ability to write clearly is essential to any Person's effective communications. It is the companion skill to good reading. Students with high level writing skills can produce documents that show planning and organization and can effectively convey the intended message and meaning. It is critical to employability and productivity in today's world that **individuals can write for a variety of audiences in differing styles, ranging from standard rhetoric themes to business oriented 'white papers', letters of application, financial proposals, technical explanations, etc. Students should be able to use word processors and computers to write to enrich their life experiences and career opportunities.**

Suggested Additional Benchmarks:

> **Late High School:** 3.A.5b Produce documents using business oriented specifications for reporting purposes, the report is not to exceed three typed pages.
>
> **Late High School:** 3.A.5c Produce a grammatically correct and properly formatted letter of application and/or inquiry about employment in a local business.
>
> **Late High School:** 3.B.5b Using word processing software produce a technical document describing a process or procedure to be used in a job related skill.
>
> **Late High School:** 3.B.5c Using the proper software create an explanation of a financial statement for the specific purpose of explaining it to an audience unfamiliar with financial statements of the type used, exhibit clarity of purpose and brevity of presentation.
>
> **Late High School:** 3.C.5b Communicate information and ideas related to a technical procedure, using persuasive arguments to inform and convince the reader of the qualities inherent in the procedure that are beneficial to the reader.

2

Listen and speak effectively in a variety of situations.

Explanation should include:

> Of all the language arts, listening and speaking are those most often used
> on a daily basis at home, school, work or in the community. Skill in
> speaking and listening is essential to **successfully competing in all careers**
> **and is an integral component of lifelong learning.** Skill in speaking is
> universally recognized as ...

Suggested Additional Benchmarks;

> **Early High School:** 4.A.4d Apply listening skills in a mock job interview
> demonstrating correct responses to questions and statements.

> **Late High School Benchmark:** 4.A.5c Apply listening skills in a
> "work" setting. Following the directions for a group project produce the
> end result without benefit of written directions. 4 4 5 d

> **Late High School Benchmark:** 4.~~~~Evaluate speakers delivering
> the technical instructions for a class or group project related to job
> production, criteria for evaluation should include: clarity of presentation,
> order of instructional material, and ease of comprehension.

> **Late High School Benchmark:** 4.B.5b Using an oral presentation
> describe a production project as individuals and as a group, conveying the
> procedures that are to be followed and the results to be obtained: use
> supporting visual aids and include the necessary technology.

STATE GOAL 5

Use reading, writing, listening and speaking skills to research and apply information for specific purposes.

Explanation should read:

The explosion of information and knowledge demands that students today be able to navigate a wide variety of sources (written, visual, and electronic), sort through data and materials to identify relevant and useful information and be able to apply what they have discovered **in order to successfully enter the workforce at any level.** These skills are critical in school across all learning areas and are **key to successful lifelong learning experiences.**

Suggested Additional Benchmarks

Late High School Benchmark: 5.A.5b Conduct information searches for the development and completion of a project related to workplace activities. Investigate specific issues for resolving the stated problem and apply the technical findings to the desired resolution.

Late High School Benchmark: 5.B.5b Evaluate the information provided in a technical article; synthesize the information to support a production plan for the resolution of a workplace dilemma; present the information as an individual, or in a group, in written and oral forms, to the members of a group.

Late High School Benchmark: 5.C.5b Write a "white paper" with proper documentation and supporting data, on an occupational topic related to the resolution of an existing problem, or in the creation of a new technological form of production.

4

I.A.1c EE Comprehend career-related words using context clues and prior knowledge.

I.A.2c LE Use a variety of occupational resources to define recent and emerging careers.

I.A.3c M/JH Expand knowledge of career specific terms, concepts and expressions.

I.A.4c EHS Apply knowledge of terms and expressions and show comprehension of instructions in conducting specific tasks related to workplace skills.

I.A.5c LHS Identify and analyze terminology found in technical journals and demonstrate the ability to follow written directions in performing job-related tasks.

I.B.3b M/JH Clarify text meaning when necessary (e.g., in addition to previous skills, clarify topic- and career-specific terminology, compare to other readings).

I.B.4c EHS Use text genre and organization to understand texts, comparing and contrasting authors' styles, purposes and audiences.

I.C.3d M/JH Draw on background knowledge and knowledge of text structure to understand a variety of reading selections.

I.C.3f M/JH Summarize and synthesize career related information gathered from a variety of sources.

I.C.4d EHS Analyze and discuss technical journals, and demonstrate the ability to translate written instructions into action. e.g.

I.C.5d LHS Demonstrate a skill described in a technical periodical. (e.g. origami, brain surgery...)

2.A.3e M/JH Identify characteristics of technical literature (clarity, veracity, and succinctness).

2.A.4e EHS Explain the relationship between and among the characteristics of technical literature (clarity, veracity, and succinctness).

2.A.5c LHS Produce a piece of technical writing demonstrating clarity, veracity and succinctness.

2.B.3a M/JH Explain, as individuals and as members of a discussion group, how various forms of literature convey ideas through form, content and purpose (e.g., historical fiction, nonfiction, short stories, film, written and performed drama, poetry, technical writing , and information technology).

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EH4a4b: Add: eg teacher, employer, friend

4a4c Interpret complex oral instructions using, but not limited to, career related examples

4a4d follow complex oral instructions using, but not limited to, career related examples

4b4a Oral presentations as individuals, employees, and as members of cooperative work groups

4a5a: eg -- begin with oral instructions -- befor that put cooperative work group

4a5b: eg -- teacher, employer, friend

4a5c: produce product following oral instructions

4b5: results of "career research"

STATE GOAL 1

Read with understanding and fluency.

for life long learning

As a result of their schooling, students will be able to:

WHY THIS GOAL IS IMPORTANT

Reading is indispensable. It is students' (and adults') essential path to information and ideas in books, newspapers, magazines, manuals, letters, contracts and a host of other materials. Students who read well and confidently—strongly understanding content—have *the* foundation for learning in all other ~~academic areas.~~ They will be able to connect what they read now with what they have read and learned in the past. They will have a growing base of knowledge from which to draw in ~~many new situations.~~ *their future career + Continued life long learning*

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Apply word analysis and vocabulary skills to comprehend text.	**1.A.1a** Apply word analysis skills (e.g., phonics, syllables, prefixes, suffixes and word patterns) to recognize new words.	**1.A.2a** Read and comprehend unfamiliar words using root words, synonyms, antonyms, word origins and derivations.
	1.A.1b Comprehend unfamiliar words using context clues and prior knowledge. *Comprehend lesser-related words...*	**1.A.2b** Use a variety of resources including glossaries, dictionaries and thesauruses to clarify word meaning. *1A2c "identify common..."*
B. Apply reading strategies to improve fluency and understanding.	**1.B.1a** Identify purposes, make predictions, connect important ideas, and link text to previous experiences and knowledge.	**1.B.2a** Anticipate what will be read (e.g., survey materials, ask questions, make predictions), connect and clarify ideas, and extend ideas beyond the text.
	1.B.1b Clarify meaning when necessary (e.g., reread, read ahead, use visual and context clues, ask questions, retell, use meaningful substitutions).	**1.B.2b** Clarify meaning when necessary (e.g., in addition to previous skills, note vocabulary and language problems, seek additional information).
	1.B.1c Read aloud with fluency and accuracy.	**1.B.2c** Read aloud with rhythm, flow and meter that sounds like standard English speech.
	1.B.1d Identify the purpose of selected texts.	**1.B.2d** Relate text structure to purpose of the text.
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4   PRELIMINARY DRAFT FOR PUBLIC DISCUSSION AND REVIEW

ENGLISH LANGUAGE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
1.A.3a Expand knowledge of word origins and derivations and use idioms, analogies, metaphors and similes to extend vocabulary development.	**1.A.4a** Apply knowledge of word origins and derivations to comprehend words used in specific content areas (e.g., scientific, political, literary, mathematical).	**1.A.5a** Identify and analyze new terminology applying knowledge of word origins and derivations in a variety of applied settings.	*Element "Autumn" gem.*
1.A.3b Analyze the meaning of words and phrases in their context. (A3c *Expand knowledge of career-specific terms.*	**1.A.4b** Compare the meaning of words and phrases and use analogies to explain the relationships among them. 1A4c	**1.A.5b** Analyze the meaning of abstract concepts and the effects of particular word and phrase choices.	
1.B.3a Anticipate what will be read, form tentative hypotheses and connect to other information.	**1.B.4a** Anticipate what will be read, connect and clarify ideas, analyze coherence and theme and connect with other sources.	**1.B.5a** Evaluate a variety of texts for purpose, structure, content, detail and effect.	
1.B.3b Clarify text meaning when necessary (e.g., in addition to previous skills, clarify terminology, compare to other readings).	**1.B.4b** Analyze, interpret and compare a variety of texts for purpose, structure, content, detail and effect.	**1.B.5b** Use text genre and organization to understand a variety of complex texts.	
1.B.3c Read aloud with appropriate expression (e.g., irony, sarcasm, humor).	**1.B.4c** Use text genre and organization to understand texts, comparing and contrasting authors' styles.		
1.B.3d Analyze text structure and detail for relevance to the purpose of the text. 176			177

ENGLISH LANGUAGE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
1.C.3a Analyze text content in relation to the purpose of the text.	**1.C.4a** Analyze elements of plot, subplots, connecting themes, character traits, motives and effect of the setting in fictional selections to demonstrate understanding of the text.	**1.C.5a** Critically evaluate texts including elements of plot, subplots, connecting themes, character traits, motives and effect of setting in fictional selections.	
1.C.3b Interpret elements of plot, possible themes, character traits and motives in fictional selections to demonstrate understanding of the text.			
1.C.3c Interpret major concepts, evidence that supports those concepts and possible applications and purposes of nonfiction selections to demonstrate understanding of the text.	**1.C.4b** Analyze major concepts, evidence that supports those concepts and possible applications and purposes of nonfiction selections to demonstrate understanding of the text.	**1.C.5b** Critically evaluate books, articles and reports including major concepts, evidence that supports those concepts, possible applications and purposes of nonfiction selections to demonstrate understanding of the text.	
1.C.3d Draw on background knowledge and knowledge of text structure to understand reading selections.			
1.C.3e Set, monitor and accomplish quantitative (e.g., weekly, monthly) and qualitative (e.g., type of material, reading level) reading goals with selections from a variety of sources.	**1.C.4c** Set, monitor and accomplish quantitative (e.g., weekly, monthly) and qualitative (e.g., type of material, reading level) reading goals with selections from a variety of sources.	**1.C.5c** Set, monitor and accomplish quantitative (e.g., weekly, monthly) and qualitative (e.g., type of material, reading level) reading goals with selections from a variety of sources.	

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STATE GOAL 2

Understand the expressed meaning in literature representative of various societies, eras and ideas.

WHY THIS GOAL IS IMPORTANT

Literature transmits ideas, reflects societies and eras and expresses the human imagination. It brings understanding, enrichment and joy. Appreciating literature and recognizing its genres enable students to learn and respond to literary texts and the special features of these texts. Literature study includes understanding the structure and intent of a short poem or a long, complex book. By exploring the techniques that authors use to convey messages and evoke responses, students connect literature to their own lives and daily experiences.

The ability to analyze literary styles + conventions assist student in understanding content + its meaning.

Searching for content + meaning is a critical skill in the workplace as well as in leisure reading.

NOTE: *The "e.g.'s" are meant as examples only.* *There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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As a result of their schooling, *students will be able to:*

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Demonstrate an understanding of literary elements and techniques.	**2.A.1a** Identify the story elements of literary works (e.g., theme, setting, plot, character).	**2.A.2a** Identify literary elements (e.g., rhyme, meter) and literary techniques (e.g., characterization, use of narration, use of dialog) in a variety of literary works including but not limited to fiction, nonfiction, and poetry.
	2.A.1b Classify literary works as fiction or nonfiction.	**2.A.2b** Compare and contrast characters, setting and plot in original literature.
	2.A.1c Describe differences in structure between prose and poetry.	**2.A.2c** Describe how story elements (e.g., character, setting, plot, point of view, tone and conflict) are used in original literature to create meaning.

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ENGLISH LANGUAGE ARTS

LATE HIGH SCHOOL LEARNING BENCHMARKS

2.A.5a Compare oral, written or viewed works from various eras and countries and analyze complex literary devices (e.g., structures, images, forms, foreshadowing, flashbacks, progressive time, digressive time).

2.A.5b Describe the development of form (e.g., short stories, essays, speeches, poetry, plays, novels) and purpose in American literature and literature of other countries.

EARLY HIGH SCHOOL LEARNING BENCHMARKS

2.A.4a Evaluate the effective use of literary techniques (e.g., figurative language, allusion, dialog, description, symbolism, word choice, style) in classic and contemporary literature representing a variety of forms (e.g. fiction, nonfiction, drama, poetry).

2.A.4b Explain the relationship between and among elements of literature: character, plot, setting, tone, point of view, theme.

2.A.4c Analyze relationships between author's style, literary form (e.g., short stories, novels, drama, fables, biographies, documentaries, poetry) and intended effect on the reader.

2.A.4d Explain the influence of historical context on form, style, and point of view for a variety of literary works.

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS

2.A.3a Identify and analyze a variety of literary techniques (e.g., figurative language, allusion, dialog, description, word choice) within classical and contemporary works representing a variety of genres (e.g., fiction, nonfiction, poetry).

2.A.3b Identify characteristics, origins and authors of various literary forms (e.g., short stories, novels, drama, fables, biographies, documentaries, poetry).

2.A.3c Compare literary works of different eras and countries for ideas and themes.

2.A.3d Describe how word choice and language structure convey an author's viewpoint.

[handwritten notes]

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
2.B.3a Explain, as individuals and as members of a discussion group, how various forms of literature convey ideas through form, content and purpose (e.g., historical fiction, nonfiction, short stories, film, written and performed drama, poetry, and information technology). **2.B.3b** Compare and contrast common literary themes across various societies and eras.	**2.B.4** Analyze form, content purpose and major themes of American literature and literature of other countries in their historical perspective. *technical writing*	**2.B.5** Evaluate classical and contemporary literature representing a variety of forms; identify recurring universal themes; and explain how these can be used to express ideas in terms of form, content and purpose (e.g., use cause/effect analysis and extended definition to assess various literary forms).	

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STATE GOAL 3

Write to communicate for a variety of purposes.

As a result of their schooling, students will be able to:

WHY THIS GOAL IS IMPORTANT

The ability to write clearly is essential to any person's effective communications. It is the companion skill to good reading. It is critical to employability and productivity in today's world. Students with high-level writing skills can produce documents that show planning and organization and can effectively convey the intended message and meaning. Skilled writers can write for a variety of audiences in differing styles, ranging from creative to work-related, and in formats ranging from stories and class reports to proposals, correspondence and business reports. Students who are able to use word processors and computers to write will both enrich their experience and extend their skills.

that individuals can write for

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ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Use correct grammar, spelling, punctuation, capitalization and sentence structure.	**3.A.1a** Use nouns, pronouns, verbs, adverbs, adjectives and conjunctions in sentences. **3.A.1b** Write passages with correct grammar, spelling, punctuation and sentence structure.	**3.A.2a** Use subordinating conjunctions, prepositions, and interjections. **3.A.2b** Using appropriate technology, write paragraphs that include all major parts of speech with accurate spelling, capitalization and punctuation. **3.A.2c** Analyze sentences for subject-verb and pronoun-antecedent agreement, adverb and adjective usage and verb tense.

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ENGLISH LANGUAGE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
3.A.3 Demonstrate command of subject-verb and pronoun-antecedent agreement, adverb and adjective usage and verb tense.	**3.A.4** Use standard written English, applying established rules and conventions and using a wide range of grammatical constructions including phrases, clauses and parallel structure.	**3.A.5** Produce grammatically correct documents using standard manuscript specifications for specified purposes (creative writing competitions, scientific/technical reports, publication in established journals).	

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
3.B.3a Produce documents that convey a clear understanding and interpretation of ideas and information, displaying focus, organization, elaboration and coherence. **3.B.3b** Edit and revise for word choice, organization, consistent point of view, and transitions among paragraphs using contemporary technology and formats suitable for submission and/or publication.	**3.B.4a** Produce, using contemporary technology, documents that exhibit a range of writing techniques appropriate to purpose and audience, with clarity of focus, logic of organization, appropriate elaboration and support, and overall coherence. **3.B.4b** Edit and revise work for submission and/or publication (e.g., manuscript form, appropriate citation of sources). **3.B.4c** Evaluate written work for its effectiveness and make recommendations for its improvement. *[handwritten notes]* Produce documents related to career explanation and development (e.g. development, letters of application, or a career plan).	**3.B.5** Produce, using contemporary technology, documents that are intended for publication for specific purposes and audiences and that exhibit clarity of focus, logic of organization, appropriate elaboration and support, and overall coherence, using contemporary technology. *[handwritten notes]* Produce a technical document describing a process or procedure to be used in a career (e.g. also promotional, step by step instructions).	

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ENGLISH LANGUAGE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
3.C.3 Compose narrative, expository, and persuasive writings (e.g., in addition to previous writings, literature reviews, instructions, news articles) for a specified audience.	**3.C.4a** Compose narrative, expository, persuasive and technical writings (e.g., fiction and nonfiction narratives, brochures, formal reports, proposals, research summaries, analyses, editorials, articles) adapting content, vocabulary, voice and tone to the audience, purpose and situation. **3.C.4b** Write for real or potentially real situations in academics, careers and professions, and civic contexts (e.g., college applications, job applications, business letters, and petitions)	**3.C.5** Communicate information and ideas in narrative, expository and persuasive writing with clarity and effectiveness in a variety of written forms using appropriate traditional and electronic formats; adapt content, vocabulary, voice and tone to the audience, purpose and situation.	

[handwritten notes in Early High School column:] Develop a resume related to a desired potential career goal.

[handwritten notes in Late High School column:] has multi media applications to organize & present career-related professional or technical documents.

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STATE GOAL 4

Listen and speak effectively in a variety of situations.

As a result of their schooling, students will be able to:

WHY THIS GOAL IS IMPORTANT

Of all the language arts, listening and speaking are those most often used on a daily basis at home, school, work or in the community. Skill in speaking is universally recognized as a primary indicator of a person's knowledge, skill and credibility. In person, by phone or even video, good listening and speaking skills are essential to sending, receiving and understanding messages. To understand messages spoken by others, students must be able to listen carefully, using specific techniques to clarify what they have heard. For speaking properly and making messages understood, grammar, sentence structure, tone, expression and emphasis must be part of students' repertoire.

These are essential skills in the workplace & are highly valued by employer.

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ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Listen effectively in formal and informal situations.	**4.A.1a** Listen attentively by facing the speaker, making eye contact and paraphrasing what is said.	**4.A.2a** Summarize and paraphrase spoken messages orally and in writing in formal and informal situations.
	4.A.1b Ask questions and respond to questions from the teacher and from group members to improve comprehension.	**4.A.2b** Ask and respond to questions related to oral presentations and messages in small and large group settings.
	4.A.1c Follow oral directions. *Follow directions to develop a cooperative work group.*	**4.A.2c** Restate and carry out simple oral instructions. *Develop a co-op group to spoken review.*
B. Speak effectively using language appropriate to the situation and audience.	**4.B.1a** Present brief oral reports, speaking clearly at an understandable rate and adjusting volume, expression and tone in accordance with the message and audience.	**4.B.2a** Plan and deliver oral presentations, matching purpose and message to the audience, organizing content in a logical sequence for clarity and emphasis, and using visual aids.
	4.B.1b Use grammatically correct language and appropriate vocabulary when speaking (e.g., sentence structure, word use, word forms).	**4.B.2b** Use grammatically correct language and match vocabulary, voice modulation and nonverbal expressions to the intended purpose, message and audience.
	4.B.1c Speak to convey messages in group settings as both contributors and leaders.	**4.B.2c** Use speaking skills to participate in and lead group discussions; analyze the effectiveness of spoken interactions based on the ability of the group to achieve its goals.

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ENGLISH LANGUAGE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
4.A.3a Demonstrate ways that listening attentively can improve comprehension (e.g., ask probing questions, provide feedback to a speaker, summarize and paraphrase complex spoken messages).	**4.A.4a** Apply listening skills in practical settings (e.g., take on roles of interviewer and interviewee, debate an issue one-on-one with another speaker).	**4.A.5a** Apply listening skills as individuals and as members of a group in a variety of settings (e.g., lectures, discussions, conversations, team projects, presentations, interviews).	*oral instruction*
4.A.3b Compare a speaker's verbal and nonverbal messages.	**4.A.4b** Analyze a speaker's verbal and nonverbal messages. *(eg: teacher, employer, friend)*	**4.A.5b** Use criteria to evaluate a variety of speakers' verbal and nonverbal messages. *(eg: teacher, employer, friend).*	*Following instructions is a critical place in the workplace often criticized by employers as lacking in graduates.*
4.A.3c Restate and carry out multi-step oral instructions. *4A3c " as applied to a work setting.*	**4.A.4c** Follow complex oral instructions. *detailput complex instructions using career-related examples.*	*4A5C follow a complex set of oral instructions*	*career*
4.B.3a Deliver planned and impromptu oral presentations, using language and vocabulary appropriate to the purpose, message and audience; clarifying details and supporting information, where appropriate; and visual aids and technology.	**4.B.4** Deliver planned and impromptu informative and persuasive oral presentations, as individuals and as members of a group, demonstrating organization, clarity, vocabulary, supporting evidence and accuracy and using visual aids and technology as support. *employee*	**4.B.5** Deliver planned and impromptu oral presentations, as individuals and as members of a group, conveying results of research, projects or literature studies to audiences of peers and professionals; use supporting visual aids and technology.	
4.B.3b Prepare, deliver and evaluate oral reports of group progress and interaction in relation to the group's goals.			

Distinguish
La criteria that relys on good speaking & listening skills.

STATE GOAL 5

Use reading, writing, listening and speaking skills to research and apply information for specific purposes.

WHY THIS GOAL IS IMPORTANT

The explosion of information and knowledge demands that students today be able to navigate a wide variety of sources (written, visual and electronic), sort though data and materials to identify relevant and useful information, and apply what they have discovered. These skills are critical in school across all learning areas and become more important after graduation.

For educational & personal reasons + in order to meaningfully enter the world of work

be keys to successful lifelong learning and career advancement.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Locate, acquire and organize information from various sources to answer questions and solve problems.	**5.A.1a** Identify and use traditional and electronic resources (e.g., reference books and other library materials, people with expertise and/or experience, electronically stored information sources) to locate and acquire information. **5.A.1b** Identify categories for information (e.g., types of documents, which sources are current or outdated, factual vs. editorial material).	**5.A.2a** Locate and acquire information using traditional sources, contemporary technology and on-line search methods. **5.A.2b** Organize and categorize information using contemporary technology. **5.A.2c** Identify authors and explain the benefits of using primary sources.
B. Analyze and evaluate information acquired from various sources.	**5.B.1** Relate materials to the specific purpose for which they were obtained.	**5.B.2** Select materials and sources to match specific purposes and explain the importance and usefulness of the selected materials.

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ENGLISH LANGUAGE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
5.A.3a Differentiate and compare information using traditional and electronic resources and on-line search methods. **5.A.3b** Credit sources for both quoted and paraphrased information.	**5.A.4a** Conduct original inquiries to answer questions or address problems using traditional and electronic resources, as well as on-line search methods. **5.A.4b** Document sources of information using professionally accepted manuscript requirements (e.g., citations, end notes, bibliographic references).	**5.A.5** Conduct information searches to investigate specific questions and issues, applying knowledge of the structure and organization of various reference, media and electronic information sources.	*[handwritten notes, illegible]*
5.B.3 Choose and analyze information sources, as individuals and as members of a group, for individual, academic and functional purposes.	**5.B.4** Choose and evaluate, as individuals and as members of a group, primary and secondary sources (print and nonprint) for a variety of purposes.	**5.B.5** Evaluate the usefulness of information; synthesize information to support a thesis; and present information in a logical manner in oral and written forms as individuals and as members of a group.	

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MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
5.C.3a Plan, write, edit and revise documents (e.g., databases, graphics, spreadsheets) using contemporary technology.	**5.C.4a** Plan, write, edit, revise and prepare a variety of documents for publication (e.g., brochures, formal reports, proposals, research summaries, analyses, editorials, articles).	**5.C.5** Write well-documented research papers or prepare documentaries related to academic, functional or occupational topics and present the findings in an oral and/or visual presentation, both as individuals and as members of a group and using contemporary technology (e.g. *multistep employ- or thinging...*).	*3 benchmarks?*
5.C.3b Prepare and orally present original work (e.g., poems, monologues, reports, plays, stories) supported by research.	**5.C.4b** Produce oral presentations and written documents using supportive research and incorporating contemporary technology. (*e.g. select & discuss a stock purchase*).		
5.C.3c Research and defend, in oral and written forms, both sides of an issue, using supporting information.	**5.C.4c** Prepare for and participate in formal debates.		

Describe career which use writing as a foundation of their work.

as part of oral or discussion group — using standards of discussion etiquette.

Develop a manual on a topic of student choice.

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If you like to make up things with pencil and paper or other materials:

    Painter   Printmaker
    Portrait painter   Sculptor
    Muralist   Illustrator (books, stories, magazines)
        you are called a "fine" artist.

If you like to make things for people to use:

    Ceramist (potter) Jeweler
    Weaver   Craftsman in wood, metal, plastics
        you are called a craftsman, artisan or craftsperson.

If you like to work with art and with people:

    Teacher (pre-school, elementary, secondary, college, university,
        art institute, social agencies, churches, retirement homes)
    Art therapist (help people who are troubled by teaching art or
        working with a psychologist)

If you like to study what is beautiful, and then write about it:

    Aesthetician   Critic

If you like to take care of the art of our past and show people new art:

    Many careers in museum or gallery work

If you like to sell work by artists:

    Art dealer   Commercial gallery owner

If you like to design things which sell or which are for sale:

    Advertisements   Furniture
    Signs   Textiles
    Wallpaper   Packages
        you are called a "commercial" artist.

Gaile Gallatin
Curator of Education
Davenport Art Gallery
1737 W. Twelfth Street
Davenport, Iowa 52804
(319) 326-7804

WHAT IS AN ARTIST?

WHAT DO ARTISTS DO?

WHAT TRAINING DO ARTISTS NEED?

PAINTER	LANDSCAPE DESIGNER
PORTRAIT PAINTER	INDUSTRIAL DESIGNER
MURALIST	DRAFTSMAN
ILLUSTRATOR	TOPOGRAPHIC DRAFTSMAN
PRINTMAKER	(MAP MAKER)
SCULPTOR	PHOTOGRAPHER
CERAMIST	CARTOONIST
CALLIGRAPHER	ART SUPERVISOR
WEAVER	ART EDUCATOR
CRAFTSMAN	ART DIRECTOR
ADVERTISING ARTIST	ART MUSEUM DIRECTOR
LAYOUT ARTIST	ART MUSEUM CURATOR
LETTERER	ART RESTORER
SIGN PAINTER	ART HISTORIAN
LETTERING AND	ARCHAEOLOGICAL ARTIST
TYPOGRAPHIC DESIGNER	AESTHETICIAN
PACKAGE DESIGNER	ART CRITIC
COVER DESIGNER	ART JURIST
TEXTILE DESIGNER	ART APPRAISER
WALLPAPER DESIGNER	ART CONSULTANT
DISPLAY DESIGNER	COLOR ADVISOR
FASHION DESIGNER	ART EDITORIALIST
FASHION ILLUSTRATOR	ART LECTURER
COSTUME DESIGNER	ART DEALER
STAGE DESIGNER	SERIGRAPHER
JEWELRY DESIGNER	ANIMATOR
FURNITURE DESIGNER	LITHOGRAPHER
INTERIOR DESIGNER	WATERCOLORIST
ARCHITECT	

STATE GOAL 25

Understand the sensory elements, organizational principles and ideas expressed in and among the arts.

WHY THIS GOAL IS IMPORTANT

Through observation, discussion, interpretation and analysis, students learn the "language" of the arts. They create and critique their own works, refining this means of communication. They also learn to understand the ideas of others as expressed in dance, drama, music or visual art forms.

They learn of future careers in the arts.

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

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As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Describe, analyze and evaluate the sensory elements and organizational principles of works of art.	**25.A.1** Identify a variety of sensory elements in the arts (e.g., DANCE—space, time, energy; DRAMA—character, emotion, setting; MUSIC—tempo, dynamics, tone color/timbre; VISUAL ARTS—line, color, texture).	**25.A.2** Identify organizational principles in works of art (e.g., DANCE—compositional form; DRAMA—plot development; MUSIC—simple musical forms; VISUAL ARTS—composition).
B. Define, analyze and evaluate how sensory elements and organizational principles are used to express ideas in the arts.	**25.B.1** Identify the main ideas expressed in movement, sound, stories and pictures.	**25.B.2** Identify and describe how sensory elements communicate ideas in works of art.
C. Compare and contrast similarities, differences and connections of sensory elements, organizational principles, and ideas expressed within and among the arts.	**25.C.1a** Identify similarities among the sensory elements among the arts (e.g., body, voice, imagination, concentration, space, transformation, shape). **25.C.1b** Identify similarities and differences among the organizational principles across the arts (e.g., pattern, repetition, contrast, rhythm).	**25.C.2a** Describe how the art forms combine to create other art forms (e.g., puppetry combines the use of visual arts, music and dance). **25.C.2b** Compare and contrast sensory elements, organizational principles and ideas expressed among the arts.

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FINE ARTS

FINE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
25.A.3 Describe how sensory elements and organizational principles function in works of art (e.g., DANCE—changes in dynamics to create variations in theme; DRAMA—character relationship to plot development; MUSIC—repetition and contrast in a symphony; VISUAL ARTS—line repeated to create patterns).	25.A.4 Analyze and evaluate sensory elements and organizational principles in works of art (e.g., DANCE—rondo and canon; DRAMA—comedy and tragedy; MUSIC—blues and rondo; VISUAL ARTS—two-dimensional and three-dimensional).	25.A.5 Analyze and evaluate student and professional works of art using criteria related to sensory elements and organizational principles (e.g., focus, clarity, continuity). *Attend a ___ + evaluate from a career perspective (e.g. What careers are involved, what training/education is needed?).*	*All levels should include attendance*
25.B.3 Analyze how the sensory elements are organized to convey meaning in works of art.	25.B.4 Analyze and evaluate how sensory elements and organizational principles are used to express ideas in a wide variety of works within an art form.	25.B.5 Analyze and evaluate student and professional works of art using criteria related to expressing ideas (e.g., clarity of message, appropriate use of materials, interpretation of artists' intent, and sustaining of an idea in performance).	*A school play can integrate all curr. areas* *— Ticketing/math + mktg.* *— Advertising/promotion* *— Scenery design/construction + art* *— Performance/English + speech* *— Social studies/history* *— Environment/Agriculture* *e.g. "Out of Africa"*
25.C.3 Describe the characteristics of works in two or more of the arts that share similar ideas (e.g., subject matter, historical period or societal context).	25.C.4 Compare and contrast the characteristics of works in two or more of the arts that share similar themes.	25.C.5 Analyze and evaluate how sensory elements, organizational principles and expressive ideas are used across the arts. *as consumers of art. Research the occupations represented within a selected art form.*	

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STATE GOAL 26

Through creating and performing, understand how works of art are produced.

WHY THIS GOAL IS IMPORTANT

Students learn the essential skills, media, tools and techniques used in production and performing dance, drama, music and visual art. They learn to shape ideas and emotions into sounds, images and actions. Creating and performing are at the core of the fine arts, promoting imaginative, critical and reflective thinking. As technical skills are acquired, students develop their own creativity and problem-solving ability and become responsive to the creativity of others.

they can explore careergations in their interest area.

NOTE: *The "e.g.'s" are meant as examples only.* There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Demonstrate an understanding of how tools and processes are used in the arts. *historically + in today's workforce.*	**26.A.1a** Identify the media and tools used to produce works of art (e.g., DANCE—the body used to produce dance; DRAMA—the mind, body and voice used to produce character and mood; MUSIC—singing or shaking, striking, blowing or bowing instruments; VISUAL ARTS—crayons, paints, scissors, markers, clay and fibers).	**26.A.2a** Identify how various media and tools interact to produce works of art (e.g., DANCE—how resources [props, costumes] and stimuli [sound, stories, musical accompaniment] are used to enhance movement; DRAMA—how the mind [memory, concentration, imagination], body [gestures, expressions, movement] and voice [sounds, pitch, volume] are used in relation to pantomime, acting, play writing, staging; MUSIC—how selected timber/tone colors [strings, woodwinds, voices] interact in ensembles; VISUAL ARTS—how materials and equipment combine [yarn/loom, ink/brush, film/camera, clay/potter's wheel]).
	26.A.1b Identify various processes used to produce works of art (e.g., DANCE—looking, listening, creating, performing, responding; DRAMA—perceiving, responding, imagining, creating, communicating to processes such as acting, improvisation, directing pantomime, designing, play writing; MUSIC—composing, conducting, performing; VISUAL ARTS—painting, drawing, printmaking, photography and sculpting).	**26.A.2b** Identify how various processes are used alone and in combination with one another (e.g., DANCE—exploring, selecting, practicing and refining; DRAMA—imaging, creating, communicating with the skills of acting, improvising and play writing; MUSIC—composing, conducting and performing; VISUAL ARTS—performing; mixed media, pencil drawings, watercolor and tempera paint).

FINE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
26.A.3 Describe how tools and processes are used to create specific effects in the arts (e.g., DANCE—how the mind [imagining, recalling, describing, imitating, practicing, improvising] and body [patterning, respond to a range of stimuli, express moods and ideas and create characters and narratives in movement; DRAMA—how the support tools, sets, costumes, sound, lights, and props enhance body, mind and voice in the dramatization of story; MUSIC—how musical sounds are used when composing, conducting and performing; VISUAL ARTS—how visual images are affected by the selection of tools, materials and techniques).	**26.A.4** Analyze how tools and processes are combined to communicate ideas in works of art (e.g., DANCE—stimuli and technologies used to express content and form stylistic differences and aspects of production; DRAMA—the primary tools of mind, body and voice and support tools of costumes, props, lights, sound, makeup and sets used to express ideas through processes such as acting, designing and directing; MUSIC—ways musical sounds are produced [physics of sound, electronic instruments and computer technology] and how they are used in composing, conducting and performing; VISUAL ARTS—how selection of 2-dimensional and 3-dimensional materials and tools affect abstract and realistic expression of ideas).	**26.A.5** Assess the choice of tools and processes to communicate ideas in works of art (e.g., DANCE—evaluate how movement choices, technical skill, music accompaniment, production choices, lighting, and costume work to support an idea or message; DRAMA—evaluate how primary and support tools are used in the artistic process of perceiving, responding, imaging, creating, communicating, evaluating; MUSIC—analyze the components of a musical composition to evaluate how it conveys an idea or mood; VISUAL ARTS—evaluate how the selection of tools, materials and processes supports and influences the communication of ideas).	EXPOSE STUDENTS TO PERFORMANCES - CELEST SHOW - ME - Sesame St. Live Who paints buses? Do they need these Skills? Fine arts are often not viewed as careers or as income-generating vocations. Encourage students to see paying careers within the fine arts.

Describe how tools have changed over time and jobs related to toolmaking (eg. hand sketching now computerized)

Identify careers related to each art form (eg. Art=artist commercial artist, sign painters, craftwork painting, museum worker, art critic, toy designer)

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
26.B.3 Demonstrate intermediate skills in the arts (e.g., DANCE—perform combinations of step patterns and a variety of traditional dance styles and improvise or choreograph dances exhibiting specified qualities of movement; DRAMA—demonstrate story telling, improvisational skills and use of scripted material to create drama/theatre; MUSIC—sing or play with accurate intonation a challenging repertoire of music, read and interpret traditional music notation while singing and playing; VISUAL ART—create works of art that are realistic, abstract and decorative).	**26.B.4** Demonstrate proficiency in the arts (e.g., DANCE—perform in relation to other dancers with awareness of spacing, timing, rhythmic acuity, precision and clarity; DRAMA—create or re-create and perform a drama or theatre scene using basic skills of ensemble, individual performance and scenic elements; MUSIC—sing or play with accurate intonation music of challenging complexity and length, read and interpret complex music notation while singing or playing, and improvise and create or arrange composition within specific guidelines; VISUAL ART—create works of visual art based on planning, research and thematic development and demonstrate an understanding of various types of visual art). Develop a career path for your chosen art form. within/	**26.B.5** Demonstrate advanced skills in the arts (e.g., DANCE—use a variety of choreographic processes, technology, aesthetic principles and dance styles when performing techniques related to various dance forms; DRAMA—analyze a written work [create setting, props, music, costumes, make-up] and perform a character to support the analysis and direct, write, design or act in an ensemble performance using basic skills; MUSIC—sing or play with accurate intonation music of challenging complexity and length; read music notation while singing or playing complex music; improvise, create and arrange compositions of increasing complexity and length; VISUAL ART—initiate, research and solve visual art problems using various techniques to create a series of works). Conduct problem-solving/ troubleshooting process using varying techniques within or across the 4 sub-disciplines.	workplace

STATE GOAL 27

Understand the role of the arts in civilizations, past and present.

WHY THIS GOAL IS IMPORTANT

The arts are a record of civilization's past and present. Artists are influenced by—and influence—the times and places in which they live and work. As students learn through the arts about people and civilizations, they learn about others and themselves.

Students learn how to be informed consumers of the fine arts (e.g. jewelry, plays) and careers related to this goal (e.g. curator, antique appraiser, carpenter, restorer).

NOTE: *The "e.g.'s" are meant as examples only. There has been no attempt to identify all possible items, but rather to give guidance to the teacher as to the general intent of the standards and benchmarks.*

As a result of their schooling, students will be able to:

ACADEMIC STANDARD	EARLY ELEMENTARY LEARNING BENCHMARKS	LATE ELEMENTARY LEARNING BENCHMARKS
A. Analyze how the arts function in history, society and everyday life. *as consumers and professionals.*	**27.A.1** Describe the ways the arts contribute to societies, civilizations and everyday life (e.g., the role of DANCE in depicting occupations and recreational celebrations; DRAMA in dramatizing fictional and nonfictional situations in stories; MUSIC in marches and lullabies; VISUAL ARTS in capturing situations in pictures and making items for use such as quilts and pottery).	**27.A.2a** Identify and describe how the arts portray universal themes (e.g., celebrations, seasons, transportation, patterns). **27.A.2b** Describe how the arts communicate similar ideas among one or more of the arts and other learning areas (e.g., meter in music to counting in math; symmetry in visual arts, dance, math and science; plot in drama and language arts).
B. Analyze how the arts reflect history, society and everyday life. *as consumers + professionals.*	**27.B.1** Identify how the arts reflect different times and countries (e.g., DANCE—folk dances and singing games; DRAMA—dramatic folk tales; MUSIC—patriotic songs; VISUAL ARTS—wall carvings and totems).	**27.B.2a** Identify and describe how the arts tell a story about the people and times (e.g., connect artworks, artifacts, folk dances and dramas to society and civilizations). **27.B.2b** Identify how the arts reflect the differences between past societies and present-day life through works of art (e.g., DANCE—musicals, ballets; DRAMA—plays and stories; MUSIC—symphonies and traditional songs; VISUAL ARTS—paintings, sculpture and decorative arts).

FINE ARTS

FINE ARTS

MIDDLE/JUNIOR HIGH SCHOOL LEARNING BENCHMARKS	EARLY HIGH SCHOOL LEARNING BENCHMARKS	LATE HIGH SCHOOL LEARNING BENCHMARKS	NOTES
27.A.3a Explain how the arts have traditionally functioned in various societies and civilizations (e.g., costumes, masks, dances and movements, sound patterns sculptures, frescos, symbols in ceremonies and performances). **27.A.3b** Describe the role of the arts in creative problem solving in the world of work (e.g. graphic designer, recording engineer, architect, set designer, and choreographer).	**27.A.4a** Analyze how the arts function in contemporary society and everyday life (e.g., advertising, architecture, computer imaging, social dance, popular music, television, film, performance art). **27.A.4b** Analyze how inventions have influenced the work of contemporary artists (e.g., electricity, printing process, mass media and technology).	**27.A.5a** Compare and contrast how the arts function in society and civilization, in the past and present (e.g., trace styles in an art form, analyze the role of the arts in expressing ideas, research the antecedents of popular art forms). **27.A.5b** Analyze the role and connections between the arts and among the other academic subject areas (e.g., how sound is related to acoustics, how community planning is related to architecture, how drama/theatre relates to documentary films).	_Many careers in the fine arts do **not** require a 4-yr. degree_
27.B.3 Explain how the arts are used to increase understanding of societies, past, and present (e.g., by examining ceremonies, performances, exhibitions and structures, _art fair judging_).	**27.B.4** Analyze the distinguishing characteristics of works of art from historical periods. _Debate if art affects society or vice versa._ _Describe careers that need an understanding of art. history._	**27.B.5** Research and analyze the relationship of the arts to history, society, and civilizations (e.g., examine the use of masks in ceremonies and performances, examine the use of hero in theatrical form, examine the use of abstraction in visual images, examine the use of improvisation in music and dance._(influence of the political climate on art)._ _Political Systems_ _Define how art reflects changes in society._ _Describe why/it art is. a civic responsibility._	

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