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ABSTRACT

This document presents a model of educational outcomes for learners in grade 4 and the indicators of these outcomes for all students. This includes students identified as having disabilities or developmental delays. The document begins with a presentation of the conceptual model, with Educational Resources (Inputs and Contexts) influencing Learning Opportunity and Process. These, in turn, influence the Outcome Domains, which have a return influence on both the Educational Resources and the Learning Opportunity and Process. The Outcome Domains include Presence and Participation, Family Involvement/Accommodation and Adaptation, Physical Health, Responsibility and Independence, Contribution and Citizenship, Academic and Functional Literacy, Personal and Social Adjustment, and Satisfaction. The conceptual model is extended by identifying outcomes within each outcome domain, with "outcomes" being defined as the results of learning experiences or interactions between children and the educational process. Indicators, which are numbers or other symbolic representations that can be used to determine whether desired outcomes are achieved, are then presented. Finally, examples of possible sources of data for the seven indicators within the Physical Health domain are provided. (JPD)

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Educational Outcomes and Indicators for Grade 4

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NATIONAL
CENTER ON
EDUCATIONAL
OUTCOMES

The College of Education
UNIVERSITY OF MINNESOTA



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August, 1994

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The National Center on Educational Outcomes (NCEO) was established in October, 1990, to work with state departments of education, national policy-making groups, and others to facilitate and enrich the development and use of indicators of educational outcomes for students with disabilities. It is believed that responsible use of such indicators will enable students with disabilities to achieve better results from their educational experiences. The Center represents a collaborative effort of the University of Minnesota, the National Association of State Directors of Special Education, and St. Cloud State University.

The Center is supported through a Cooperative Agreement with the U.S. Department of Education, Office of Special Education Programs (H159C00004). Opinions or points of view do not necessarily represent those of the U.S. Department of Education or offices within it.

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Educational Outcomes and Indicators for Grade 4

The current emphasis on educational reform and accountability reflects the public's desire to know the results of education for all of America's students. There is great interest in identifying the important outcomes of education and the best indicators of those outcomes.

The **National Center on Educational Outcomes** (NCEO) is working with federal and state agencies to facilitate and enhance the collection and use of data on educational outcomes for students with disabilities. In doing so, it has taken an inclusive approach, identifying a conceptual model of outcomes that applies to all students, not just to students with disabilities. Hundreds of educators, administrators, policymakers, and parents have participated in a consensus-building process using this model as a framework to identify key indicators of important educational outcomes for all students.

The purpose of this document is to present a model of educational outcomes for learners in grade 4 (or approximately 9 years of age) and the

indicators of these outcomes for all students. This includes students identified as having disabilities or developmental delays. In the pages that follow, you will find:

- A conceptual model of domains and outcomes
- Possible indicators for each outcome
- Steps toward identifying sources of data for indicators

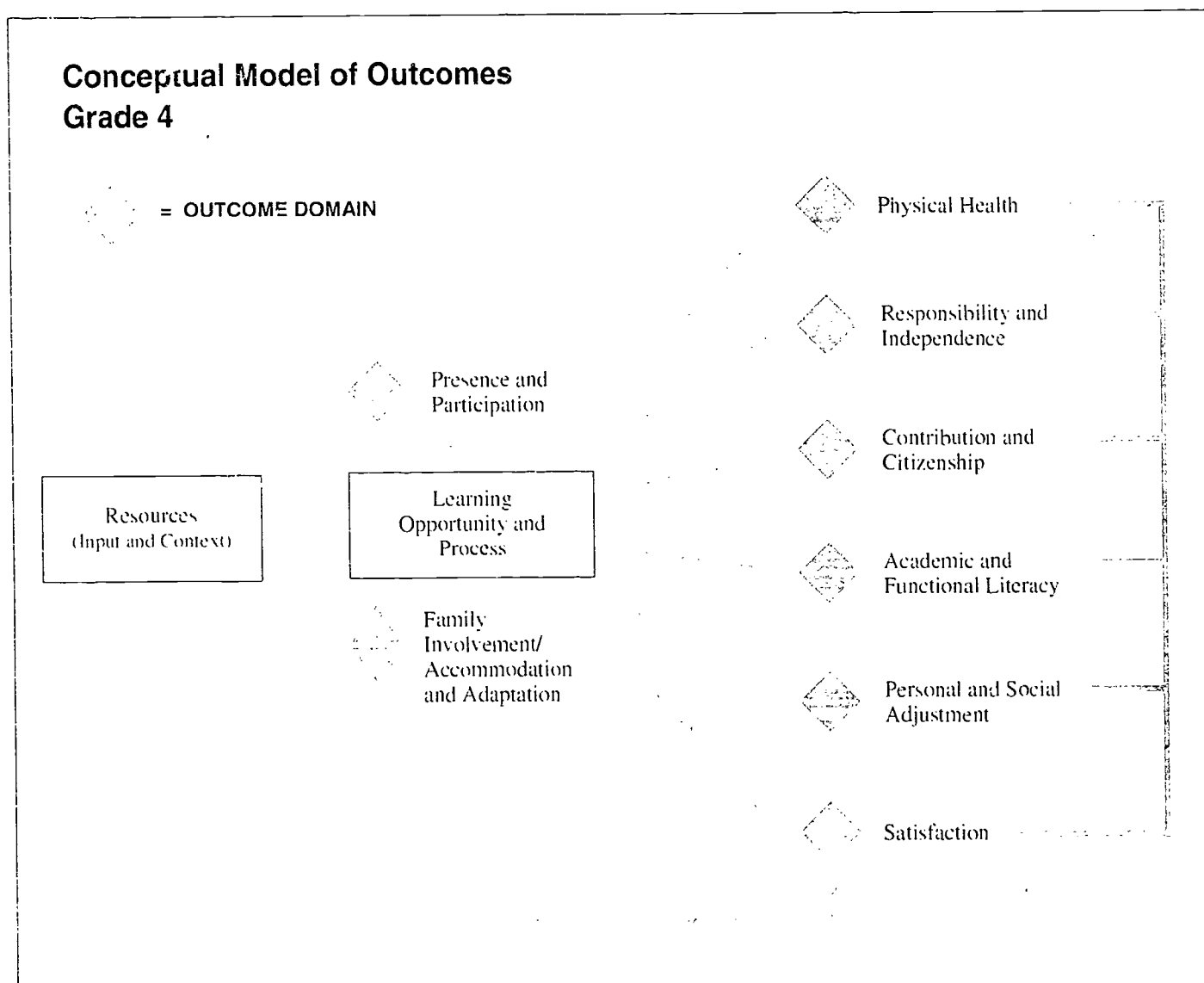
We at the National Center on Educational Outcomes are indebted to many groups and individuals who provided feedback to us (see Contributors listed at the end of this document). We believe that the model and indicators for grade 4 outcomes presented here will serve as a point from which to extend discussion as policymakers, states, and local school districts identify the important outcomes of education.

Conceptual Model of Domains and Outcomes

The conceptual model depicted below shows the complete educational model, with Educational Resources (Inputs and Contexts) influencing Learning Opportunity and Process. These, in turn, influence the Outcome Domains (the shaded areas), which have a return influence on both the Resources and Opportunity and Process.

Two of the shaded domains, Presence and Participation, and Family Involvement/Accommodation and Adaptation, are placed next to Learning Opportunity and Process. This placement results from the belief that these domains may be part of the process but still need to be measured. All domains (indicated by ♦) are treated equally as outcome domains.

Family Involvement is included with Accommodation and Adaptation in the conceptual model at the grade 4 level, just as it was at the early childhood levels (ages 3 and 6). This reflects the need to focus on outcomes related to the involvement and support of the family and community at the early age and grade levels.



The conceptual model is extended by identifying outcomes, indicators of the outcomes, and finally, sources of data for the indicators.

“Outcomes” are the results of learning experiences or interactions between children and the educational process.

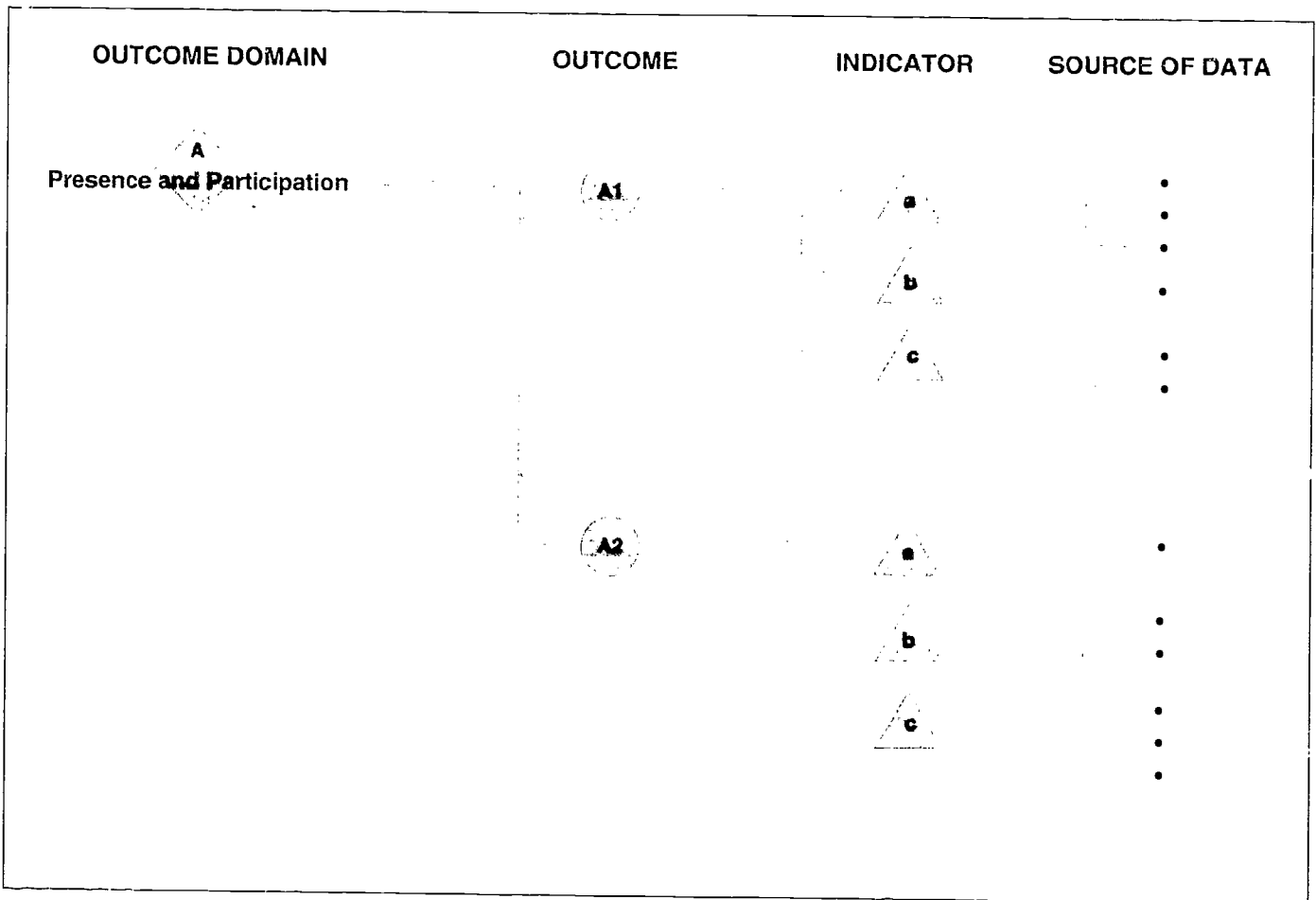
“Indicators” are numbers or other symbolic representations that can be used to determine whether desired outcomes are achieved.

The relationships among these components are shown below for the Presence and Participation domain. Throughout this document outcome domains are represented by shaded diamonds, outcomes are represented by shaded circles, and indicators are represented by shaded triangles. Sources of data, represented below as small dots, are not fully developed for the eight domains in this document.

Outcomes for the eight domains are presented on pages 4 and 5. Indicators

are listed for each outcome within outcome domains on pages 8-15. Sample sources of data for the Physical Health outcome domain are presented on page 17.

Within this document, outcome domains, outcomes, and indicators are assigned letters and numbers to help in referencing them. These letters and numbers do not imply a hierarchical order of any kind.



OUTCOME DOMAIN

OUTCOME

Presence and Participation

A

A1 Is present in school

A2 Participates in school activities

**Family Involvement/
Accommodation and
Adaptation**

B

B1 Uses enrichments, adaptations, accommodations, or compensations necessary to achieve outcomes in each of the major domains

B2 Demonstrates the presence of family support and coping skills

Physical Health

C

C1 Makes healthy lifestyle choices

C2 Is aware of basic safety, fitness, and health care needs

C3 Is physically fit

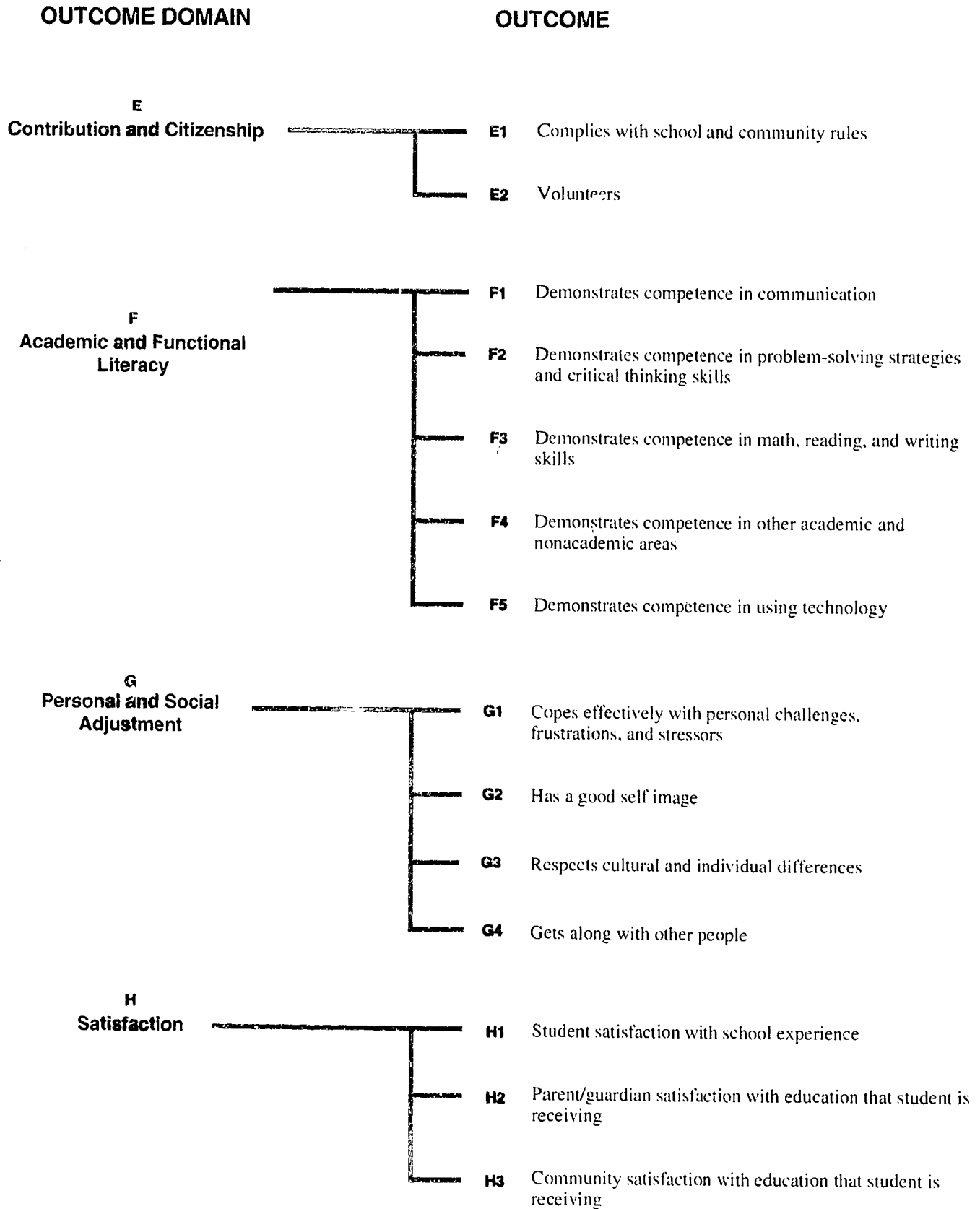
**Responsibility and
Independence**

D

D1 Demonstrates age-appropriate independence

D2 Gets about in the environment

D3 Is responsible for self



Possible Indicators for Grade 4 Outcomes

Indicators are numbers or other symbolic representations of outcomes. They can be viewed over time to gather information on trends. At the national and state levels, indicators usually are presented as percentages or rates.

State and local district personnel who are interested in specific students can easily translate the indicators presented here into individually-based indicators. A guide to these translations is included in the supporting document entitled

Self-Study Guide to the Development of Educational Outcomes and Indicators (see p. 25).

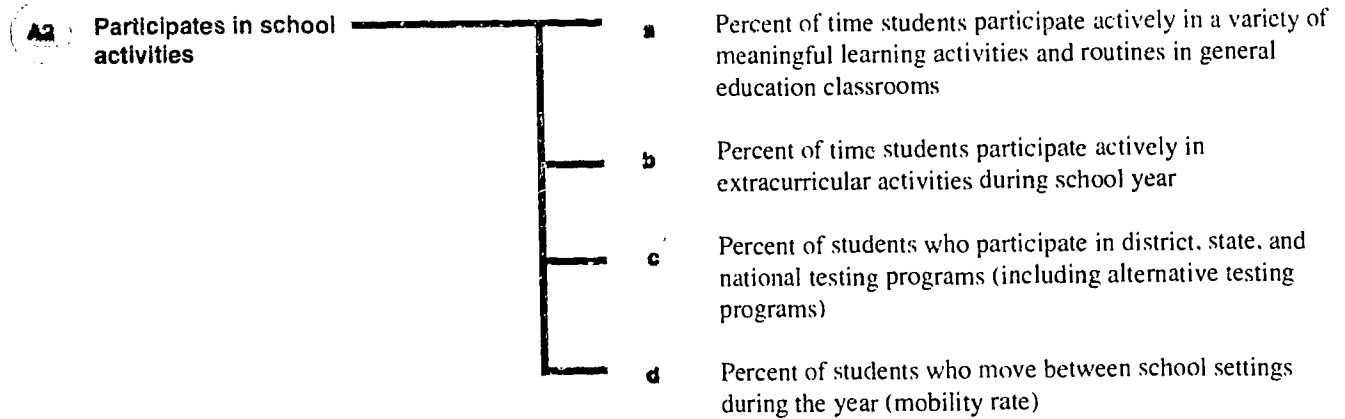
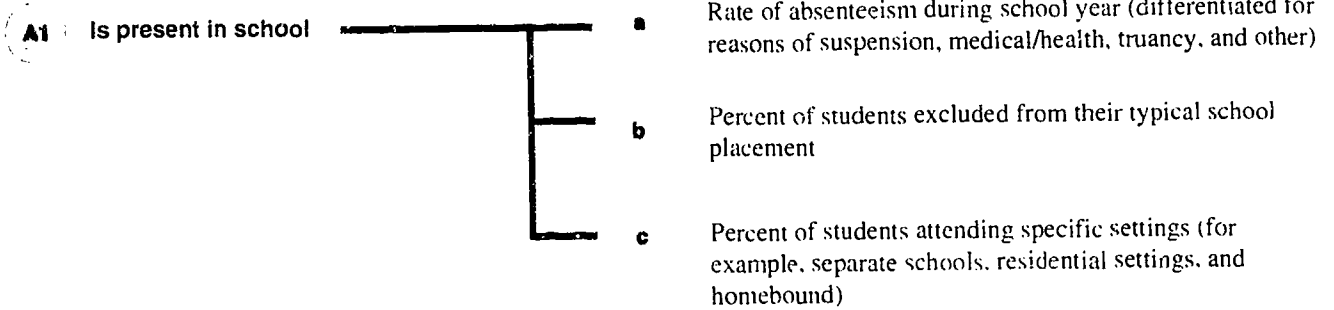
Lists of possible indicators for educational outcomes at grade 4, which were identified through the consensus-building process, are presented on the following pages. It is important to think of these as a framework within which outcomes, indicators, and sources of data can be generated.

() = OUTCOME

A
DOMAIN

= INDICATOR

Presence and Participation

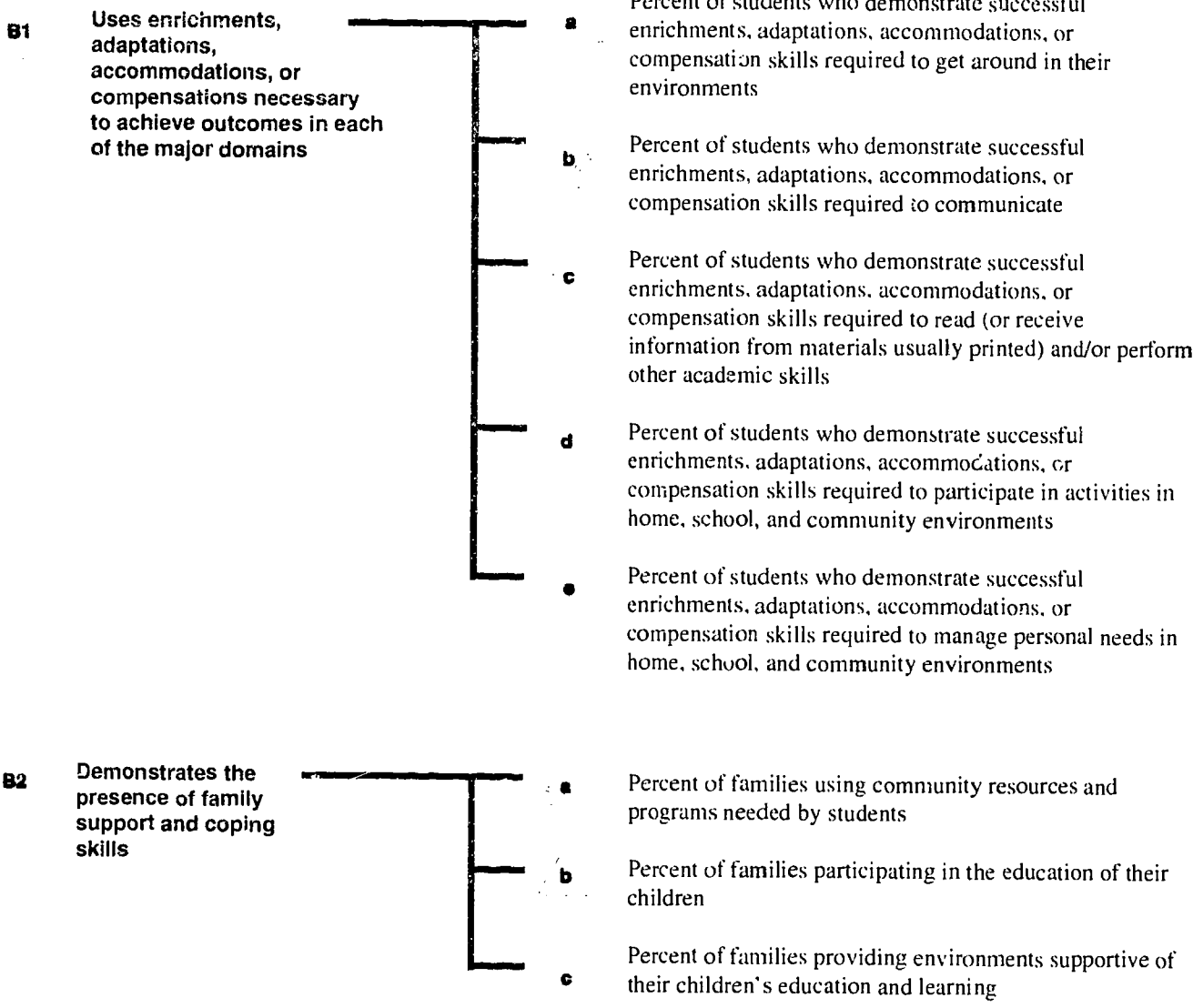


= OUTCOME

= INDICATOR

B
DOMAIN

Family Involvement/ Accommodation and Adaptation



○ = OUTCOME

△ = INDICATOR



Physical Health

C1 Makes healthy lifestyle choices

a

Percent of students who are aware of nutritional choices

b

Percent of students who participate regularly in sports, recreational, and/or exercise activities

C2 Is aware of basic safety, fitness, and health care needs

a

Percent of students who are aware of basic safety precautions and procedures

b

Percent of students who are aware of basic fitness needs

c

Percent of students who are aware of basic health care needs

d

Percent of students who are aware of dangers of use and abuse of tobacco, alcohol, drugs, poisons, and medicines

C3 Is physically fit

a

Percent of students who meet individualized standards of physical fitness

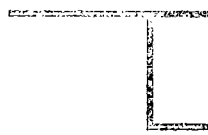
○ = OUTCOME

△ = INDICATOR



Responsibility and Independence

D1 Demonstrates age-appropriate independence

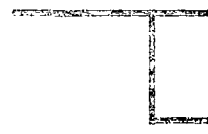


Percent of students who act responsibly in a family, group, or individual situation



Percent of students who initiate and follow through on activities

D2 Gets about in the environment

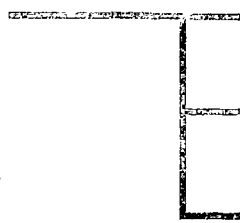


Percent of students who can get to and from a variety of destinations



Percent of students who have an emerging awareness of the larger community

D3 Is responsible for self



Percent of students who can attend to their own hygiene needs



Percent of students who take care of their own belongings



Percent of students who begin to look to others for support

= OUTCOME

E
DOMAIN

= INDICATOR

Contribution and Citizenship

E1 Complies with school and community rules



- a** Percent of students who are beginning to act as responsible citizens (for example, recycling, helping each other, caring about the environment, respecting property)
- b** Percent of students who have been repeatedly suspended or subjected to disciplinary actions
- c** Percent of students who have an understanding of work roles and responsibilities as students and citizens

E2 Volunteers






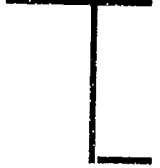

- a** Percent of students who participate in school and classroom governance activities
- b** Percent of students who use their interests and abilities to benefit others and contribute to the group


= OUTCOME

F
DOMAIN

= INDICATOR

Academic and Functional Literacy

F1	Demonstrates competence in communication		a	Percent of students who use and comprehend language that effectively accomplishes the purpose of the communication
F2	Demonstrates competence in problem-solving strategies and critical thinking skills		a	Percent of students who demonstrate problem-solving and critical thinking skills
F3	Demonstrates competence in math, reading, and writing skills		a	Percent of students who demonstrate competence in math to function in home, school, and community environments
			b	Percent of students who demonstrate competence in reading to function in home, school, and community environments
			c	Percent of students who demonstrate competence in writing to function in home, school, and community environments
F4	Demonstrates competence in other academic and nonacademic areas		a	Percent of students who demonstrate competence in other academic domains (science, language, geography, social studies) to function in home, school, and community environments
			b	Percent of students who demonstrate competence in cultural domains (fine and performing arts) to function in home, school, and community environments
F5	Demonstrates competence in using technology		a	Percent of students who apply technology to enhance functioning in home, school, and community environments

 = OUTCOME

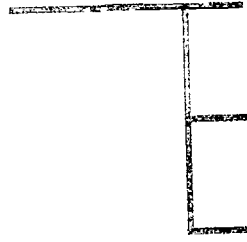
 = INDICATOR



Personal and Social Adjustment

G1

Copes effectively with personal challenges, frustrations, and stressors



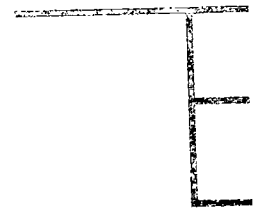
Percent of students who deal appropriately with frustration and unfavorable events

Percent of students who express feelings and needs in socially acceptable ways

Percent of students whose behavior reflects an appropriate degree of self-control

G2

Has a good self image



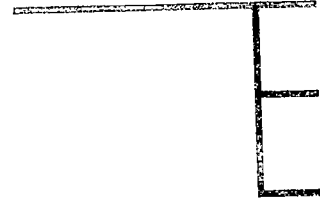
Percent of students who perceive themselves as worthwhile

Percent of students who perceive themselves as competent

Percent of students who demonstrate knowledge of and acknowledge their own limitations

G3

Respects cultural and individual differences



Percent of students who respect and show concern for others

Percent of students who accept cultural, racial, ability, and family differences

Percent of students who participate in making the community welcoming and inclusive of diversity

G4

Gets along with other people



Percent of students who have friends their own age and are part of a social network

Percent of students who can work cooperatively

○ = OUTCOME

△ = INDICATOR

H
DOMAIN
Satisfaction

H1

Student satisfaction with school experience

a

Percent of students who enjoy learning and are satisfied with their school accomplishments

b

Percent of students who indicate they receive what they need to be successful

H2

Parent/guardian satisfaction with education student is receiving

a

Percent of parents/guardians who are satisfied with their students' level of accomplishment in academic and social areas

b

Percent of parents/guardians who are satisfied with what is being provided in school (curriculum, extracurricular, teaching, and supports)

H3

Community satisfaction with education that student is receiving

a

Percent of community (teachers, policymakers, employers, general public) satisfied with students' accomplishments

b

Percent of community (teachers, policymakers, employers, general public) satisfied with what is being provided in school (curriculum, extracurricular, teaching, and supports)

Steps Toward Identifying Sources of Data for Indicators

NCEO staff and advisors are currently in the process of identifying possible sources of data for each of the indicators that has been identified through the consensus-building

process. Examples of possible sources of data for the seven indicators within the Physical Health domain are provided on this page. These were generated by NCEO staff.

Before listing the possible sources of data for all outcome indicators in the NCEO model, experts will be asked to provide their ideas about the best data sources.

C
DOMAIN

Physical Health

OUTCOME	INDICATOR	POSSIBLE SOURCE OF DATA
c1 Makes healthy lifestyle choices	a Percent of students who are aware of nutritional choices	<ul style="list-style-type: none"> • Student interview • Parent interview
	b Percent of students who participate regularly in sports, recreational, and/or exercise activities	<ul style="list-style-type: none"> • School administrative records • Teacher survey • Participation records from community agencies
c2 Is aware of basic safety, fitness, and health care needs	a Percent of students who are aware of basic safety precautions and procedures	<ul style="list-style-type: none"> • Knowledge test results • Adaptive behavior scales or checklists
	b Percent of students who are aware of basic fitness needs	<ul style="list-style-type: none"> • Physical education exam scores • Student interview
	c Percent of students who are aware of basic health care needs	<ul style="list-style-type: none"> • Knowledge test results • Health examination scores
	d Percent of students who are aware of the dangers of use and abuse of tobacco, alcohol, drugs, poisons, and medicines	<ul style="list-style-type: none"> • Student interview • Health examination scores
c3 Is physically fit	a Percent of students who meet individualized standards of physical fitness	<ul style="list-style-type: none"> • Physical education exam scores • Fitness test results • Teacher questionnaire

Identifying and Defining the Important Outcomes of Education

The model and lists of domains, outcomes, and indicators that have been presented in this document are viewed as providing a framework and examples. From these examples, states, districts, and schools can begin to identify and define the important outcomes of education for all of their students.

This document is a summary of the results of consensus-building exercises focused on grade 4 only. NCEO has used the same consensus-building process to identify outcomes and indicators for the developmental levels indicated in the figure below.

These are available in the same format as the grade 4 outcomes and indicators.

OUTCOME DOMAIN	DEVELOPMENTAL LEVELS					
	3 Years	6 Years	Grade 4	Grade 8	School Completion	Post School
A Presence and Participation	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●
B Family Involvement Accommodation and Adaptation	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●
C Physical Health	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●
D Responsibility and Independence	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●
E Contribution and Citizenship	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●
F Academic and Functional Literacy	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●
G Personal and Social Adjustment	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●
H Satisfaction	— — ●	— — ●	— — ●	— — ●	— — ●	— — ●

Contributors to the Development of Grade 4 Outcomes

Many individuals contributed to the development of the conceptual model, outcomes, and indicators presented here. Stakeholders participated in an intensive process of consensus

building using a computerized multiattribute analysis procedure. Other contributors, including NCEO's Advisory Committee members, read and reacted to various working

papers, model prototypes, and questionnaires. With extreme gratitude we recognize and thank these contributors.

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Supporting Documents

The following documents are available for the reader who is interested in additional information on the model and its underlying assumptions, the process through which the current model and indicators were developed, or how states and school districts apply the model to meet their needs.

A Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Working Paper 1) July, 1991.

This paper discusses terminology and assumptions underlying the development of a model of outcomes for children and youth with disabilities. It presents alternative models, identifies unresolved issues, and represents a preliminary statement of models and issues.

Responses to Working Paper 1: Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Synthesis Report 3) June, 1992.

This paper is a synthesis of the responses from a large number of individuals who were invited to react to the educational outcomes model and the assumptions, definitions, and unresolved issues presented in Working Paper 1. Patterns in responses to specific issues including support, concerns, suggested refinements, and sample comments are included.

An Evolving Conceptual Model of Educational Outcomes for Children and Youth with Disabilities (Working Paper 2) August, 1992.

This paper is an extension of Working Paper 1, with revised definitions and

assumptions, and an updated model of educational and enabling outcomes for students with disabilities. An initial list of indicators of each outcome domain is included.

Developing a Model of Educational Outcomes (October, 1993).

This report summarizes the process and stages leading to the development of NCEO's conceptual model, indicators, and sources of data.

Consensus Building: A Process for Selecting Educational Outcomes and Indicators (November, 1993).

This report details the consensus process used by NCEO to produce lists of outcomes and indicators.

Self-Study Guide to the Development of Educational Outcomes and Indicators (September, 1993).

This guide provides state and district personnel with information on how to use NCEO's model in developing a set of outcomes and indicators.

Information on these materials can be obtained by calling NCEO Publications (612-626-1530) or by writing:

NCEO Publications
350 Elliott Hall
75 East River Road
Minneapolis, MN 55455

**NCEO works in collaboration with
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