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ABSTRACT

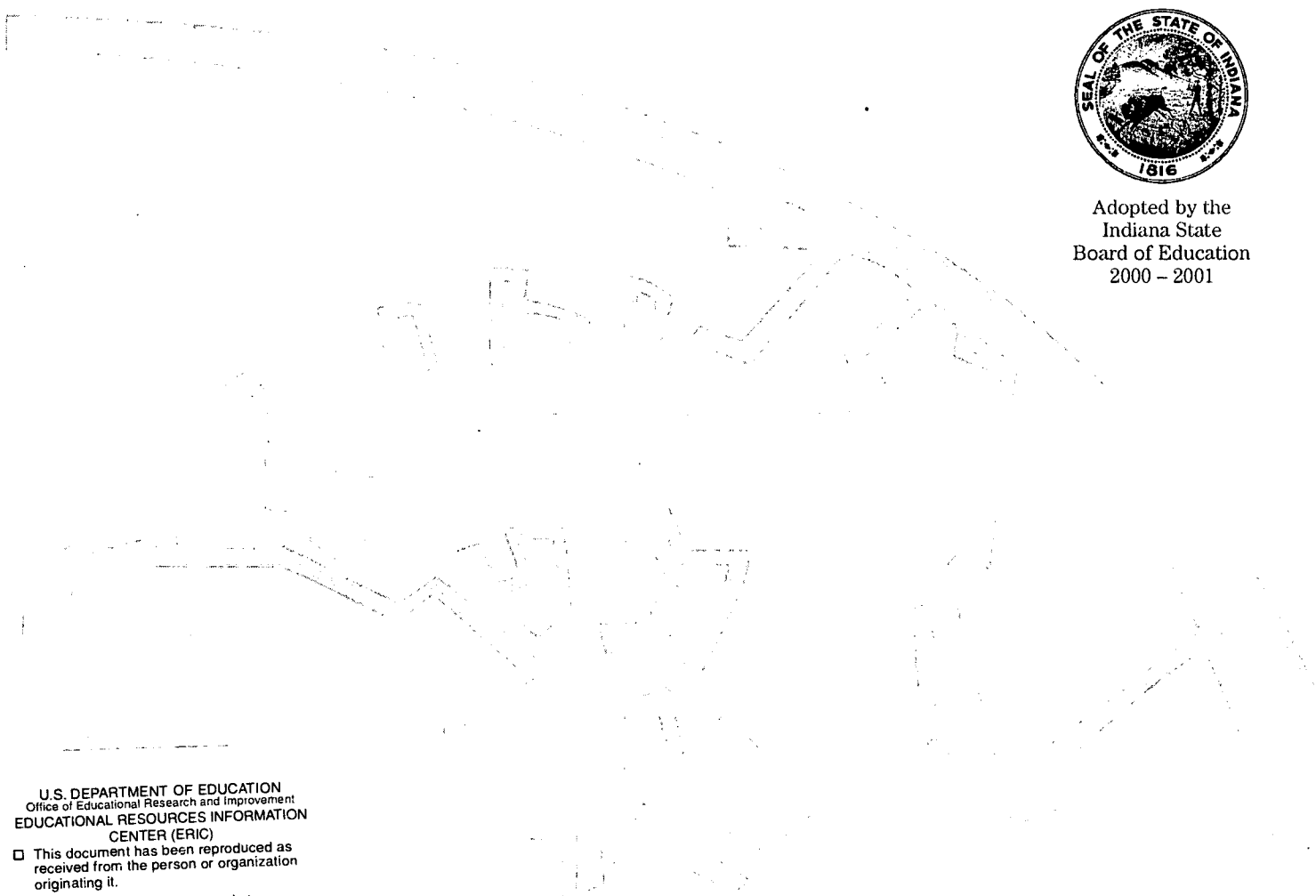
This guide to Indiana's academic standards in language arts, mathematics, science, and social studies for kindergarten students begins with a note to students and another to parents. The guide spells out what students should know and be able to do in each subject, at each grade level. It helps students understand what is required to meet the standards. The guide also lists 10 things parents can do to help students succeed and includes information on assessments or measuring student learning. The guide's English/Language Arts section cites the following standards: (1) Reading: Word Recognition, Fluency, and Vocabulary Development; (2) Reading: Comprehension; (3) Reading: Literary Response and Analysis; (4) Writing: Process; (5) Writing: Applications (Different Types of Writing and Their Characteristics); (6) Writing: English Language Conventions; (7) Listening and Speaking: Skills, Strategies, and Applications. The Mathematics section lists six standards: Number Sense, Computation, Algebra and Functions, Geometry, Measurement, and Problem Solving. The Science section enumerates these six standards: Nature of Science and Technology, Scientific Thinking, Physical Setting, Living Environment, Mathematical World, and Common Themes. The Social Studies section cites these five standards: History; Civics and Government; Geography; Economics; and Individuals, Society, and Culture. Attached are note sheets. (NKA)

Kindergarten

Indiana's Academic Standards

English/Language Arts
Mathematics
Science
Social Studies

Adopted by the
Indiana State
Board of Education
2000 – 2001



Dear Student,

The world is changing fast. In order for you to succeed in school, at work, and in the community, you will need more skills and knowledge than ever before.

Getting in shape academically is the single most important thing you can do to prepare for a successful future.

This booklet of Academic Standards clearly spells out what you should know and be able to do in each subject, at your grade level. Examples are given to help you understand what is required to meet the Standards. **Please review this guide with your teachers and share it with your parents and family.**

Whether you go on to be a surgeon, computer technician, teacher, or airplane mechanic, learning never stops. There will always be a more demanding computer application, a new invention, or a more complex project awaiting you.

To be ready for tomorrow — get in top academic shape today. Use this guide year round to check your progress.

Dear Parent,

The demand is greater than ever for people who can read, write, speak effectively, analyze problems and set priorities, learn new things quickly, take initiative, and work in teams. Technology has already transported us into a time where the next e-commerce opportunity is limited only by our imagination.

That's why Indiana has established new Academic Standards in English/language arts, mathematics, science, and social studies. These world-class Standards outline what your student should know and be able to do in each subject, at each grade level.

Indiana's new Academic Standards were recommended by Indiana's Education Roundtable and adopted by the State Board of Education. According to Achieve, Inc. and other respected education experts, these Standards are among the best in the nation.

Higher academic standards pose a challenge, but Indiana students have shown that they can measure up. Our students know that higher expectations lead to greater rewards — and they're prepared to work harder. We know that by setting specific goals, everyone wins. Teachers have clear targets, students know what's expected, and you have detailed information about your child's strengths and weaknesses.

How can you be sure that your student will be ready to meet these challenges? First, keep in mind that learning does not take place only in the classroom. Students spend far more time at home than they do in school. How they spend their time can make a real difference. That is where your help is the most important.

On the next page is a list of 10 things you can do to help your student get a good education. **Nothing will have a bigger impact on your student's success than your involvement in his or her education.** We hope you use this guide as a tool to help your child succeed today and in the future.

Sincerely,

Frank O'Bannon

Governor Frank O'Bannon

Dr. Suellen Reed

Dr. Suellen Reed,
Superintendent of Public Instruction

Stan Jones

Stan Jones,
Commissioner for Higher Education

10 things parents can do to help students succeed

1. **Build relationships with your child's teachers.** Find out what each teacher expects of your child and how you can help your child prepare to meet those expectations.

2. **Read.** Reading is the foundation for all learning. Read to your young child, encourage your older child to read to you, or spend time together as a family reading. All this helps your child develop strong reading habits and skills from the beginning and reinforces these habits and skills as your child grows. Reading is one of the most important contributions you can make to your child's education.

3. **Practice writing at home.** Letters, journal entries, e-mail messages, and grocery lists are all writing opportunities. Show that writing is an effective form of communication and that you write for a variety of purposes.

4. **Make math part of everyday life.** Cooking, gardening, paying bills, and even shopping are all good ways to help your child understand and use mathematics skills. Show that there may be many ways to get to the right answer and encourage your child to explain his or her method.

5. **Ask your child to explain his or her thinking.** Ask lots of "why" questions. Children should be able to explain their reasoning, how they came up with the right answer, and why they chose one answer over another.

6. **Expect that homework will be done.** Keep track of your child's homework assignments and regularly look at his or her completed work. Some teachers now give parents a number to call for a recorded message of that day's homework assignments; others put the information on the Internet. If your school doesn't offer these features, talk to the teacher about how you can get this important information. Even if there aren't specific assignments, find out how you can stay informed about what your child is working on so that you can help at home.

7. **Use the community as a classroom.** Feed your child's curiosity about the world 365 days a year. Use the library to learn more about the history of your town. A visit to a farmer's market can help your child picture our state's rich agricultural tradition. Take your young child to zoos and parks and your older child to museums and workplaces to show how learning connects to the real world.

8. **Encourage group study.** Open your home to your child's friends for informal study sessions. Promote outside formal study groups through church or school organizations or other groups. Study groups will be especially important as your child becomes older and more independent. The study habits your child learns now will carry over into college and beyond.

9. **Help other parents understand academic expectations.** Use your school and employee newsletters, athletic associations, booster clubs, a PTA or PTO meeting, or just a casual conversation to help other parents understand what academic standards mean for them, their children, and their school and how they can help their children learn at home.

10. **Spend time at school.** The best way to know what goes on in your child's school is to spend time there. If you're a working parent, this isn't easy, and you may not be able to do it very often. But "once in awhile" is better than "never."

Remember: *You are the most important influence on your child. Indiana's Academic Standards give you an important tool to ensure that your child gets the best education possible.*

Measuring Student Learning

Children develop at different rates. Some take longer and need more help to learn certain skills. Assessments, like ISTEP+, help teachers understand how students are progressing and assist in identifying academic areas where students may need additional attention.

Assessments also provide a measure of school accountability – assisting schools in their efforts to align curriculum and instruction with the state's Academic Standards and reporting progress to parents and the public. Students in designated grades take ISTEP+ in the fall of each school year – with the assessment based on what the child should have learned and retained from the previous year.

Core 40 End-of-Course Assessments are given at the end of specific high school classes and are a cumulative assessment of what students should have learned during that course. End-of-Course Assessments also provide a means to ensure the quality and rigor of high school courses across the state. Voluntary for schools at this time, a selection of these assessments will be phased in over the next five years.

◗ Indicates mandatory ISTEP+ testing ◆ Indicates voluntary assessments

Kindergarten

Grade 1
◆Reading

Grade 2
◆Reading

Grade 3
◗ English/Lang. Arts
◗ Mathematics

Grade 4

What's the Goal? By Grade 4, have students moved beyond learning to read toward "reading to learn" other subjects? Can each student write a short, organized essay? Can each student use math skills to solve everyday, real-world problems?

Grade 5
◗ Science (begins 2003)
◗ Social Studies (begins 2004)

Grade 6
◗ English/Lang. Arts
◗ Mathematics

Grade 7
◗ Science (begins 2005)
◗ Social Studies (begins 2006)

Grade 8
◗ English/Lang. Arts
◗ Mathematics

What's the Goal? By Grades 7 and 8, have students developed strong enough study habits in English and math skills to be ready for high school?

Grade 9
◗ Science (begins 2007)
◗ Social Studies (begins 2008)
◆Core 40 End-of-Course Assessments

Grade 10 (GQE)
◗ English/Lang. Arts
◗ Mathematics
◆Core 40 End-of-Course Assessments

Grade 11
(two re-tests available for those who have not passed the GQE)
◆Core 40 End-of-Course Assessments

Grade 12
(two re-tests available for those who have not passed the GQE)
◆Core 40 End-of-Course Assessments

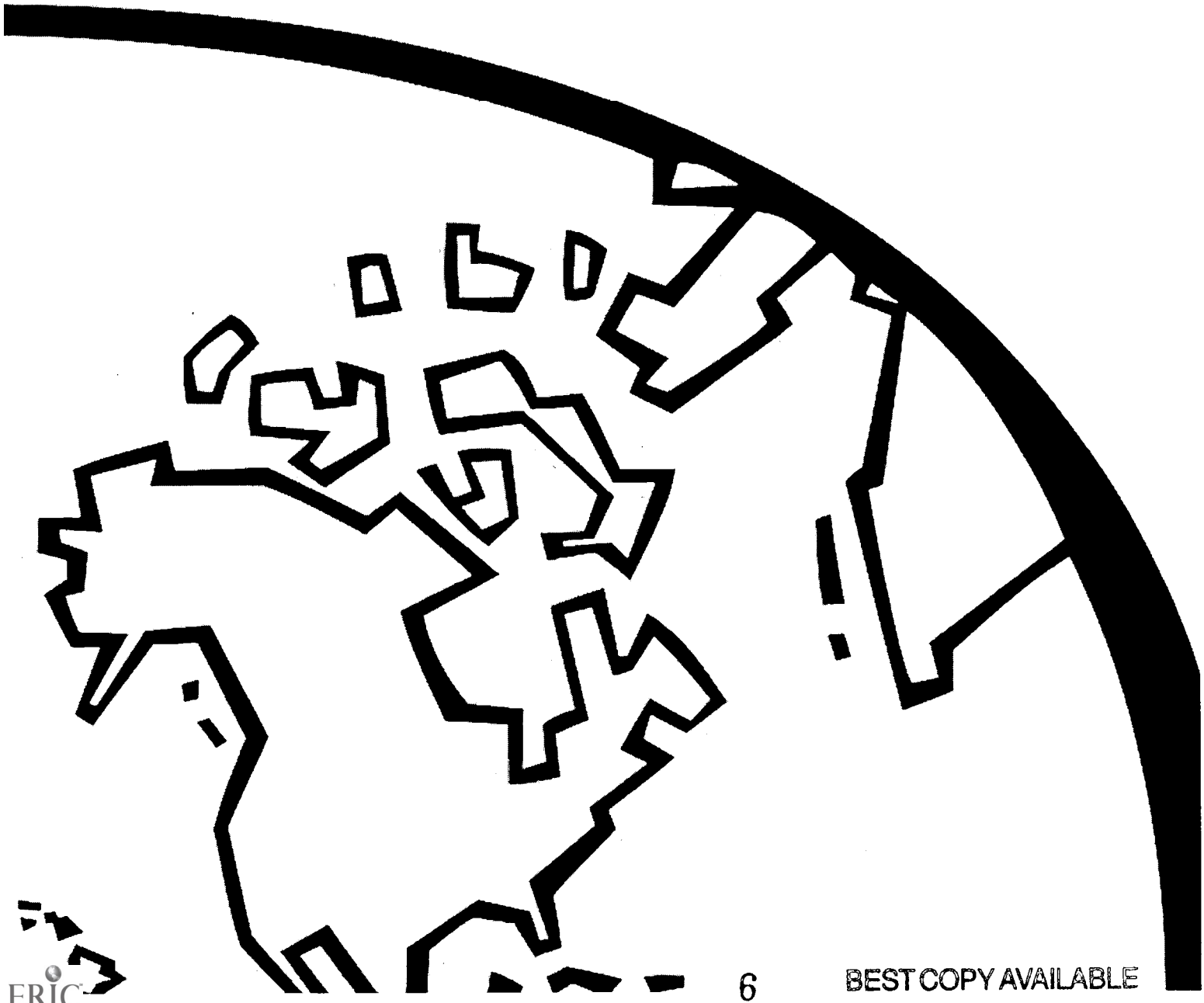
Graduation
(or continued extra help)

What's the Goal?
By Grade 12, can students read well enough to pass a driver's exam, understand an appliance manual, or compare two opposing newspaper editorials? Could students write an effective job application letter? By testing skills like these in Grade 10, teachers know whether – and in which skill area – students need more attention before it's time to graduate.

For more information visit www.doe.state.in.us/standards and click on Assessment or call 1-800-54-ISTEP (1-888-544-7837).

Kindergarten

English/Language Arts



Standard 1

READING: Word Recognition, Fluency, and Vocabulary Development

Students know about letters, words, and sounds. They apply this knowledge to read simple sentences.

Concepts about Print

K.1.1 Identify the front cover, back cover, and title page of a book.

K.1.2 Follow words from left to right and from top to bottom on the printed page.

K.1.3 Understand that printed materials provide information.

K.1.4 Recognize that sentences in print are made up of separate words.

K.1.5 Distinguish letters from words.

K.1.6 Recognize and name all capital and lowercase letters of the alphabet.

Phonemic Awareness*

K.1.7 Listen to two or three phonemes (sounds) when they are read aloud, and tell the number of sounds heard, whether they are the same or different, and the order.

Example: Listen to the sounds */f/*, */m/*, */s/* or */l/*, */n/*, */v/*. Tell how many sounds were heard and whether any sounds were the same.

K.1.8 Listen and say the changes in spoken syllables (a word or part of a word that contains one vowel sound) and words with two or three sounds when one sound is added, substituted, omitted, moved, or repeated.

Example: Listen to the word *bat* and tell what word is left when you take the */b/* sound away. Tell what word is left when you take the */br/* sound away from the spoken word *brother*.

K.1.9 Blend consonant-vowel-consonant (cvc) sounds aloud to make words.

Example: Listen to the sounds */b/*, */e/*, */d/* and tell what word is made.

K.1.10 Say rhyming words in response to an oral prompt.

Example: Say a word that rhymes with *cat*.

K.1.11 Listen to one-syllable words and tell the beginning or ending sounds.

Example: Tell what sound you hear at the beginning of the word *girl*.

* When letters have a slanted line before and after them, such as */f/*, */sh/*, */b/*, this represents the sound the letter makes, not the name of the letter.

K.1.12 Listen to spoken sentences and recognize individual words in the sentence; listen to words and recognize individual sounds in the words.

K.1.13 Count the number of sounds in a syllable; count the number of syllables in words.

Decoding and Word Recognition

K.1.14 Match all consonant sounds (*mad, red, pin, top, sun*) to appropriate letters.

K.1.15 Read one-syllable and high-frequency (often-heard) words by sight.

K.1.16 Use self-correcting strategies when reading simple sentences.

K.1.17 Read their own names.

K.1.18 Understand the alphabetic principle, which means that as letters in words change, so do the sounds.

K.1.19 Learn and apply knowledge of alphabetical order when using a classroom or school library/media center.

Vocabulary and Concept Development

K.1.20 Identify and sort common words in basic categories.

Example: Tell whether the words *blue, yellow,* and *red* are colors, shapes, or foods. Tell the names of some favorite colors.

K.1.21 Identify common signs and symbols.

Example: Identify the meanings of common signs and symbols, such as stop signs or store signs, from the colors, shapes, logos, and letters on these signs or symbols.

Standard 2

READING: Comprehension

Students identify the basic facts and ideas in what they have read, heard, or seen. They use comprehension strategies, such as generating and responding to questions and comparing new information to what is already known, to understand what they read. The selections in the **Indiana Reading List** *(available online at www.doe.state.in.us/standards/readinglist.html) illustrate the quality and complexity of the materials to be read by students. In Kindergarten, students will listen to and begin to read grade-level-appropriate classic and contemporary literature, nursery rhymes, alphabet books, dictionaries, and online information.*

Structural Features of Informational and Technical Materials

K.2.1 Locate the title and the name of the author of a book.

Comprehension and Analysis of Grade-Level-Appropriate Text

K.2.2 Use picture clues and context to aid comprehension and to make predictions about story content.

Example: Follow along with the text and pictures while a story, such as *Make Way for Ducklings* by Robert McCloskey, is being read aloud. At different points in the story, tell what might happen next and how the story might end.

K.2.3 Connect the information and events in texts to life experiences.

Example: Tell about a trip to a farm after reading or listening to a book about a farm, such as *Going to Sleep on the Farm* by Wendy Lewison or *The Town Mouse and the Country Mouse: An Aesop Fable* by Janet Stevens.

K.2.4 Retell familiar stories.

Example: Retell the story of a folktale, such as the version of *The Three Little Pigs* by Steven Kellogg.

K.2.5 Identify and summarize the main ideas and plot of a story.

Example: Listen to a folktale, such as the version of *The Little Red Hen* by Paul Galdone or *The Three Billy Goats Gruff* by Tim Arnold. Then, discuss with the class the main events of the story and the characters in the story. After listening to an information story that is read aloud, such as *Bears, Bears, and More Bears* by Jackie Morris, tell about the main ideas that were learned.

Standard 3

READING: Literary Response and Analysis

Students listen and respond to stories based on well-known characters, themes (the main idea of a story), plots (what happens in a story), and settings (where a story takes place). The selections in the **Indiana Reading List** *(available online at www.doe.state.in.us/standards/readinglist.html) illustrate the quality and complexity of the materials to be read by students.*

Analysis of Grade-Level-Appropriate Narratives (Stories)

K.3.1 Distinguish fantasy from reality.

Example: Listen to *The Day Jimmy's Boa Ate the Wash,* Trinka Hakes Noble's story about a class field trip to a farm, and *Farming,* Gail Gibbons' nonfiction book about farming. Tell how these two books are different.

K.3.2 Identify types of everyday print materials.

Example: Walk around the school and identify the signs in the school, such as EXIT, Principal's Office, and Restrooms. Tell the difference between a storybook and a beginners' dictionary.

K.3.3 Identify characters, settings, and important events in a story.

Example: Identify the main characters in a story, such as *Noisy Nora* by Rosemary Wells. Describe the setting in a familiar story, such as *Goodnight Moon* by Margaret Wise Brown. Retell the important events in a story, such as the folktale *Jack and the Beanstalk.*

K.3.4 Identify favorite books and stories.

Standard 4

WRITING: Process

Students discuss ideas and tell stories for someone to write. Students use pictures, letters, and words to write.

Organization and Focus

K.4.1 Discuss ideas to include in a story.

K.4.2 Tell a story that the teacher or some other person will write.

K.4.3 Write using pictures, letters, and words.

K.4.4 Write phonetically spelled words (words that are written as they sound) and consonant-vowel-consonant words (demonstrating the alphabetic principle).

Example: Write correctly simple words, such as *man, cat,* and *run,* and spell other words as they sound, such as *whale* as *wal, jumps* as *jmps,* and *bigger* as *bigr,* showing an understanding of what letters represent certain sounds.

K.4.5 Write by moving from left to right and from top to bottom.

Standard 5

WRITING: Applications

(Different Types of Writing and Their Characteristics)

In Kindergarten, students begin to write and draw pictures for specific purposes and for a specific audience (intended reader).

K.5.1 Draw pictures and write words for a specific reason.

Example: Draw a picture or write to a friend or a family member to tell about something new at school.

K.5.2 Draw pictures and write for specific people or persons.

Example: Write or dictate an invitation to a parent to attend a classroom event.

Standard 6

WRITING: English Language Conventions

Students begin to learn the written conventions of Standard English.

Handwriting

K.6.1 Write capital and lowercase letters of the alphabet, correctly shaping and spacing the letters.

Spelling

K.6.2 Spell independently using an understanding of the sounds of the alphabet and knowledge of letter names.

Example: Spell correctly common words, such as *cat,* or spell by how the word sounds, such as *kat.*

Standard 7

LISTENING AND SPEAKING: Skills, Strategies, and Applications

Students listen and respond to oral communication. They speak in clear and coherent sentences. Students deliver brief oral presentations about familiar experiences or interests.

Comprehension

K.7.1 Understand and follow one- and two-step spoken directions.

Oral Communication

K.7.2 Share information and ideas, speaking in complete, coherent sentences.

Speaking Applications

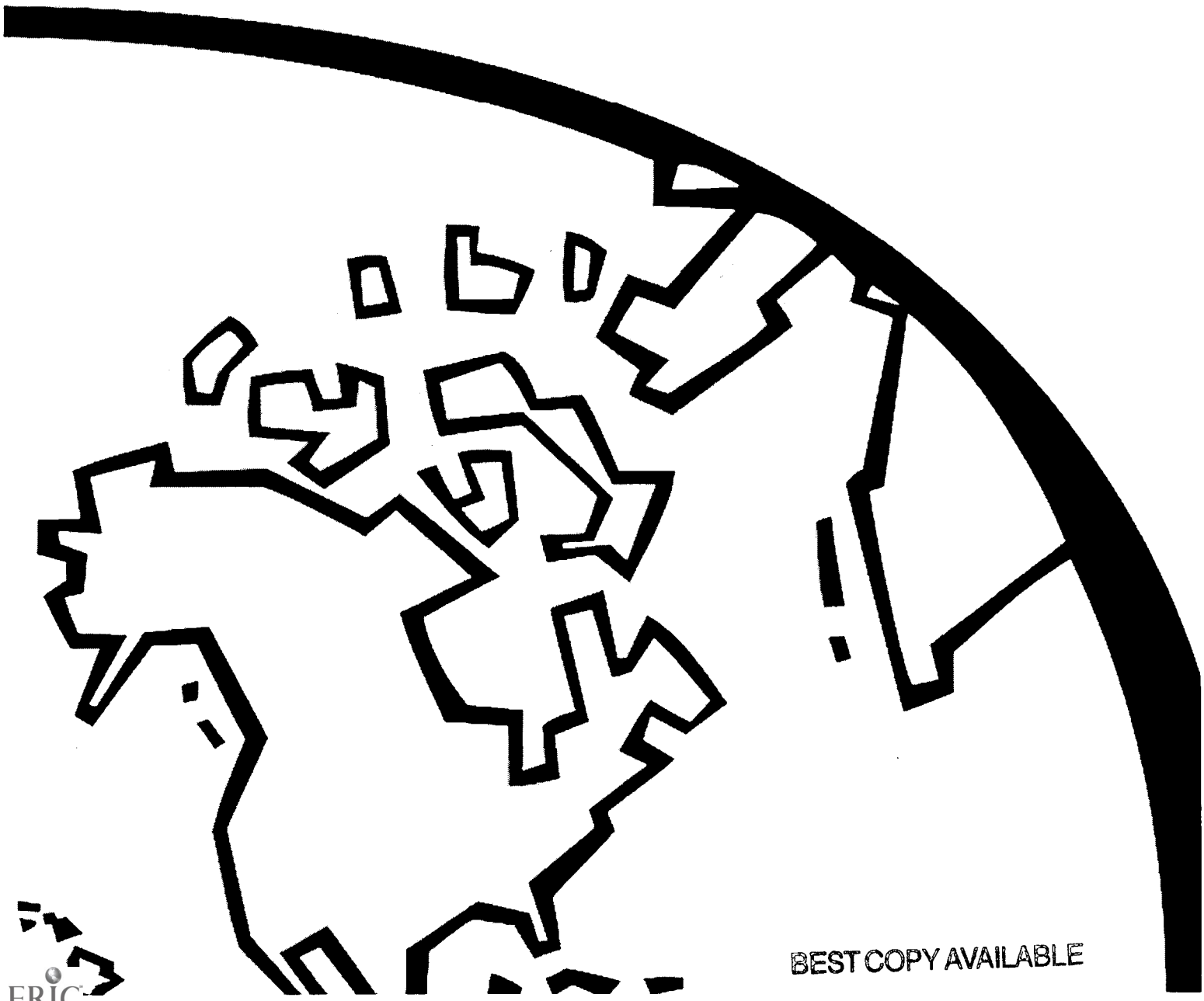
K.7.3 Describe people, places, things (including their size, color, and shape), locations, and actions.

K.7.4 Recite short poems, rhymes, and songs.

K.7.5 Tell an experience or creative story in a logical sequence.

Kindergarten

Mathematics



Mathematics

In this technological age, mathematics is more important than ever. When students leave school, they are more and more likely to use mathematics in their work and everyday lives — operating computer equipment, planning timelines and schedules, reading and interpreting data, comparing prices, managing personal finances, and completing other problem-solving tasks. What they learn in mathematics and how they learn it will provide an excellent preparation for a challenging and ever-changing future.

The state of Indiana has established the following mathematics Standards to make clear to teachers, students, and parents what knowledge, understanding, and skills students should acquire in Kindergarten:

Standard 1 — Number Sense

Understanding the number system is the basis of mathematics. Students develop this understanding by first comparing the number of objects (such as blocks) in a given set. From comparing sets of objects, they develop the concept of counting: matching each object in a set with a counting number. Then they use counting to recognize, name, and order up to ten objects. As preparation for learning about fractions, students practice dividing sets into equal groups and shapes into equal parts.

Standard 2 — Computation

Fluency in computation is essential. As students learn about numbers, they also learn how to add and subtract them. They use objects to join sets together (for addition) and to remove objects from sets (for subtraction).

Standard 3 — Algebra and Functions

Algebra is a language of patterns, rules, and symbols. Students at this level sort and classify objects according to various rules and make simple patterns with numbers and shapes.

Standard 4 — Geometry

Students learn about geometric shapes and develop a sense of space. They identify and describe simple shapes, comparing and sorting them by such attributes as size and roundness. They learn the meaning of words, like inside and above, that relate to positions in space.

Standard 5 — Measurement

The study of measurement is essential because of its uses in many aspects of everyday life. Students begin their study of measurement by comparing objects' length, weight, temperature, etc. They use words like shorter, taller, heavier, and colder. They also learn concepts of time, such as hours, days, months, and years.

Standard 6 — Problem Solving

In a general sense, mathematics is problem solving. In all mathematics, students use problem-solving skills: they choose how to approach a problem, they explain their reasoning, and they check their results. As they develop their skills with numbers, geometry, or measurement, for example, students at this level move from simple ideas to more complex ones by taking logical steps that build a better understanding of mathematics.

As part of their instruction and assessment, students should also develop the following learning skills by Grade 12 that are woven throughout the mathematics Standards:

Communication

The ability to read, write, listen, ask questions, think, and communicate about math will develop and deepen students' understanding of mathematical concepts. Students should read text, data, tables, and graphs with comprehension and understanding. Their writing should be detailed and coherent, and they should use correct mathematical vocabulary. Students should write to explain answers, justify mathematical reasoning, and describe problem-solving strategies.

Reasoning and Proof

Mathematics is developed by using known ideas and concepts to develop others. Repeated addition becomes multiplication. Multiplication of numbers less than ten can be extended to numbers less than one hundred and then to the entire number system. Knowing how to find the area of a right triangle extends to all right triangles. Extending patterns, finding even numbers, developing formulas, and proving the Pythagorean Theorem are all examples of mathematical reasoning. Students should learn to observe, generalize, make assumptions from known information, and test their assumptions.

Representation

The language of mathematics is expressed in words, symbols, formulas, equations, graphs, and data displays. The concept of one-fourth may be described as a quarter, $\frac{1}{4}$, one divided by four, 0.25, $\frac{1}{8} + \frac{1}{8}$, 25 percent, or an appropriately shaded portion of a pie graph. Higher-level mathematics involves the use of more powerful representations: exponents, logarithms, π, unknowns, statistical representation, algebraic and geometric expressions. Mathematical operations are expressed as representations: $+$, $=$, divide, square. Representations are dynamic tools for solving problems and communicating and expressing mathematical ideas and concepts.

Connections

Connecting mathematical concepts includes linking new ideas to related ideas learned previously, helping students to see mathematics as a unified body of knowledge whose concepts build upon each other. Major emphasis should be given to ideas and concepts across mathematical content areas that help students see that mathematics is a web of closely connected ideas (algebra, geometry, the entire number system). Mathematics is also the common language of many other disciplines (science, technology, finance, social science, geography) and students should learn mathematical concepts used in those disciplines. Finally, students should connect their mathematical learning to appropriate real-world contexts.

Standard 1

Number Sense

Students understand the relationship between numbers and quantities up to 10, and that a set of objects has the same number in all situations regardless of the position or arrangement of the objects.*

K.1.1 Match sets of objects one-to-one.

Example: Take crayons from the box and give one to each student in the group. Explain what you are doing.

K.1.2 Compare sets of up to ten objects and identify whether one set is equal to, more than, or less than another.

Example: Compare the blocks in two boxes. Tell which box contains more blocks and explain the way in which you decided on your answer.

K.1.3 Know that larger numbers describe sets with more objects in them than sets described by smaller numbers.

Example: Understand that a set of 7 apples contains more apples than a set of 3 apples.

K.1.4 Divide sets of ten or fewer objects into equal groups.

Example: Take 6 blocks and give the same number to each of 3 children.

K.1.5 Divide shapes into equal parts.

Example: Divide a piece of paper into 4 equal pieces.

K.1.6 Count, recognize, represent, name, and order a number of objects (up to 10).

Example: Count a group of seven pennies. Recognize that 7 is the number for this set.

K.1.7 Find the number that is one more than or one less than any whole number* up to 10.

Example: You have a bag of 7 apples. How many apples are in a box that holds one less than the bag of apples?

K.1.8 Use correctly the words one/many, none/some/all, more/less, and most/least.

Example: Take some of the blocks out of this box, but not all of them.

K.1.9 Record and organize information using objects and pictures.

Example: Ask some of your friends what pets they have. Use pictures of animals to show the number of pets your friends have.

* set: collection of objects, numbers, etc.

* whole numbers: 0, 1, 2, 3, etc.

Standard 2

Computation

Students understand and describe simple additions and subtractions.

K.2.1 Model addition by joining sets of objects (for any two sets with fewer than 10 objects when joined).

Example: Put together 3 pencils and 2 pencils. Count the total number of pencils.

K.2.2 Model subtraction by removing objects from sets (for numbers less than 10).

Example: From a pile of 9 crayons, take away 6 crayons. Count the number of crayons left in the pile.

K.2.3 Describe addition and subtraction situations (for numbers less than 10).

Example: In the last example, explain what operation you were using when you took away crayons from the pile.

Standard 3

Algebra and Functions

Students sort and classify objects.

K.3.1 Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group.

Example: Find the squares in a collection of shapes. Sort these squares into large ones and small ones and explain how you decided which squares went in each pile.

K.3.2 Identify, copy, and make simple patterns with numbers and shapes.

Example: Make a pattern of squares and circles with one square, one circle, one square, one circle, etc.

Standard 4

Geometry

Students identify common objects around them and describe their geometric features and position.

K.4.1 Identify and describe common geometric objects: circle, triangle, square, rectangle, and cube.

Example: Look for cubes and circles at home and at school.

K.4.2 Compare and sort common objects by position, shape, size, roundness, and number of corners.

Example: Compare the numbers of corners of triangles, squares, and rectangles.

K.4.3 Identify and use the terms: inside, outside, between, above, and below.

Example: Tell when a block is inside or outside a box.

Standard 5

Measurement

Students understand the concept of time and units to measure it. They understand that objects have length, capacity, weight, and temperature, and that they can compare objects using these qualities.

K.5.1 Make direct comparisons of the length, capacity, weight, and temperature of objects and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler or holds more.

Example: Hold two books side by side to see which is shorter. Hold one in each hand to see which is heavier.

K.5.2 Understand concepts of time: morning, afternoon, evening, today, yesterday, tomorrow, week, month, and year. Understand that clocks and calendars are tools that measure time.

Example: Use a calendar to find the number of days in the month of your birthday.

Standard 6

Problem Solving

Students make decisions about how to set up a problem.

K.6.1 Choose the approach, materials, and strategies to use in solving problems.

Example: Solve the problem: "There are four blocks on the table and a box of blocks that is closed. The teacher says that there are five blocks in the box. Find the number of blocks in all, without opening the box." Decide to draw a picture.

K.6.2 Use tools such as objects or drawings to model problems.

Example: In the first example, draw a picture of the four blocks that you can see, and then draw five more blocks for the ones that you cannot see.

Students solve problems in reasonable ways and justify their reasoning.

K.6.3 Explain the reasoning used with concrete objects and pictures.

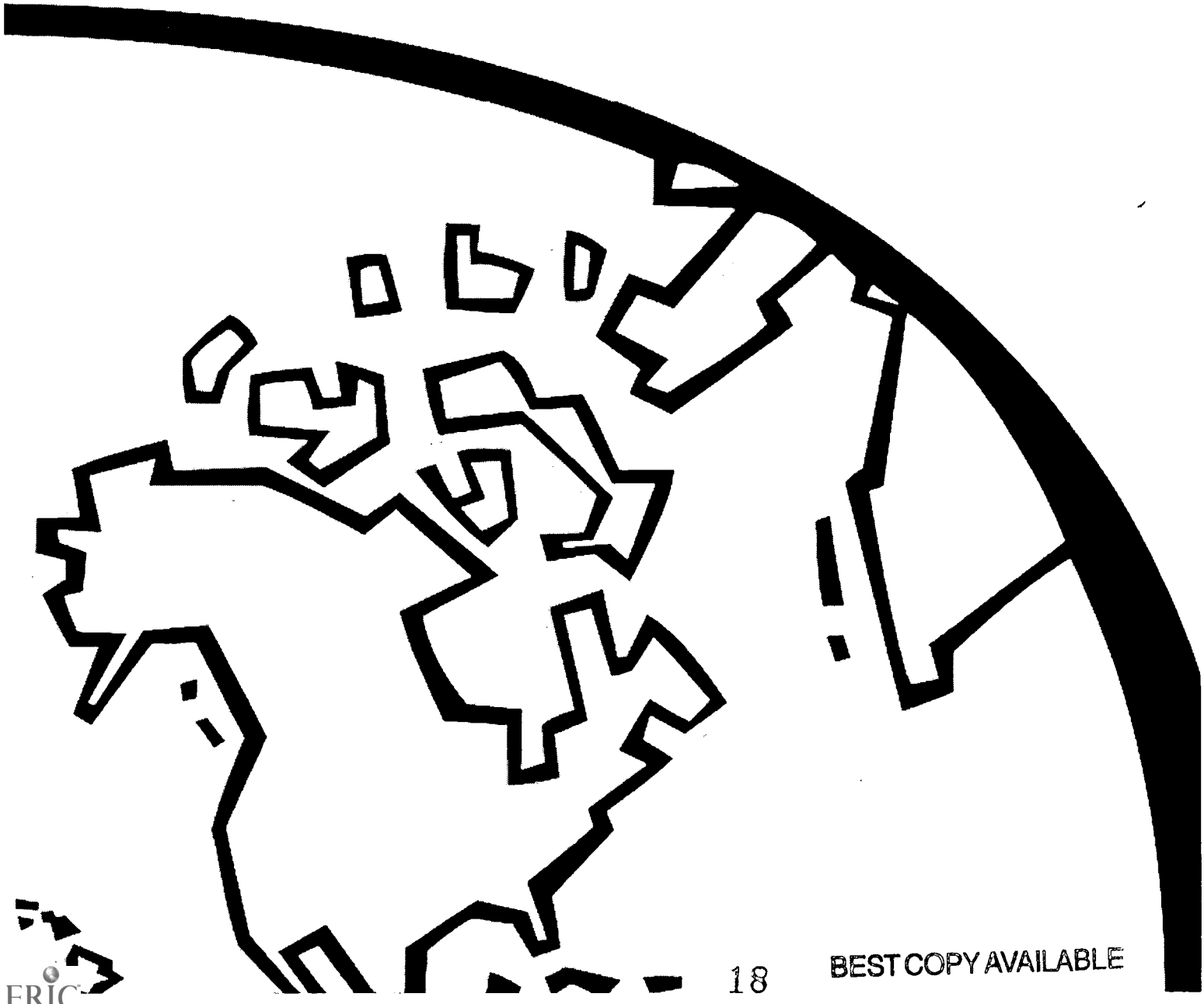
Example: In the first example, count the number of blocks that you have drawn and write the number that represents the total.

K.6.4 Make precise calculations and check the validity of the results in the context of the problem.

Example: In the first example, open the box of blocks and place them on the table. Count the total number of blocks on the table to see whether your drawing was correct.

Kindergarten

Science



The Indiana Academic Standards for science contain six Standards. Each Standard is described below. On the pages that follow, age-appropriate concepts are listed underneath each Standard. These ideas build a foundation for understanding the intent of each Standard.

Standard 1 — The Nature of Science and Technology

It is the union of science and technology that forms the scientific endeavor and that makes it so successful. Although each of these human enterprises has a character and history of its own, each is dependent on and reinforces the other. This first Standard draws portraits of science and technology that emphasize their roles in the scientific endeavor and reveal some of the similarities and connections between them. In order for students to truly understand the nature of science and technology, they must model the process of scientific investigation through inquiries, fieldwork, lab work, etc. Through these experiences, students will practice designing investigations and experiments, making observations, and formulating theories based on evidence.

Standard 2 — Scientific Thinking

There are certain thinking skills associated with science, mathematics, and technology that young people need to develop during their school years. These are mostly, but not exclusively, mathematical and logical skills that are essential tools for both formal and informal learning and for a lifetime of participation in society as a whole. Good communication is also essential in order to both receive and disseminate information and to understand others' ideas as well as have one's own ideas understood. Writing, in the form of journals, essays, lab reports, procedural summaries, etc., should be an integral component of students' experiences in science.

Standard 3 — The Physical Setting

One of the grand success stories of science is the unification of the physical universe. It turns out that all natural objects, events, and processes are connected to each other. This Standard contains recommendations for basic knowledge about the overall structure of the universe and the physical principles on which it seems to run. This Standard focuses on two principle subjects: the structure of the universe and the major processes that have shaped planet Earth, and the concepts with which science describes the physical world in general – organized under the headings of *Matter and Energy* and *Forces of Nature*. In Kindergarten, students learn that objects are made of different materials and that they move in different ways.

Standard 4 — The Living Environment

People have long been curious about living things – how many different species there are, what they are like, how they relate to each other, and how they behave. Living organisms are made of the same components as all other matter, involve the same kinds of transformations of energy, and move using the same basic kinds of forces. Thus, all of the physical principles discussed in Standard 3 – The Physical Setting, apply to life as well as to stars, raindrops, and television sets. This Standard offers recommendations on basic knowledge about how living things function and how they interact with one another and their environment. In Kindergarten, students learn that different types of plants and animals inhabit Earth.

Standard 5 — The Mathematical World

Mathematics is essentially a process of thinking that involves building and applying abstract, logically connected networks of ideas. These ideas often arise from the need to solve problems in science, technology, and everyday life — problems ranging from how to model certain aspects of a complex scientific problem to how to balance a checkbook.

Standard 6 — Common Themes

Some important themes pervade science, mathematics, and technology and appear over and over again, whether we are looking at ancient civilization, the human body, or a comet. These ideas transcend disciplinary boundaries and prove fruitful in explanation, in theory, in observation, and in design. A focus on *Constancy and Change* within this Standard provides students opportunities to engage in long-term and on-going laboratory and field work, and thus understand the role of change over time in studying The Physical Setting and The Living Environment.

Standard 1

The Nature of Science and Technology

Students are actively engaged in beginning to explore how their world works. They explore, observe, ask questions, discuss observations, and seek answers.*

Scientific Inquiry

K.1.1 Raise questions about the natural world.

The Scientific Enterprise

K.1.2 Begin to demonstrate that everyone can do science.

* observation: gaining information through the use of one or more of the senses, such as sight, smell, etc.

Standard 2

Scientific Thinking

Students use numbers, pictures, and words when observing and communicating to help them begin to answer their questions about the world.

Computation and Estimation

K.2.1 Use whole numbers*, up to 10, in counting, identifying, sorting, and describing objects and experiences.

Communication

K.2.2 Draw pictures and write words to describe objects and experiences.

* whole numbers: 0, 1, 2, 3, etc.

Standard 3

The Physical Setting

Students investigate, describe, and discuss their natural surroundings. They begin to question why things move.

Matter and Energy

K.3.1 Describe objects in terms of the materials they are made of, such as clay, cloth, paper, etc.

Forces of Nature

K.3.2 Investigate that things move in different ways, such as fast, slow, etc.

Standard 4

The Living Environment

Students ask questions about a variety of living things and everyday events that can be answered through shared observations.

Diversity of Life

K.4.1 Give examples of plants and animals.

K.4.2 Observe plants and animals, describing how they are alike and how they are different in the way they look and in the things they do.

Standard 5

The Mathematical World

Students use shapes to compare objects and they begin to recognize patterns.

Shapes and Symbolic Relationships

K.5.1 Use shapes — such as circles, squares, rectangles, and triangles — to describe different objects.

Standard 6

Common Themes

Students begin to understand how things are similar and how they are different. They look for ways to distinguish between different objects by observation.

Models and Scale

K.6.1 Describe an object by saying how it is similar to or different from another object.

NOTES

Kindergarten

Social Studies

Living and Learning Together

In Kindergarten, students learn about their environment as they begin to distinguish events of the past from the present and begin the development of citizenship, thinking skills, and participation skills.

The K – 8 Indiana Academic Standards for social studies are organized around five content areas. The content area Standards and the types of learning experiences they provide to students in Kindergarten are described below. On the pages that follow, age-appropriate concepts are listed underneath each Standard. Skills for thinking, inquiry, and participation in a democratic society are integrated throughout. Specific terms are defined and examples are provided when necessary.

Standard 1 — History

Students examine the connections of their own environment with the past, begin to distinguish between events and people of the past and the present, and use a sense of time in classroom planning and participation.

Standard 2 — Civics and Government

Students learn that they are citizens of their school, community, and country; identify symbols of the state and nation; understand examples of responsible citizenship; follow school rules; and know why rules are needed for order and safety.

Standard 3 — Geography

Students learn that maps and globes are different ways of representing Earth's surface and begin to explore the geographic characteristics of their homes, school, and community.

Standard 4 — Economics

Students explain how people do different jobs and work to meet basic economic wants.

Standard 5 — Individuals, Society, and Culture

Students identify themselves as individuals who interact with other individuals and groups, including the family, school, and community; and identify ways that people, who are similar and different, make up the community.

Standard 1

History

Students examine the connections of their own environment with the past, begin to distinguish between events and people of the past and the present, and use a sense of time in classroom planning and participation.

Historical Knowledge

K.1.1 Compare people, objects, and events of today and long ago.

Example: Compare objects of the past and present, such as a butter churn and a mixer; compare clothing, houses, and transportation of the past with the present.

K.1.2 Identify celebrations and holidays as a way of remembering and honoring events and people in the past.

Example: Identify Thanksgiving; the Reverend Martin Luther King, Jr. Day; Presidents' Day; Memorial Day; Veterans' Day.

K.1.3 Listen to and retell stories about people in the past who showed honesty, courage, and responsibility.

Example: George Washington, George Rogers Clark, Mercy Otis Warren, Dolly Madison, Chief Little Turtle, Abraham Lincoln, Harriet Tubman, Tuskegee Airman Walter Palmer.

Chronological Thinking

K.1.4 Identify and order events that take place in a sequence.

Example: Identify events in the school day as first, next, last; list the day's classroom activities in order; place events, such as birthdays, in order; use a calendar to identify national holidays and historical events.

Standard 2

Civics and Government

Students learn that they are citizens of their school, community, and country; identify symbols of the state and nation; understand examples of responsible citizenship; follow school rules; and know why rules are needed for order and safety.

Foundations of Government

K.2.1 Identify and describe the roles and responsibilities of school personnel.

Example: Principal, secretary, custodian, instructional assistant, bus driver, nurse, and teacher.

Functions of Government

K.2.2 Give example of rules in the classroom and school and provide reasons for the specific rules.

K.2.3 Identify symbols and traditions associated with being citizens of Indiana and the United States.

Example: Identify the Indiana flag and the United States flag.

Roles of Citizens

K.2.4 Identify examples of responsible citizenship in the school setting and in stories about the past and present.

K.2.5 Identify and follow school rules to ensure order and safety.

Standard 3

Geography

Students learn that maps and globes are different ways of representing Earth's surface and begin to explore the geographic characteristics of their homes, school, and community.

The World in Spatial Terms

K.3.1 Use words related to location, direction, and distance, including *here/there*, *over/under*, *left/right*, and *up/down*.

K.3.2 Identify maps and globes as ways of representing Earth and identify map symbols for land and water.

Places and Regions

K.3.3 Describe people and places in the school and community.

Example: People in the school might include school workers; places might include the cafeteria, office, and gym. People in the community might include firefighters; places might include the fire station.

Physical Systems

K.3.4 Give examples of seasonal weather changes and describe how seasonal changes affect people and the environment.

Example: In different seasons, people wear different kinds of clothing.

Human Systems

K.3.5 Describe simple differences and similarities between ways people live in cities and on farms.

Environment and Society

K.3.6 Recommend ways that people can help keep their environment clean.

Standard 4

Economics

Students explain how people do different jobs and work to meet basic economic wants.

K.4.1 Explain that people work to earn money to buy the things they want.

K.4.2 Identify different kinds of jobs that people do.

Example: Picture books and stories illustrate and identify different types of jobs, as well as tools and clothing used in different jobs.

K.4.3 Explain why people in a community have different jobs.

Example: People may have different types of jobs because they like doing different things, or because they are better at doing one particular type of job.

K.4.4 Give examples of work activities that people do at home.

Standard 5

Individuals, Society, and Culture

Students identify themselves as individuals who interact with other individuals and groups, including the family, school, and community; and identify ways that people, who are similar and different, make up the community.

K.5.1 Identify ways in which people are alike and different.

Example: Identify qualities, such as interests, hobbies, skills, and experiences, which make individuals unique.

K.5.2 Identify individuals who are important in students' lives, such as parents, grandparents, guardians, and teachers, and give examples of how families cooperate and work together.

K.5.3 Give examples of how families in the community are similar and different, yet are part of the community.

K.5.4 Identify and compare similarities and differences in families in other places and cultures.

Example: Use picture books and stories to show the similarities and differences in houses, clothing, work, and celebrations.

NOTES

NOTES

Questions?

If you have contacted your child's school and still need additional information, call: **1.888.544.7837**.

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