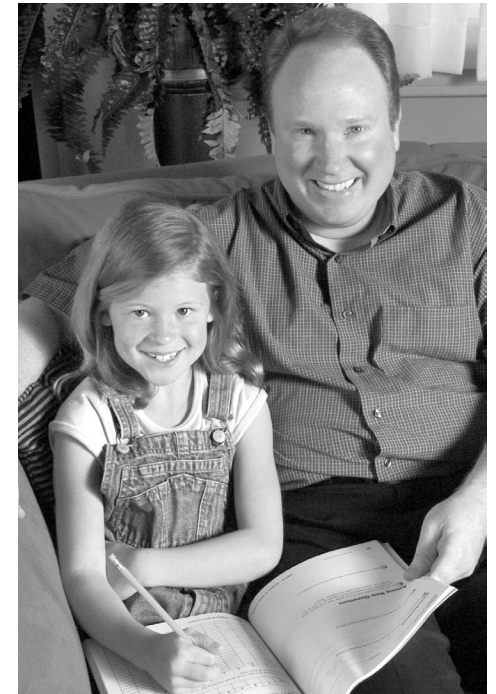


A Standards Guide for Families



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Reading
Writing
Mathematics
Science
Social Studies

What is Expected
in Grade

2



Standards now,
knowledge for a lifetime.

Dear Family,

Education in Ohio is changing. This change will help your child succeed in school. It also will better prepare your child for success in college or the work force upon high school graduation.

The basis of this change is new **academic content standards**, which define what your child should know and be able to do at every grade level. There are new standards in English language arts (reading and writing), mathematics, science and social studies.

These new standards let teachers know what they are expected to teach and students know what they are expected to learn. Standards also help educators identify and measure what students know and can do.

Part of this system will include achievement tests to determine how well your child is making progress toward these new standards. These tests will replace the current Ohio Proficiency Tests.

The information in this guide will give you a sample of some of the things your child will need to know and be able to do in reading, writing, mathematics, science and social studies for the second grade. The guide also has helpful practice problems, tips and activities you can do with your child to help him or her achieve the new standards.

*It is important to note that the information in this guide is **not** the complete set of standards; rather, this information is designed to highlight a select number of skills that your child should know and be able to do in the second grade.* The official standards documents, designed for teachers' use, are in some cases several hundred pages long. This booklet has been reduced to this size for your convenience.

To view the complete set of standards, visit the Ohio Department of Education Web site at www.ohioacademicstandards.com.

I sincerely thank you for the time, interest and energy you are investing in your child's education. I hope this guide is one of many tools you use to help your child reach these new standards and achieve success inside and outside the classroom.

Sincerely,

Susan Tave Zelman
Superintendent of Public Instruction

Language Arts



Phonemic Awareness, Word Recognition and Fluency

What this means: *Being able to read well by sounding out words, recognizing them by sight and reading out loud with ease and fluency.*

- Identify rhyming words.
- Read words that have more than one syllable by sight.
- Blend sounds (e.g., **truck**, **smile**) to figure out unknown words.
- Identify words as having long or short vowels.

Check your understanding: **Long and Short Vowels**



Words with *long vowels* include words such as **ate**, **tube**, **hoe**, **bite**
Words with *short vowels* include words such as **hat**, **bug**, **pet**, **sit**

- Read with ease with change in voice, expression and timing.



Acquisition of Vocabulary

What this means: *Being able to recognize clues in reading, asking questions, listening and conversing with adults and peers.*

- Identify synonyms and antonyms.

Check your understanding: **Synonyms and Antonyms**



Synonyms: Words that have similar meanings such as *pretty* and *beautiful*, or *large* and *big*.

Antonyms: Words that have opposite meanings such as *quiet* and *loud*, or *hot* and *cold*.

- Determine the meaning of a compound word (e.g., lunchroom, baseball) and explain how the two words are related.
- Determine the meaning of prefixes (e.g., **un**leash, **re**pay) and suffixes (e.g., **fastest**, **wishful**).
- Use root words (e.g., **smile**) and endings (e.g., **smiled** or **smiles**) to figure out the meaning of a word.
- Read homographs. Homographs are words with the same spelling, but with different meanings and pronunciation. For example, “She will **tear** the cloth” and “He cried a **tear**.”

Reading Process – Concepts of Print, Comprehension Strategies and Self-Monitoring Strategies

What this means: Through reading, students will understand the basic concepts and meanings of different types of print materials.

- Establish a purpose for reading (e.g., to be informed, to follow directions, to be entertained).
- Identify the main idea in a story and include details that support that main idea.
- Answer **literal** (directly stated), **inferential** (indirectly stated and require more information) and **evaluative** (require the reader to come up with a response based on the reader’s opinion) questions to show understanding about what has been read or watched.

Reading Applications – Informational, Technical and Persuasive Text

What this means: Reading, understanding, explaining and critiquing different kinds of written materials such as magazines, essays, maps and online sites.

- Put events in order by numbering them.
- List who, what, when, where, if and how questions from the text.
- Identify information in charts, diagrams, graphs and maps.

Reading Applications – Literary Text

What this means: Organizing and interpreting results through collecting data to answer questions and solve problems, show relationships and make predictions about different types of literature (e.g., fables, tales, short stories).


- Tell similarities and differences between different versions of the same story.
- Describe characters and setting (time, location).
- Retell the plot (order in which events occur) of a story.
- Know the difference between a story, poem, play, fairy tale and fable.



Writing Processes

What this means: Using the steps of prewriting, drafting, revising and editing to publish different types of writing.

- Develop a main idea for writing.
- Organize writing with a beginning, middle and ending.
- Use sentence structures that make statements (declarative), ask questions (interrogative) and show feelings and emotions (exclamatory).

Check your understanding: **Declarative, Interrogative and Exclamatory Statements** 

Declarative: He went to work.
Interrogative: Are you sick?
Exclamatory: Watch out!

- Use resources such as a beginner’s dictionary to choose appropriate vocabulary.
- Proofread writing to improve grammar, spelling, punctuation and capitalization.

Writing Applications

What this means: Learning about, using and choosing appropriate words for different kinds of writing, from letters to scientific reports, and for different audiences.


- Write stories that give clear messages, include detail, go in order and use expressive language.
- Write responses to stories by comparing reading materials to people or events.
- Write letters of invitation that include all parts of a letter: date, proper salutation, body, closing and signature.
- Write messages, journals, notes and poems.



Writing Conventions

What this means: Understanding and applying punctuation, grammar and spelling rules.

- Print neatly, spacing letters, words and sentences correctly.
- Spell regularly used words correctly.
- Begin to use spelling patterns and rules correctly (e.g., dropping the silent e before adding -ing).
- Use periods, question marks and exclamation points correctly.
- Use correct capitalization (e.g., proper nouns, first word in a sentence, months and days).
- Use nouns, verbs and adjectives correctly.

Check your understanding: **Nouns, Verbs and Adjectives** 

A **noun** is a person, place or thing, a **verb** is an action word, an **adjective** is a describing word.

Sarah ate a large cookie.

Sarah is the noun, *ate* is the verb and *large* is the adjective.

- Use personal pronouns (words that replace names of things or people).

Check your understanding: **Personal Pronouns** 

Instead of saying:

“Hey, I hear you met Bob yesterday. How is **Bob**?”

You say:

“Hey, I hear you met Bob yesterday. How is **he**?”

Research

What this means: Knowing how to gather information in all subjects using different kinds of tools (e.g., books, computers, magazines) and communicate what is found.

- Create questions for research on an assigned topic or area of interest.
- Use searching techniques to gather information from various locations such as libraries, the classroom or community resources.
- Identify important information and write short notes about it.
- With the teacher’s help, sort important information into groups.

Communication: Oral and Visual

What this means: Delivering presentations on different topics for different types of audiences.

- Use active listening skills by making eye contact or asking questions.
- Identify the main idea of a presentation.
- Follow two- and three-step spoken directions.
- Give presentations that:
 - a) Present ideas/events in order and have a clear focus;
 - b) Show an understanding of the topic;
 - c) Include a clear introduction, body and conclusion;

- d) Use visuals;
- e) Name sources.

- Deliver a simple dramatic presentation such as reciting poetry, rhymes, songs and stories.

Tips and Activities

- ✓ Help your child learn to listen for details in stories: *who*, *what*, *when*, *where* and *why*. Read a newspaper story to your child and ask detail questions. Who was the story about? Where did the story take place? What happened?
- ✓ Say a word with a short vowel sound such as “cat.” Ask your child to identify the vowel sound he or she hears in the word. Next, ask him or her to say another word with the same vowel sound. (Short vowel sounds: *a* as in *apple*, *e* as in *egg*, *i* as in *itch*, *o* as in *ox*, *u* as in *up*.)
- ✓ A pronoun is a word that takes the place of a noun. Some pronouns are *he*, *she*, *we*, *it*, *him*, *her*, *them* and *you*. Read a story with your child. Let him or her find the pronouns in the story and tell you which name the pronoun replaces.
- ✓ When reading a book with your child, ask him or her to show you the title of the book, the author’s name and the table of contents.
- ✓ Play a compound word search game. Have your child find and circle 10 compound words on a page from the newspaper.

Mathematics



Numbers, Number Sense and Operations

What this means: Using number sense and number skills, from basic counting to paper and pencil calculations, to age-appropriate use of calculators and computers.

- Use place value concepts to read, write, compare and order numbers.

Check your understanding: **Using Place Value Concepts**

Read and write 3-digit numerals. For example, write or use models of hundreds, tens and ones to show 243 as two hundred forty-three, as 24 tens and 3 ones or as 2 hundreds and 43 ones, and to show a number that is 10 less than 243.

- Count money and make change using coins and a \$1 bill.
- Represent fractions (halves, thirds, fourths, sixths and eighths) using words, numerals and parts of a whole, or of a set of objects.
- Recognize and represent situations involving multiplication and division such as multiplication by combining equal groups of objects and division by sharing equally.

Check your understanding: **Multiplication and Division**

Multiplication: Explain 4×3 , as 4 boxes with 3 pieces of candy in each box.

Division: Explain $8 \div 4$ as 8 cookies shared equally by 4 friends.

- Find sums and differences involving single-digit numbers (basic addition and subtraction facts) quickly and accurately.
- Add and subtract multiples of 10.
- Estimate the answer to an addition or subtraction problem using front-end estimation.

Check your understanding: **Front-end Estimation**

Front-end estimation: Using the leading digits or those with the highest place value to estimate quickly and easily. For example, the sum of $43 + 55$ is more than 90 (4 tens + 5 tens) and the difference of $73 - 45$ is about 30 (7 tens - 4 tens).

Measurement

What this means: Making accurate measurements using the appropriate tools, terms and technology.

- Identify appropriate units of measure for length, volume (capacity), weight and time.
- Explain how units of measure are related (e.g., 12 inches = 1 foot, 100 centimeters = 1 meter).
- Establish common references for units of measure.

Check your understanding: **Common References for Units of Measure**

The width of a finger is about a centimeter and the width of 2 fingers is about an inch; a large glass holds about 1 cup and a paper clip weighs about 1 gram.

- Tell time to the nearest minute on a digital clock and to the nearest five minutes on an analog (with hands) clock.
- Use measurement tools such as a ruler to draw a line that is 3 inches long, a measuring cup to place 2 cups of rice in a bowl and a scale to find the weight of a potato in grams.




Geometry and Spatial Sense

What this means: Identifying, classifying and analyzing one-, two- and three-dimensional objects, understanding their properties and using that knowledge to solve problems.

- Identify and compare three-dimensional objects (e.g., cubes, cones, pyramids, cylinders) based on their characteristics such as shape of the faces or surfaces, number of edges or vertices (corners).

- Predict what new shapes will be formed by putting together shapes or by taking apart or cutting a shape.
- Recognize and create shapes with line symmetry.

Check your understanding: **Line Symmetry**

A shape with line symmetry can be folded so the halves match exactly. For example, many leaves, the letters M and H, and some shapes such as    have line symmetry.

- Determine whether two-dimensional shapes are congruent (same shape and size) or similar (same shape, different size) by copying or laying one on top of the other.

Patterns, Functions and Algebra

What this means: Representing patterns and relationships using tables, graphs and symbols and using them to solve problems.

- Extend simple number patterns.
- Describe the rule for a pattern and create patterns with consistent rules.

Check your understanding: **Rules For Patterns**

Pattern A: 2, 4, 6, 8, 10... **Pattern B:** 1, 3, 5, 7, 9...
Rule for patterns A and B: Add 2

- Understand and use equivalence to identify values for symbols representing unknown quantities.

Check your understanding: **Equivalence**

$\square + \bigcirc = 10$
List the different values for \square and \bigcirc that will make a sum of 10.
 $(\Delta) - 2 = 4$
List the value for (Δ) that will make the number sentence true.

- Describe qualitative changes (use descriptive terms) and quantitative changes (tell how much using a number or measurement), especially in addition or subtraction problems.

Check your understanding: **Qualitative and Quantitative Changes**



Qualitative change: The student grew taller this year.
Quantitative change: The student grew 2 inches this year.

Data Analysis and Probability

What this means: Organizing and interpreting results through data collection to answer questions, solve problems, show relationships and make predictions.

- Collect data by asking questions, observing or taking a survey and put that data in a chart, picture graph or bar graph.
- Write a few sentences to describe and answer questions about data represented in a chart or graph.
- Make a timeline to put events in order.
- Understand that data may vary from one population to another (e.g., favorite TV shows of students and of parents).
- List some possible outcomes of a simple experiment and predict whether possible outcomes are more, less or equally likely to occur.

Mathematical Processes

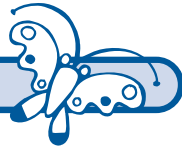
What this means: Applying problem-solving and reasoning skills and communicating mathematical ideas.

- Identify and restate in own words the question or problem and the information needed to solve the problem.
- Judge the reasonableness of predictions, estimates and solutions.
- Communicate thinking and solutions using everyday language and appropriate mathematical language and symbols.



Tips and Activities


- ✓ Ask your child to use the numbers to find as many different results as possible. For example, use the cards in 2s or 3s to find sums and differences ($7 - 6 = 1$; $7 + 2 - 6 = 3$; $6 - 2 = 4$; $7 - 2 = 5$; $6 + 2 = 8$; $7 + 2 = 9$, etc.)
- ✓ Practice counting money and making change. For example, ask your child questions like: "I have some coins in my pockets that equal 90 cents. What combinations of coins could be in my pocket?" Practice writing the value of money using the cent sign (¢) and in decimal form using the dollar sign (\$).
- ✓ A grocery store is filled with geometric shapes. Ask your child to find an item that has circles for faces, an item shaped like a cone, or shapes that stack well and those that take up lots of space.
- ✓ Practice measuring things by using tools around the house. Set out a ruler, yardstick or scale and ask your child to measure or weigh something using the correct tool.
- ✓ Ask your child to draw a timeline that puts the events of his or her day in order.
- ✓ Cut out pictures from magazines of whole pieces of food such as whole sandwiches, pies and pizzas. Have your child cut the pictures to show halves, thirds and fourths.



Earth and Space Sciences

What this means: *Understanding the interconnected cycles and systems of the universe, solar system and Earth.*

- Understand that there are more stars in the sky than anyone can count.
- Describe how the sun, moon and stars all appear to move slowly across the sky.
- Describe how the moon appears a little different every day, but looks the same again about every four weeks.
- Notice that some weather changes occur throughout the day while others occur in a season.

*Check your understanding: **Changes in the Weather*** 


Changes in the weather that occur throughout the day could include rain, fog, sleet or hail. Other changes in the weather occur throughout a season such as snow in winter and hot weather in summer.

- Describe weather by measuring temperature and precipitation (e.g., rain, snow).

Life Sciences

What this means: *Understanding the structure and function of living systems and how they interact with the environment.*

- Understand that people and animals need air, food, water, living space and shelter and that plants need air, water, nutrients (e.g., minerals), living space and light to survive.
- Understand that there are many types of environments that support (provide for) many different kinds of living things.

*Check your understanding: **Types of Environments*** 

Oceans support fish, forests support deer and pastures support cattle.

- Explain why organisms can survive only in environments that meet their needs (e.g., fish couldn't survive without water).
- Notice what is similar and different among individuals of the same kinds of plants and animals, including people (e.g., dogs are different colors, leaves have different shapes, people have different hair color).
- Explain that food is a basic need of plants and animals (e.g., plants need sunlight to make food and to grow, and animals eat plants and/or other animals for food) and is important because it is a source of energy.
- Explore the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).
- Compare the habitats of different kinds of Ohio plants and animals, and some of the ways animals depend on plants and other animals.

*Check your understanding: **Habitats*** 

Habitat: A habitat is the environment where a plant or animal naturally lives. For example, a fish lives in the lakes or oceans while a bear lives in the forest or woods.

- Compare the activities of Ohio's common animals (e.g., squirrels, chipmunks, deer, butterflies, bees, ants, bats and frogs) during the different seasons and describe their changes in behavior and body covering.
- Compare Ohio plants during the different seasons by describing changes in the way they look (e.g., leaves changing color in the fall).

Physical Sciences

What this means: *Understanding physical systems, concepts and properties of matter, energy, forces and motion.*

- Explore how things make sounds (e.g., rubber bands, strings).
- Explore and describe sounds (e.g., high, low, soft, loud) produced by objects that vibrate.
- Explore with flashlights and shadows how light travels in a straight line until it strikes an object.

Science and Technology

What this means: *Understanding the relationship between science and technology to design and construct devices to solve problems.*

- Explain that using technology involves benefits (advantages) and risks.
- Explore why people make or invent new things (products) to meet their own wants and needs.
- Predict (tell what might happen) how building or trying something new might affect other people and the environment.
- Communicate orally (spoken), pictorially (through pictures) or through writing, the design process used to make something.

Scientific Inquiry

What this means: *Using scientific processes to ask questions, conduct investigations, gather, analyze and communicate information.*

- Ask “How can I/we” questions.
- Ask “How do you know” questions (not “why” questions) in appropriate situations and attempt to give reasonable answers when others ask questions.
- Explore “how” questions of other students.

- Use the correct safety processes when completing a science experiment.
- Use evidence (proof) to come up with explanations of scientific investigations (e.g., What do you think? How do you know?).
- Understand that explanations are made when responding to an observation or event.
- Use the correct tools to gather data (e.g., timers, magnifiers, rulers).
- Measure properties of objects using tools such as rulers, balances and non-breakable thermometers.
- Share explanations to give others the chance to ask questions, review the evidence (proof) and suggest other explanations.

Scientific Ways of Knowing

What this means: *Learning how to think scientifically and understanding how people have shaped the study and practice of science.*

- Describe that scientific investigations usually work the same way under the same conditions.
- Explain why scientists review and ask questions about the results of other scientists’ work.
- Describe ways where using the answer (solution) to a problem might affect other people and the environment.

Check your understanding: **How Solutions to Problems Affect Others**



Cutting down forests to make space for building houses or other developments is an example of how a solution to a problem might impact people and the environment.

- Show that in science, it is helpful to work with a team and share findings with others.

Tips and Activities

- ✓ Have your child identify the sun, moon and stars at various times of the day. Observe the moon together over several weeks. Draw its various shapes. Examine the moon chart in the weather section of your daily newspaper or calendar.
- ✓ Record weather changes over the year and note changes in seasons. Identify what type of precipitation and events are expected at various times of the year and why. For example, the spring season brings much rain and thunderstorms which prepares the land for growing plants.
- ✓ While sitting at the dinner table, talk about the basic requirements for survival and talk about how other living things achieve those requirements.
- ✓ Make musical instruments from odds and ends around the house. Make a variety of sounds and make adjustments to the sounds and note what is responsible for the change.
- ✓ Help your child develop language and observations by using animals to discuss what they have in common and what characteristics are different. For example, birds can be used for size comparisons, types of feathers, habitat and food sources.



Social Studies



Focus: People Working Together

History

What this means: *Understanding the pattern of events that have happened in the past.*

- Measure time by days, weeks, months and years.
- Place events in order on a timeline.
- Use objects from the past such as pictures, life stories, maps, diaries and folklore to answer questions about daily life in the past.
- Identify the work that people performed in the past to make a living and explain how jobs in the past are similar and/or different from jobs today.

Check your understanding: **Jobs in the Past vs. Jobs Today** ✓

One way to make a living long ago was to be a blacksmith. How does a blacksmith's job compare to an auto mechanic's job today?

- Describe examples of how science and technology have changed people's lives and compare:
 - a) Forms of communication from the past to present (e.g., letters, telephones, e-mail);
 - b) Forms of transportation from the past to present (e.g., wagons, trains, cars, airplanes).
- Understand how a person's actions and a person's character have made a difference in other people's lives. Be able to explain the importance of:
 - a) Social and political leaders in the United States such as George Washington, Thomas Jefferson, Tecumseh, Harriet Tubman, Abraham Lincoln, Sojourner Truth, Susan B. Anthony and Dr. Martin Luther King, Jr.;

- b) Explorers, inventors and scientists such as George Washington Carver, Thomas Edison, Charles Drew, Rachel Carson and Neil Armstrong.

People in Societies

What this means: *Identifying both similarities and differences in the traditions of various groups of people.*

- Describe the customs and traditions of people living in countries on different continents.
- Describe how the contributions of different groups of people have shaped our national heritage.

Check your understanding: Contributions That Shaped The Heritage of the U.S.

The everyday life of Americans is shaped by influences from around the globe. Many words that come from other languages are part of our conversations. Names of places like Ohio or Lake Erie come from American Indian words.

Foods from many countries are available in restaurants and grocery stores. Students begin to learn about these connections in the early grades.

- Describe the contributions of important people such as inventors, scientists, artisans, architects, explorers and political leaders to the United States and its heritage.

Geography

What this means: *Identifying the location of places, understanding how places are connected and how human activity affects them.*

- Make a map that includes a map title and a map key and explains what the symbols stand for.
- Locate landforms (e.g., plateaus, islands, hills, mountains or valleys) and bodies of water (e.g., creeks, ponds, lakes, oceans) in photographs, maps and 3-D models.

- Compare how land is used in urban (city), suburban (outlying part of a city) and rural (country) areas.

Check your understanding: How Land is Used in Different Areas

Land in a rural area might be used for farming, while land in an urban area may have more businesses. People in the city often live in duplexes or apartments, but people in rural and suburban areas are more likely to live in single-family homes.

- Explain ways people have changed the physical environment such as building roads and clearing land to develop cities.

Economics

What this means: *Understanding how to make decisions in our economic system.*

- Explain how resources can be used in different ways (e.g., a bushel of corn can be fed to cows, used to make sweetener or made into fuel).
- Explain how people are both buyers and sellers of goods and services.
- Understand that most people work in jobs where they produce a few specialized goods or services.
- Explain why people in different parts of the world earn a living in many different ways.

Government

What this means: *Understanding why government is necessary and how it works.*

- Identify leaders such as the mayor, governor and president, and explain that they are elected by the people.
- Explain how a system of government provides order to a group like a school or community, and why government is needed, including:

- a) Making and enforcing laws;
- b) Providing leadership;
- c) Providing services;
- d) Resolving disputes.

- Explain why there are rules in the workplace.
- Tell what might happen (consequences) when rules are followed or broken in different settings.

Citizenship Rights and Responsibilities

What this means: Preparing to become active citizens.

- Show skills and explain the benefits of cooperation in a group including managing conflict (problems) in a peaceful way and showing courtesy and respect to others.
- Demonstrate citizenship traits including honesty, self-assurance (confidence), respect for the rights of others, persistence (determination) and patriotism.

Social Studies Skills and Methods

What this means: Collecting information, organizing it and using it to make decisions.










- Identify sources used to gather information such as people (teacher, parent, librarian), printed materials (books) and electronic sources (Web sites).
- Be able to predict the next event in a sequence (series of things).
- Tell the difference between fact and fiction.

*Check your understanding: **Fact and Fiction*** 

Children begin to understand the difference between what is real and what is not. Cartoons can be distinguished from news stories. Fairy tales are different than books about real people.

- Use problem-solving/decision-making skills to identify a problem and gather information while working alone and in a group.

Tips and Activities

-  Watch the television news together. Let the events on the news start a conversation. Draw your child's attention to various elected leaders and the jobs that they do.
-  You might watch programs about famous people from history. Life stories of real people are a good way for your child to learn history.
-  Use family photos to make a timeline that puts events in order.
-  Ask what scientists, firefighters, mechanics, pilots, lawyers and farmers do. Take turns thinking of other jobs.
-  Read stories about other parts of the world. Call attention to the jobs that people are doing.
-  Second-graders study the globe. Ask your child to identify the continents – Asia, Africa, South America, North America, Europe, Australia and Antarctica. Make a game of it by taking turns finding the continents and oceans.
-  As your child asks questions, help him or her think of different ways to find an answer like using the computer and books or asking someone who knows about a particular topic.
-  As you drive in the car, help your child to notice the difference between ways land is used in the country, the suburbs and the city. Play games in which you count barns, gas stations or houses in different areas. Talk about how the land was different before so many people settled here.
-  Discuss your job and those of friends and point out the products and services that are produced where you work. Help your child to understand that most families today do not produce everything they need to live.

Note: Some of the tips and activities in this guide were derived from "parent tips" posted on the Web sites of Georgetown County School District in South Carolina (www.gcsd.k12.sc.us) and Chelsea Publishing House (www.teachervision.com). These resources were used with permission of the authors whom we gratefully acknowledge.

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