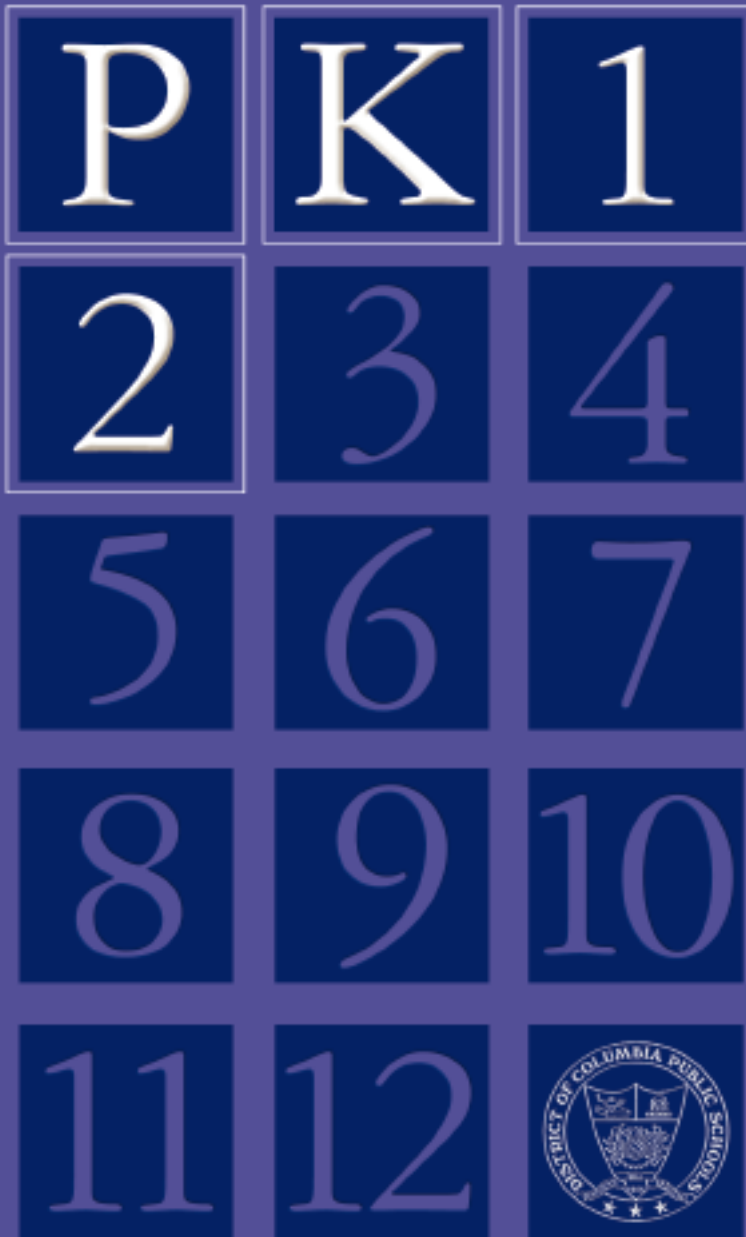


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# Expect *the Best* for Your Child



How to use the *new learning standards* in reading/English language arts, mathematics, science, and social studies to help your child do well in *prekindergarten through grade 2*.



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# New Standards = Better Goals for Learning

DC Public Schools has adopted new learning standards for core subjects, including reading/English language arts, mathematics, science, and social studies. The new standards show what students should know and be able to do:

- in each subject,
- at each grade level, and
- in every school.

Standards tell **all** students that we expect them to succeed in school. This is a powerful message: When children know we expect them to do well, they will believe in themselves more and work harder.



*Our new learning standards are among the best in the nation. They are the first step toward creating a world-class school system in the District of Columbia.*

## Standards in the Classroom

Lessons and activities should reflect the standards for that grade. Textbooks and year-end tests also should match the standards. Parent-teacher conferences should focus on how well your child is meeting the standards.

If your child is having trouble meeting the standards, frequent informal tests will help teachers and you find out early so your child can get extra help.

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# *Talk* to Your Child's Teacher

Talk to your child's teacher about the standards and how your child is doing in school. Here are some questions you may want to ask.

To learn more about a standard:

- What does this standard mean? Can you show me examples of work that meet this standard?
- When will my child work on this during the school year?
- What activities, materials, and lessons are you using in school to help my child meet the standard? What are the class work and homework for this standard?
- How is my child tested on this standard? How do you know if my child has mastered it?
- May I look at some of my child's work on this standard?

To learn how your child is doing in school:

- Is my child reading at grade level? Can you show me some books that my child can read?
- How did you decide the grades on my child's report card?
- How much time each day does my child spend reading in class? Writing? Doing mathematics?
- In what subjects is my child ahead or behind?
- What do the end-of-year tests tell about how my child is doing?

If your child is behind:

- How are you helping him/her catch up?
- What extra help do you suggest for my child?
- What can I do at home to help my child do better in school?

# Reading/English Language Arts in *Prekindergarten*

Prekindergarten children show new language skills. They start conversations and participate in class discussions. They enjoy learning new words and using words to add detail to what they say.

During prekindergarten, children start to connect spoken words to words on a page. They are aware that words are made up of sounds, that sounds go together to form words, and that letters represent specific sounds. They know some of the alphabet, including letters in their own names.

They also understand that words and pictures give information. They use the pictures as clues to what the words mean. As they listen to stories, children can predict what will happen, retell stories in their own words, and tell stories they have made up.

## TOPICS COVERED

Reading/English language arts standards cover the following eight topics, or strands. Expectations for what a child should be able to do increase from one grade to the next.

- Using and understanding spoken words (*Language Development*)
- Moving from spoken language to print (*Beginning Reading*)
- Getting facts from books and other writing (*Informational Text*)
- Learning from and enjoying stories, poems, and plays (*Literary Text*)
- Using materials to find out information (*Research*)
- Using written words to share information, ideas, and feelings (*Writing*)
- Getting information from television, film, Internet, or videos (*Media*)
- Knowing how to spell and use grammar correctly (*English Language Conventions*)

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF PREKINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Start or continue conversations. For example, can talk with the teacher about a trip to the fire station and ask whether the class will be able to go again.

Use words to describe objects, actions, and feelings. For example, can say, “She’s upset” when he/she sees a child crying.

Know that spoken words can be written and read and that written words can be spoken aloud. For example, look at a menu and ask, “Which word says *pancakes*?”

Identify words that rhyme in songs, nursery rhymes, poems, and stories.

Know letters in his/her own name and in familiar words. For example, point to an *M* and say, “This is for *mommy*.”

Use books and other printed materials to find information. For example, can say, “That bus with the *A* on it goes to my grandma’s house.”

Relate book experiences to his/her own life. For example, look at a book about dogs and say, “I have a dog just like this one. His name is Max.”

Use adults as resources to answer questions or clarify information. For example, ask a parent, “Can you show me how to write my name?”

Make clear attempts to convey a message in writing. For example, ask, “How do I write *Dear Papi*?”

Print his/her own name. For example, write his/her name on a drawing.

## HOME ACTIVITIES

### Read to your child every day.

At the end of the story talk about favorite parts. Ask what your child liked about the story. Introduce new words as you talk.

Sing with your child the ABC song and other songs that emphasize rhyme, such as “The Itsy Bitsy Spider” or “This Old Man.”

Help your child find words that rhyme, such as cat, fat, hat, mat.

Provide your child with different types of crayons, pencils, and magic markers to use for drawing and writing.

# Reading/English Language Arts in *Kindergarten*

In kindergarten, students learn about the alphabet and its role in reading. They name upper- and lower-case letters and match letters with their sounds.

Speaking skills focus on how sounds go together to form words. These skills include rhyming, matching words with beginning sounds, and blending sounds into words.

Kindergarten students also experiment with reading and writing. Most students will not be able to read stories on their own, but they can retell familiar stories and talk about stories that someone reads to them.

## TOPICS COVERED

Reading/English language arts standards cover the following eight topics, or strands. Expectations for what a child should be able to do increase from one grade to the next.

- Using and understanding spoken words (*Language Development*)
- Moving from spoken language to print (*Beginning Reading*)
- Getting facts from books and other writing (*Informational Text*)
- Learning from and enjoying stories, poems, and plays (*Literary Text*)
- Using materials to find out information (*Research*)
- Using written words to share information, ideas, and feelings (*Writing*)
- Getting information from television, film, Internet, or videos (*Media*)
- Knowing how to spell and use grammar correctly (*English Language Conventions*)



# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF KINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Follow agreed-on rules for discussion, including raising hands, waiting his/her turn, and speaking one at a time.

Recite short poems, rhymes, and songs.

Sort common objects into categories, such as colors, shapes, and foods.

Identify different parts of a book (for example, front cover, back cover, title page) and the information found there.

Recognize letter-sound matches. Name and identify letters of the alphabet and the sounds they represent.

Say a rhyming word in response to a spoken word. For example, correctly answer when asked, “What rhymes with *bat*?”

Retell important facts from a text that is heard or read.

Recall story events in the correct order.

Ask questions and gather information from several sources in the classroom or library.

Use knowledge of phonics and sounds of letters to spell words.

## HOME ACTIVITIES

### Read to your child often.

Some popular choices include *The Very Hungry Caterpillar*, by Eric Carle; *26 Letters and 99 Cents*, by Tana Hoban; *Fish Is Fish*, by Leo Lionni; and *Pig Pig Grows Up*, by David McPhail.

### Talk with your child about what happened in school that day.

Ask your child to draw pictures of these activities.

### Watch a TV show together.

Ask your child to describe a part he/she liked best.

### Explore the Internet together.

# Reading/English Language Arts in *Grade 1*

In grade 1, children become more independent readers and writers. As readers, they sound out more complex words and understand their meanings. They learn to think about what they read and answer questions beginning with who, what, when, where, and how (Who is the little girl's friend? How did the boy find his way home?). Students also can predict what will happen next in stories. They can talk about the main ideas of simple stories and follow directions with several parts.

As they write and speak, first graders learn to use language correctly. They use complete sentences based on logical thinking and correctly spell many common three- and four-letter words.

## TOPICS COVERED

Reading/English language arts standards cover the following eight topics, or strands. Expectations for what a child should be able to do increase from one grade to the next.

- Using and understanding spoken words (*Language Development*)
- Moving from spoken language to print (*Beginning Reading*)
- Getting facts from books and other writing (*Informational Text*)
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- Knowing how to spell and use grammar correctly (*English Language Conventions*)

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 1, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Describe familiar objects, people, and events and their characteristics (like their colors or locations) using specific words and phrases (e.g., *under the tree with red leaves*).

Determine meanings of words using a beginning dictionary.

Match oral words to printed words.

Distinguish between long- and short-vowel sounds (for example, between *bit* and *bite*) in single-syllable words that are spoken.

Answer questions about facts that they hear or read.

Predict what will happen next in a story. Explain whether or not the prediction actually happened.

Identify the plot, character, and setting in a favorite story.

Write or dictate stories that have a beginning, middle, and end. Arrange ideas in a logical way.

Write in complete sentences.

## HOME ACTIVITIES

**Read with your child, and encourage your child to read aloud to you.**

Books your child might enjoy include *Brown Bear, Brown Bear, What Do You See?* by Bill Martin Jr.; *Pancakes, Pancakes!* by Eric Carle; and *Mama Don't Allow*, by Thacher Hurd.

**At home or at the library, search the Internet with your child for favorite animals or hobbies.**

**Sing songs together.**

Ask your child to pick out the words that rhyme and to make up more rhymes that fit the song.

**Each day, pick a "word of the day" that starts with a different letter.**

Find other words that start with that letter.

# Reading/English Language Arts in *Grade 2*

During second grade, students gain more skills in reading, writing, and listening. They continue to learn and practice rules for decoding words, and they learn new concepts — such as prefixes and suffixes — that help them figure out the meanings of new words. Students spend time with books or articles on factual subjects such as science and history.

For grade 2 students, writing is an exciting way to use new words to express ideas. Students learn how to write clearly and revise what they write. They become more confident speakers and listeners as they learn to paraphrase, clarify, explain, and report on information they hear.

## TOPICS COVERED

Reading/English language arts standards cover the following eight topics, or strands. Expectations for what a child should be able to do increase from one grade to the next.

- Using and understanding spoken words (*Language Development*)
- Moving from spoken language to print (*Beginning Reading*)
- Getting facts from books and other writing (*Informational Text*)
- Learning from and enjoying stories, poems, and plays (*Literary Text*)
- Using materials to find out information (*Research*)
- Using written words to share information, ideas, and feelings (*Writing*)
- Getting information from television, film, Internet, or videos (*Media*)
- Knowing how to spell and use grammar correctly (*English Language Conventions*)

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 2, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Relate an important event in life or describe personal interests — keeping focus on the topic and speaking at an understandable speed.

Use simple prefixes (such as *un-* or *re-*) and suffixes (such as *-ful* and *-ly*) to determine the meanings of words.

Identify the two words that make up a contraction (such as *haven't* = *have* + *not*). Read contractions accurately.

Read aloud grade-appropriate material accurately and with comprehension.

Use text features such as the title, table of contents, and headings to make predictions about the content.

Restate key facts from a story or article.

Identify the causes and effects of events in a biography.

Identify differences among literary forms such as poetry, drama, and nonfiction.

In composition, identify ways to make points clearer, more logical, or more expressive.

Capitalize all proper nouns. Capitalize words at the beginnings of sentences and greetings.

## HOME ACTIVITIES

### Encourage your child to read aloud to you.

Suggest titles such as *Alexander and the Wind-up Mouse*, by Leo Lionni; *Henry and Mudge First Book*, by Cynthia Rylant; and *Brave Irene*, by William Steig.

### Take your child to the library as often as possible.

Ask a librarian to help you find books about a place or activity that your family enjoys.

### Encourage your child to send thank you notes and other kinds of friendly letters to family and friends.

### Read a book together, then watch a video of the book.

Ask your child to describe how the book was different from the video.

# Mathematics in *Prekindergarten*

Prekindergarten children learn that numbers represent specific quantities, and they can point to an object while counting it. They learn they can use numbers to solve problems, to predict what will happen next, and to measure quantities.

They learn to sort objects in different ways — for example, by color or size. They recognize simple patterns, which they can repeat in sounds or designs.

Prekindergarten children learn to see objects or numbers in relation to each other or to themselves. For example, they use numbers to describe things in order: first, second, and third. They can recognize several different shapes and can put two or more shapes together to form new ones. They also understand the idea of measurement and may make up their own measurements — for example, using a shoe to measure distance.

## TOPICS COVERED

Mathematics standards for prekindergarten through grade 8 are presented in the following five strands. Expectations for what a child should be able to do increase from one grade to the next.

- Understanding numbers and how they work, such as adding, subtracting, multiplying, and dividing (*Number Sense and Operations*)
- Investigating patterns and using symbols (such as  $x + y = z$ ) to analyze mathematical situations and change (*Patterns, Relations, and Algebra*)
- Identifying shapes, sizes, and relationships (*Geometry*)
- Using number relationships to find out size and volume (*Measurement*)
- Doing experiments, collecting data, and using the information to decide what will happen (*Data Analysis, Statistics, and Probability*)

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF PREKINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Count with understanding to at least 10. For example, choose and count seven beads to put on a necklace.

Use numbers to describe quantity. Can say, "I broke my cookie into four pieces."

Recognize and name numerals up to 10. For example, can point to each number on the toy clock while counting aloud.

Quickly recognize quantity of up to four objects. For example, can see three bears and say, "There are three," without having to count them.

Add and subtract using concrete objects. For example, line up three blocks, then get one more and say, "Now I have four."

Recognize, describe, and copy simple patterns. For example, join in a clapping pattern: slap knees, slap knees, clap hands; slap knees, slap knees, clap hands.

Recognize, name, and describe simple two- and three-dimensional shapes. Can say, "This is a triangle. See, it has three sides."

Create shapes using concrete materials. For example, use straws to make rectangles of different sizes.

Show awareness of time concepts and sequence. Can say, "After lunch we have read-aloud time" or "We go home at three o'clock."

Describe and analyze information from graphs. For example, notice that "there are more boys than girls here" after looking at the attendance graph.

## HOME ACTIVITIES

### **Talk to your child in number language.**

For example, "At five o'clock we eat dinner. At eight o'clock in the morning you go to school."

### **Count aloud as you climb steps, button clothes, sort laundry, or stack materials.**

### **Sing songs or say rhymes that include numbers (e.g., One, two, buckle my shoe).**

Buy simple counting books at book stores or supermarkets.

### **Encourage your child to collect buttons or other objects with different shapes, sizes, or colors.**

Ask your child to sort them in different ways: for example, round or flat, big or little.

# Mathematics in *Kindergarten*

Kindergarten students work with small numbers and amounts and with simple shapes. They count, compare, describe, and sort objects.

A key skill for kindergarten students is to group and compare sets of objects, such as blocks or apples. Students understand that the number of objects in a set will remain the same no matter how the objects are rearranged.

Kindergarten students also develop a sense of patterns, such as when making a necklace with a sequence of colored beads.

## TOPICS COVERED

Mathematics standards for prekindergarten through grade 8 are presented in the following five strands. Expectations for what a child should be able to do increase from one grade to the next.

- Understanding numbers and how they work, such as adding, subtracting, multiplying, and dividing (*Number Sense and Operations*)
- Investigating patterns and using symbols (such as  $x + y = z$ ) to analyze mathematical situations and change (*Patterns, Relations, and Algebra*)
- Identifying shapes, sizes, and relationships (*Geometry*)
- Using number relationships to find out size and volume (*Measurement*)
- Doing experiments, collecting data, and using the information to decide what will happen (*Data Analysis, Statistics, and Probability*)



# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF KINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Name and order a set of up to 20 objects.

Compare sets of at least 10 objects, using appropriate terms such as *none*, *more than*, and *same number of*.

Use objects and drawings to solve related addition and subtraction problems to 10. For example, line up seven blocks and then take away three to find that  $7 - 3 = 4$ .

Sort and classify objects by color, shape, size, or other characteristics.

Count by fives and tens to at least 50.

Describe characteristics of two-dimensional shapes — for example, size, roundness, or number of sides.

Tell time to the nearest hour.

Identify U.S. coins and their values.

Describe what a graph or table shows (for example, in a chart displaying children's favorite fruit, what is the favorite?).

Ask questions about text (readings), and locate facts to answer the questions.

## HOME ACTIVITIES

### **Play with blocks together.**

Ask your child to build things three, four, or five blocks high.

### **Ask your child to sort laundry or toys into piles of different colors or types.**

### **Invite your child to make change.**

Exchange five pennies for a nickel or two nickels for a dime.

### **Find different things to count: books that you read together, trees that you pass on your walks, or the number of days in a month.**

# Mathematics in *Grade 1*

In grade 1, students start thinking more about numbers and counting as concepts instead of just counting by rote. They learn about the place value number system — for example, whether a number stands for ones, tens, or hundreds, as in the numbers 2 (2 ones), 20 (2 tens), or 200 (2 hundreds).

Students continue to gain skills in adding and subtracting and can easily add and subtract small numbers. They use simple units of measurements, such as inches and cups, and can locate objects in space (for example, the chair is next to the door or the hat is on the hook). They use simple charts and graphs to represent and compare data.

## TOPICS COVERED

Mathematics standards for prekindergarten through grade 8 are presented in the following five strands. Expectations for what a child should be able to do increase from one grade to the next.

- Understanding numbers and how they work, such as adding, subtracting, multiplying, and dividing (*Number Sense and Operations*)
- Investigating patterns and using symbols (such as  $x + y = z$ ) to analyze mathematical situations and change (*Patterns, Relations, and Algebra*)
- Identifying shapes, sizes, and relationships (*Geometry*)
- Using number relationships to find out size and volume (*Measurement*)
- Doing experiments, collecting data, and using the information to decide what will happen (*Data Analysis, Statistics, and Probability*)

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 1, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Count, read, and write whole numbers to 100 and relate them to the amounts they represent. For example, know that 60 is bigger than 20.

Compare and order whole numbers to 110 by using symbols for *less than* ( $<$ ), *equal to* ( $=$ ), or *greater than* ( $>$ ).

Know and remember addition and subtraction facts for numbers up to 10. Use these facts to solve problems.

Add and subtract one- and two-digit numbers without regrouping them.

Describe and create addition and subtraction number progressions. For example, 1, 4, 7, 10 ... is the result of adding 3 to the previous number.

Skip-count forward and backward by twos, fives, and tens up to at least 50.

Identify symmetry in two-dimensional shapes (for example, when two sides of a heart are the same).

Looking at two or more different objects, compare their lengths, weights, and volumes.

Use charts, pictures, and bar graphs to represent and compare data. For example, put a star on a chart every time the child helps make his/her lunch. Are the number of stars about the same each week, or are there big differences?

## HOME ACTIVITIES

### Line up cups or glasses of different sizes.

Ask your child to decide which one will hold the most water.

### Count the windows in your home.

Ask your child what twice that many would be. Half that many?

### Help your child use scissors to cut out different geometric shapes, such as a rectangle, circle, and triangle.

What happens when you cut each shape in half or in quarters?

### Together, turn to a page in a book and find its number.

Ask your child to think of other numbers. Are they higher or lower than the page number? Find the pages that match your child's numbers.

# Mathematics in *Grade 2*

Grade 2 students learn more about whole numbers and how they work together. As they understand more about arithmetic operations (such as addition and subtraction), children find more flexible ways of thinking about problems and how to solve them.

During second grade, students learn place values and number relationships when adding and subtracting. Students also discover new ways to think about numbers. They begin to work with fractions and decimals. They measure quantities in appropriate units, such as inches or feet. They identify and classify shapes such as circles and triangles.

## TOPICS COVERED

Mathematics standards for prekindergarten through grade 8 are presented in the following five strands. Expectations for what a child should be able to do increase from one grade to the next.

- Understanding numbers and how they work, such as adding, subtracting, multiplying, and dividing (*Number Sense and Operations*)
- Investigating patterns and using symbols (such as  $x + y = z$ ) to analyze mathematical situations and change (*Patterns, Relations, and Algebra*)
- Identifying shapes, sizes, and relationships (*Geometry*)
- Using number relationships to find out size and volume (*Measurement*)
- Doing experiments, collecting data, and using the information to decide what will happen (*Data Analysis, Statistics, and Probability*)

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 2, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Count, read, and write whole numbers such as 1, 5, 20, and 287 — up to 1,000. Relate whole numbers to the quantities they represent.

Compare numbers to 1,000 and put them in their correct order. Use the symbols  $>$  (greater than),  $<$  (less than), and  $=$  (equal to).

Show that addition is the inverse of subtraction (for example,  $2 + 6 = 8$  and  $8 - 6 = 2$ ). Use this understanding to simplify calculation and check their solutions.

Add and subtract three-digit numbers accurately and efficiently. For example,  $653 - 321 = ?$

Represent multiplication as repeated addition. For example,  $6 \times 3$  is the same as  $6 + 6 + 6$ .

Identify and write commonly used fractions such as  $1/4$  or  $2/3$ .

Classify familiar two- and three-dimensional shapes by common characteristics. For example, how many corners does a triangle have?

Measure and compare the length of common objects using metric units to the nearest centimeter and U.S. customary units to the nearest inch.

## HOME ACTIVITIES

**Use a clock to help your child think about adding and subtracting.**

Ask your child what time it will be in three hours or what time it was two hours ago.

**Together, find ways you use math in daily life.**

For instance, you use fractions to slice a pizza for the number of people eating it.

**With your child, explore your home to find different geometric shapes, such as circles or triangles.**

**Measure your child's height and mark it on a wall.**

Let your child help measure and mark the heights of some toys. Together, compare the different heights.

# Science in *Prekindergarten*

In prekindergarten, students ask questions about the natural world and learn to find the answers. They use tools to investigate, and they describe what they see. They collect, organize, and record facts. They form conclusions from what they see — for example, they notice that mixing blue and yellow paint always makes green paint so they conclude that blue and yellow make green.

Prekindergarten students also observe and describe the natural world. For example, they see dark clouds and say, “It’s going to rain.” They learn that living things have life cycles: Their lives begin, they grow older, they have offspring, and they die. Students learn that plants and animals need things such as air and water to survive.

## TOPICS COVERED

Science in prekindergarten is organized by the different branches of science, with a separate category for how scientists think and find things out. Expectations for what a child should be able to do increase from one grade to the next. Prekindergarten topics include:

- *Scientific Thinking and Inquiry* — A way scientists ask questions, form theories about the natural world, and collect accurate information to find the answers.
- *Earth Science* — The branch of science that studies the origins of Earth and things that are part of it, such as rocks, soil, water, and air. Earth sciences include meteorology (the study of weather), oceanography (oceans), astronomy (planets, moon, sun, stars), and geology (rocks, mountains, and other structures).
- *Physical Science* — The branch of science that explores the nature and properties of nonliving materials (such as water and air) and energy (such as electricity) and how they interact. Chemistry (the study of substances and their properties) and physics (the study of matter and energy) are two of the physical sciences.
- *Life Science* — The branch of science that investigates how people, animals, plants, and other living things function; how they interact; and how they work.

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF PREKINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Ask questions about the natural world. For example, “Where does the sun go at night?”

Predict what will happen, based on what they know about the natural world. For example, “If I bring snow inside the school, the snow will melt.”

Explore cause and effect. For example, build a tower of blocks, adding blocks one by one until the tower falls.

Observe and describe the natural world. For example, say, “It must be spring. Flowers are starting to grow in our garden.”

See how actions can cause changes in the natural world. For example, notice that dirt looks darker when the child pours water on it.

Explore the physical properties of different materials. For example, look at sand through a magnifying glass or pick up pins with a magnet.

Identify things many plants or animals need. For example, “Animals need air to breathe,” or, “We need to water the plant or it will dry up and die.”

## HOME ACTIVITIES

**With your child, read books written for preschool children about the natural world — for example, books about animal families.**

Together, look at books with pictures of different places, like oceans or deserts. Talk about what you see.

**If you have a pet at home, ask your child to help feed it, keep it clean, and make sure it gets enough exercise.**

If you do not have a pet, visit a zoo or pet store and talk about how animals are cared for there.

**Invite your child to help feed a baby brother or sister or help you prepare a meal for your family.**

Talk about how people eat food to get the energy they need to live and work.

**Together, start a small indoor garden of flowers or herbs in pots.**

Let your child water the plants and report how the plants change over time.

# Science in *Kindergarten*

In kindergarten, children learn that the world is filled with many kinds of plants, animals, and objects that they can observe and describe. They ask questions to help them think about these things, and they use their senses to find answers. They learn that objects are made of different materials, such as wood, concrete, cotton, and paper.

Kindergarten students see that some things happen in patterns they can predict — for example, night follows day. They recognize that objects can move in different directions (backward, forward, side to side) and that objects have different relationships to each other based on their locations (*on* the floor, *under* the table).

## TOPICS COVERED

Science in kindergarten is organized by the different branches of science, with a separate category for how scientists think and find things out. Expectations for what a child should be able to do increase from one grade to the next. Kindergarten topics include:

- *Scientific Thinking and Inquiry* — A way scientists ask questions, form theories about the natural world, and collect accurate information to find the answers.
- *Earth Science* — The branch of science that studies the origins of Earth and things that are part of it, such as rocks, soil, water, and air. Earth sciences include meteorology (the study of weather), oceanography (oceans), astronomy (planets, moon, sun, stars), and geology (rocks, mountains, and other structures).
- *Physical Science* — The branch of science that explores the nature and properties of nonliving materials (such as water and air) and energy (such as electricity) and how they interact. Chemistry (the study of substances and their properties) and physics (the study of matter and energy) are two of the physical sciences.
- *Life Science* — The branch of science that investigates how people, animals, plants, and other living things are organized; how they are connected; and how they work.



# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF KINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Perform simple inquiries, such as using their eyes and ears to recognize different animals or using a thermometer to measure temperature.

Know that the sun, moon, and other objects in the sky move in predictable ways and can be seen at certain times of the day or night.

Know that events such as night and day or the four seasons repeat in the same patterns over time.

Know that objects can be described by properties that can be observed, such as weight, color, or size.

Recognize that objects can be made of many materials, such as paper, glass, or cloth. Describe ways that materials are different or the same.

Explain that things move in many different ways, such as straight, zigzag, round and round, back and forth, and fast and slow.

Recognize that different kinds of plants and animals live on the Earth.

Explain that plants and animals are alike in some ways and different in others — for example, tell how dogs and cats are alike and how they are different.

## HOME ACTIVITIES

### **With your child, find different kinds of flowers.**

Talk about how they are alike and how they are different.

### **Do a “sky check” each morning before your child goes to school.**

Talk with your child about what you see: What color is the sky today? What objects do you see in the sky? Is the sky getting lighter or darker in the morning? Is the weather changing, too?

### **Line up several items of your child’s clothing — for example, a T-shirt, a pair of shoes, and a jacket.**

What kinds of material are each one made of? Which one is softest? Which is the heaviest?

### **Look in magazines for pictures of different kinds of animals.**

Talk about which would make the best pet — and why.

# Science in *Grade 1*

First grade students learn how to use tools, such as magnifying glasses and rulers, to observe objects. They compare objects using size, shape, color, and other facts.

Students in grade 1 also learn important principles about the natural world. They learn that the Earth is made of land, air, and water. They explore what is special about each of these — for example, that air is made of gasses that they can feel as wind. They find out how to make objects move by using forces, such as pushing, pulling, or gravity. They also compare living things and recognize ways in which they are the same — for example, most living things need food, air, and water.

## TOPICS COVERED

Science in grade 1 is organized by the different branches of science, with a separate category for how scientists think and find things out. Expectations for what a child should be able to do increase from one grade to the next. Grade 1 topics include:

- *Scientific Thinking and Inquiry* — A way scientists ask questions, form theories about the natural world, and collect accurate information to find the answers.
- *Earth Science* — The branch of science that studies the origins of Earth and things that are part of it, such as rocks, soil, water, and air. Earth sciences include meteorology (the study of weather), oceanography (oceans), astronomy (planets, moon, sun, stars), and geology (rocks, mountains, and other structures).
- *Physical Science* — The branch of science that explores the nature and properties of nonliving materials (such as water and air) and energy (such as electricity) and how they interact. Chemistry (the study of substances and their properties) and physics (the study of matter and energy) are two of the physical sciences.
- *Life Science* — The branch of science that investigates how people, animals, plants, and other living things function; how they interact; and how they work.

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 1, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Learn about the natural world by asking questions and carefully seeking answers.

Observe a plant or animal and keep a record of how it changes over time.

Measure objects using standard units, such as inches or centimeters. Also measure objects using units that are not standard, such as the length of a hand.

Know that water, rocks, soil, and living organisms are things that are found on the Earth's surface.

Observe, measure, and change the motion of objects — for example, see that a ball is rolling slowly and give it a push to make it roll faster.

Make metal objects move using a magnet. Show that gravity will make a ball or other object fall when nothing is holding it up.

Describe the differences within a plant or animal group — for example, explain that some rabbits are brown and some are white or that butterflies can have different designs on their wings.

Recognize that humans and other animals are living things that grow, reproduce, and need food, air, and water.

## HOME ACTIVITIES

### **Adopt a tree near your home.**

As the seasons change, ask your child to draw new pictures of the tree, showing what happens to the leaves.

### **Make a family growth chart.**

Use a different color pencil for each member of your family to measure each person's height once a month.

### **With your child, collect small jars of soils from different places, such as a garden, river bank, or baseball field.**

Talk about how the soils are different and how they are alike.

### **Put several small objects at one end of a table — for example, a toy car, a marble, and a feather.**

Find the best way to move each object across the table without touching it.

# Science in *Grade 2*

In grade 2, students explore how science and technology work together to solve problems. They see that science, including conservation and meteorology (weather), are important in daily lives.

Grade 2 students see that variety and change exist in all parts of the natural world. They see that materials change from one state to another by changing temperature — for example, water changes from ice to liquid to water vapor. They learn that variations in how living things look and behave can help them survive in different conditions — for example, brown rabbits can hide in the forest, and white rabbits blend into the snow. They learn that plants and animals depend on one another for survival.

## TOPICS COVERED

Science in grade 2 is organized by the different branches of science, with separate categories for how scientists find things out and for ways science can be used. Expectations for what a child should be able to do increase from one grade to the next. Grade 2 topics include:

- *Scientific Thinking and Inquiry* — A way that scientists ask questions, form theories about the natural world, and collect accurate information to find the answers.
- *Science and Technology* — Using what we know of the natural world to solve problems or meet our needs. For example, we use natural laws to build tools that help us do work.
- *Earth Science* — The branch of science that studies the origins of Earth and things that are part of it, such as rocks, soil, water, and air. Earth science includes meteorology (the study of weather), oceanography (oceans), astronomy (planets, moon, sun, stars), and geology (rocks, mountains, and other structures).
- *Physical Science* — The branch of science that explores the nature and properties of nonliving materials (such as water and air) and energy (such as electricity) and how they interact. Chemistry (the study of substances and their properties) and physics (the study of matter and energy) are two of the physical sciences.
- *Life Science* — The branch of science that investigates how people, animals, plants, and other living things are organized; how they are connected; and how they work.

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 2, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Describe a plant, rock, or other object with details such as color, size, and shape.

Compare what he or she sees with what others see. Recognize that different people may see different things or think different details are important.

Make simple line and bar graphs to record changes over time — for example, to track changes in outdoor temperature.

Know that weather can be observed, measured, and described.

Understand that Earth's resources can be conserved. Explain how some materials, such as paper or glass, can be used again.

Know that materials can be in different states: solids, liquids, and gases. For example, water can be ice, liquid water, or steam.

Discuss ways that living things depend on their environment and each other to survive. For example, bears sleep in caves in winter, and birds use plants to build nests.

Know that different types of animals and plants live in different habitats, such as oceans, rivers, mountains, farms, and city parks.

Know that people have different features, like hair color, skin color, height, and weight. Even with these differences, people are more like other human beings than they are like other animals.

## HOME ACTIVITIES

**As a family, pick something you all use often, like your TV or computer, and turn it off for an entire Saturday.**

Talk about how this made your lives different.

**With your child, make a colorful pencil holder, vase, or flower-pot from a used can or bottle.**

Talk about how other items in your home can be reused.

**Freeze fruit juice or colored water in your ice cube tray. Put one of the frozen cubes in a dish to melt, then let it evaporate in the sun.**

Talk about what happened with your child. Why did the ice cube lose its shape when it melted? Where did the water go when it evaporated?

**Ask your child to find pictures of front yards in different states — for example, in the Arizona desert, on a farm in Iowa, or on a beach in Virginia.**

Talk about how and why the plants are different at each location.

# Social Studies in *Prekindergarten*

In prekindergarten, children develop a sense of who they are within their families and communities. They recognize similarities and differences, saying, for example, “We both have brown hair but yours is straight and mine is curly.” They notice that people and things change over time.

Prekindergarten children learn basic ideas about buying and selling, and they know that people have different kinds of jobs. They identify features such as streams and hills in their neighborhoods and learn personal information such as their addresses and telephone numbers. They master basic ideas of citizenship, such as sharing with classmates and respect for others.

## TOPICS COVERED

Social studies standards cover four major areas:

- *History* — the study of past events that have important effects on our country and our world
- *Geography* — the study of the Earth’s physical features, as well as the effects of human life and activity on Earth
- *Economics* — the study of how people and societies produce, buy, sell, and use goods and services
- *Civics* — the study of politics, government, and the rights and duties of citizens

In each grade, students focus on different ideas within the four main areas. In prekindergarten, standards include the following topics: people and how they live; culture and cultural diversity; economics; time, continuity, and change; geographic thinking; and civics and history.

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF PREKINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Show respect for different cultures and ethnicities. For example, learn words in a different language or taste a snack offered by a classmate of a different culture.

Describe how people help or hurt the environment. For example, know that littering messes up the school yard or that planting flowers makes an area pretty.

Describe how people, things, and ideas move from one place to another. Say, “I took the Metro to the ball game with dad,” or “My grandma sent me a present in the mail.”

Know that time and the passage of time can be measured. Check the sand timer and say, “Hurry, clean-up time is almost over.”

Describe changes that take place in their families. For example, tell the class about a new baby in the family, saying, “I used to be a baby, too, but now I’m big.”

Know the difference among past, present, and future events. Say, “Tomorrow is my birthday. Yesterday, I got an A at school.”

Know that maps are tools to help us find where we are going. Pretend to follow a map to find a buried treasure.

Vote and make choices and decisions. For example, choose which table to work at. Take part in rule setting.

## HOME ACTIVITIES

**Together, talk about rules that your family follows and why these rules are useful.**

Invite your child to help make some of the rules. For example, we pick up our toys every night so no one will step on them.

**Put up a large calendar and circle dates important to your family — for example, birthdays and major holidays.**

Invite your child to cross off each day, just before bedtime.

**Tell your child stories about important events in your family — for example, how your family moved to the District of Columbia or what your life was like as a child.**

Ask your child about their day at school or at play.

**Find out which states or countries children who attend your child’s school come from.**

Check out books about those places from the library, and read them with your child.

# Social Studies in *Kindergarten*

In kindergarten, children build on their experiences with their families, school, and communities. Picture books, stories, and songs used in the classroom focus on characters and real people who are brave leaders and good citizens.

Kindergarten children listen to stories about the people and events we celebrate in national holidays, and they learn why we celebrate these holidays. They also learn how their grandparents and great-grandparents lived in earlier times and how our lives are different today.

## TOPICS COVERED

Social studies standards cover four major areas:

- *History* — the study of past events that have important effects on our country and our world
- *Geography* — the study of the Earth's physical features, as well as the effects of human life and activity on Earth
- *Economics* — the study of how people and societies produce, buy, sell, and use goods and services
- *Civics* — the study of politics, government, and the rights and duties of citizens

In each grade, students focus on different ideas within the four main areas. In kindergarten, standards include the following topics: people and how they live; culture and cultural diversity; basic economic concepts; time, continuity, and change; geographic thinking; and civics and history.



# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF KINDERGARTEN, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Know important personal information, such as his/her name, birth date, gender, and phone number.

Know the people in their families and the roles people have in their homes. For example, draw a picture of grandmother cooking dinner.

Show cooperation, fairness, and respect for others. For example, listen when others talk.

Be aware that different people have different jobs, and know the duties of some jobs, such as teacher, police officer, or firefighter.

Know and follow routines of the day, such as clearing the table after dinner.

Identify geographic features near home or school, such as a hill, a street corner, or a store.

Show an understanding of rules and the purposes they serve. For example, sign up for a turn at the computer.

Know symbols and practices identified with the United States. For example, recognize the American flag.

## HOME ACTIVITIES

### **Read books with your child about many kinds of families.**

Discuss how the families are similar to and different from yours.

### **Together, talk about how your child can help around the house.**

Agree on a task your child can do each day.

### **Invite your child to interview family members to learn more about their jobs.**

Together, find pictures of people who do the same kinds of jobs.

### **Talk about your child's bedtime routine.**

What do you do first? Then what do you do? Try to follow the same routine every night.

# Social Studies in *Grade 1*

In grade 1, children hear and read true stories and folk tales from the United States and around the world. They learn about events, people, and symbols that are related to U.S. national holidays, and they learn why these are important to Americans.

As they study concepts in history, geography, economics, and civics, grade 1 students learn about each other's families and about the achievements of different people in different times and places.

## TOPICS COVERED

Social studies standards cover four major areas:

- *History* — the study of past events that have important effects on our country and our world
- *Geography* — the study of the Earth's physical features, as well as the effects of human life and activity on Earth
- *Economics* — the study of how people and societies produce, buy, sell, and use goods and services
- *Civics* — the study of politics, government, and the rights and duties of citizens

In each grade, students focus on different ideas within the main areas. In grade 1, standards include the following topics: geography, civic values, earliest people and civilizations of the Americas, early world civilizations, and real and fictional heroes in history.

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 1, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Use maps to organize and present information.

Label the world's continents, oceans, and major mountain ranges on a map.

Discuss the meaning of important U.S. symbols, such as the national flag, the bald eagle, the Lincoln Memorial, and the Statue of Liberty.

Describe the meaning of cultural events held each year in Washington, DC, including Adams Morgan Day, Chinese New Year celebrations, and the DC Caribbean Carnival.

Describe the Inca, Maya, and Aztec civilizations. Discuss their artistic and cultural traditions and inventions, such as writing and calendars.

Locate Washington, DC, on a map.

Describe the meaning of words associated with civic values, such as *fairness*, *responsibility*, and *rules*.

## HOME ACTIVITIES

**With your child, talk with older members of your family to find out how their ancestors came to the United States.**

Use a globe or map to locate their home countries.

**Take your child to see art and other objects from ancient Maya, Inca, Egyptian, and other cultures at the Smithsonian's National Museum of Natural History, 10th St. and Constitution Ave., NW.**

**Invite your child to make up a folk tale about an adventure or journey made by a friend or member of your family.**

Discuss the lessons your child can learn from the story.

**Find a recipe from another culture that your family might enjoy — for example, chicken mole from Mexico or cous cous from the Middle East.**

Ask your child to help you prepare the dish for your family.

# Social Studies in *Grade 2*

In grade 2, children learn more about Americans and the many places Americans come from. In part, students do this by exploring the history of their own families. They also read or listen to stories about people who live in other parts of the world or who lived in other times — including their special achievements, customs, events, places, and landmarks.

## TOPICS COVERED

Social studies standards cover four major areas:

- *History* — the study of past events that have important effects on our country and our world
- *Geography* — the study of the Earth’s physical features, as well as the effects of human life and activity on Earth
- *Economics* — the study of how people and societies produce, buy, sell, and use goods and services
- *Civics* — the study of politics, government, and the rights and duties of citizens

In each grade, students focus on different ideas within the main areas. In grade 2, standards include the following topics: geography; civic values; U.S. history — early exploration to independence; and world history — early civilizations of Rome, Greece, and China.

# WHAT YOUR CHILD SHOULD KNOW

## BY THE END OF GRADE 2, YOUR CHILD SHOULD KNOW AND BE ABLE TO PERFORM THESE SKILLS:

Describe rights and duties that come with being a citizen. Know how a person becomes a U.S. citizen — for example by being born here or by being naturalized.

Locate the continents, regions, or countries from which students, parents, guardians, grandparents, or other relatives or ancestors came to Washington, DC.

Know ways that nations or groups of nations work together or solve problems, for example, by trading with each other or signing treaties.

Understand that one person's actions or character can bring about changes. Read biographies of past and present heroes, such as civil rights leader Rosa Parks, labor leader César Chávez, and astronaut Neil Armstrong, and explain how each made a difference in other people's lives.

Identify food, customs, sports, and music that originate in other countries and are found in the United States today.

Identify the location and significance of well-known sites, events, or landmarks in different countries and regions from which Washington, DC, students' families hail.

Define the meaning of words associated with good citizenship (e.g., *politeness*, *achievement*, *courage*, *honesty*, and *reliability*).

## HOME ACTIVITIES

**Explain to your child that many people in DC were born in different countries.**

Then use the Internet or other resources to learn the birthplaces of players on the Washington Nationals baseball team or DC United soccer team. Find each location on a map or globe.

**Talk with your child about rules you have in your family.**

Who sets the rules?  
How and when are rules changed?

**With your child, visit places in Washington, DC, that are important symbols of our country — for example, the White House, U.S. Capitol, and Lincoln Memorial.**

Talk about what these places mean to our country.

**Start a hero research project.**

Ask your child to choose a well-known person who he or she admires. Use the Internet, newspapers, books, and other resources to collect facts and pictures about the person. Talk about ways that the hero's life is similar to your child's.

# How Is *Your Child* Doing?



*New tests will let you and the teacher know how well your child is meeting the standards.*

Standardized reading/English language arts and mathematics tests are given to students in grades 3–8 and 10 every spring. A composition test to measure students' writing skills is given in grades 4, 7, and 9. Different tests also monitor reading progress for children in grades kindergarten–2.

Beginning in spring 2008, a new end-of-year science test will be given to at least one grade each in elementary, middle, and high schools. Other tests are being developed to measure students' progress in Algebra I and Geometry, high school English, and the sciences.

In addition to these districtwide tests, your child's teacher will be giving informal tests and quizzes throughout the year.

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# Checklist

As a parent, you are your child's most important teacher — and best advocate. Let your child know you care about his/her school performance. Make sure your child's teacher knows that you are engaged as well.

Here are some ways you can help your child meet the new standards. *Don't feel you must do everything on this list. Just letting your child know that you expect him/her to do well in school is very important.*

- Talk to your child about what he/she learned and did in school that day.
- Praise your child when he/she does well or makes a good effort.
- Ask to see and sign homework every day.
- Attend parent-teacher conferences. Ask the teacher how you can help your child succeed.
- If you think your child could use extra help, ask the teacher to help you find a tutor, a reading specialist, or other resources.
- Visit your child's classroom, and volunteer for school activities.
- Read the material your child brings home from school. If your child has not brought home any material, find out why.
- Learn your rights and options for tutoring help and transferring schools under the No Child Left Behind Act. On the Web, visit [www.NCLB.gov](http://www.NCLB.gov).

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## Learn More

You can view the complete standards for reading/English language arts, mathematics, science, and social studies on the DCPS Web site, [www.k12.dc.us](http://www.k12.dc.us).

For a printed copy of this standards guide for parents, call (202) 724-4222. The parent guides are available in six languages: English, Amharic, French, Mandarin Chinese, Spanish, and Vietnamese.

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