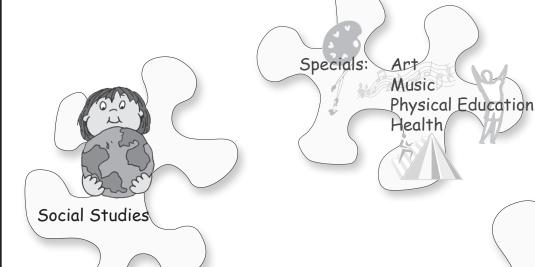


Fitting the Pieces Together

Second Grade





Science

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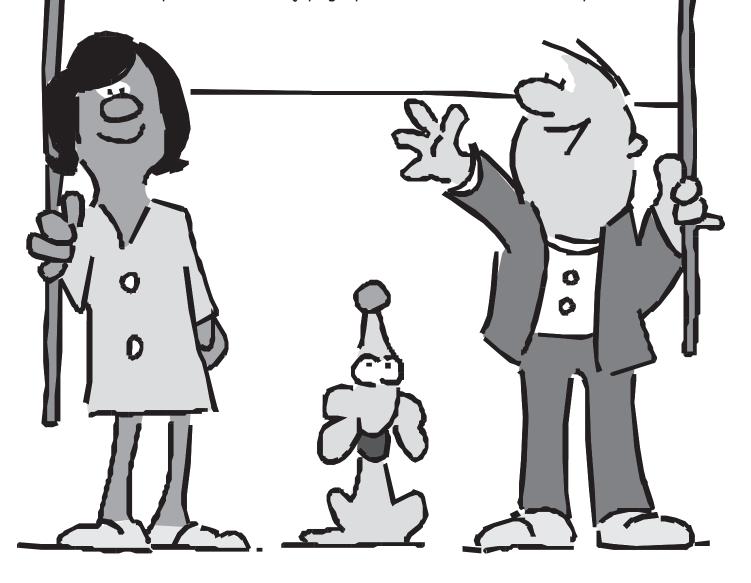
Board of Education of Frederick County

A listing of the Board of Education members is available at www.fcps.org





This will be an exciting year for you and your child. This guide includes child development stages, samples of curricula and activities to reinforce learning at home. Please use this guide throughout the year as a resource to help you gain a better understanding of your child's school experience. A strong home-school connection will assist your child in reaching his/her fullest academic potential while enjoying a positive and successful school year.



Working Together To Build Lifelong Learners

Children become lifelong learners through daily exposure to opportunities that encourage curiosity, self-direction, creativity and critical thinking. Included are strategies that will help your child throughout elementary school, as well as in life:

· Reading

Reading is one of the most valuable experiences you can provide for your child. Reading to your child, having your child read to you and having your child see you read, will enhance the importance of literacy.

· Problem Solving

Assist your child in choosing the most appropriate or most reasonable solution to a problem. Encourage your child to explain why a certain solution or answer was chosen.

· Communicating

Create daily opportunities for conversation with your child. Take turns talking and listening to daily events or stories.

Cooperating

Provide opportunities for your child to interact with others in a positive manner (play games, take turns, share).

Valuing Learning

Show your child that education is important by participating in his/her education. Show your interest by asking questions, praising your child's efforts and reviewing daily events.

· Modeling Good Citizenship

Assist your child in becoming a responsible member of the community. Model the Character Counts pillars: Caring, Trustworthiness, Responsibility, Citizenship, Fairness, Respect.

Fitting the Pieces Together

Second Grade

What you will find on the following pages...

Developmental Stages

Each child grows and develops in a unique way. This section of the guide is designed to give you general information concerning the development of children. Because child development is an ongoing process, this section includes a three-year look at how children in this age group change and grow. A typical 7 year old child will be in a variety of places in this three year look.

Samples of Curricula

This section of the guide is written to introduce you to samples of the curricula that your child will experience this year. Within this section, you will find a list of areas (language arts, mathematics, science, social studies, art, music, physical education, health education) that will be studied, samples of curricula that will be taught and family activities to reinforce learning at home. Please remember that the left hand column displays the curriculum the teachers use. The right hand column is most important for you. It offers a variety of activities and games you can easily do at home to reinforce your child's learning. While we have tried to explain all confusing terms, you may still have questions. For answers, go to www.FCPS.org, ask your child's teacher, or ask the school administrators to point you in the right direction to find the information you want.

Child Development 6, 7, 8 years Remember... Your second grade child will be somewhere on these pages

AGE	PHYSICAL	PERSONAL		
years of age	 Enjoys physical activities (bike riding, roller blading, ball sports) Plays roughly Improves pencil grip (printing, coloring) Exhibits clumsiness Exhibits difficulty sitting still for a long time Can tie shoes Enjoys expressing self through art 	 Changes behavior often Changes moods (crying, excitable, argumentative, anxious) Thinks own needs and wants are most important Needs praise and rewards often Needs clear, consistent rules Relieves anxiety by wiggling, biting nails and "acting out" Learns to problem solve 		
years of age	 Tires easily due to own pressures Sits still for longer time periods Improves coordination Enjoys table games Begins to get permanent teeth 	 Tends to be more independent Begins to define personal identity and roles at school and home Tends to be easily frustrated and disappointed Needs clear, consistent rules Wants to work things out for self 		
years of age	 Exhibits more coordination Likes rough-and-tumble, loud games Likes table games Likes to draw Tries to write neatly 	 Feels badly about own mistakes Shows some responsibility without reminders Makes own choices Recognizes own success or failure Relieves anxiety through humming, scowling, muttering, leg-jiggling Likes to be challenged Likes to have more control 		

SOCIAL	INTELLECTUAL	LISTENING AND LANGUAGE DEVELOPMENT	
 Begins to have a close friend Needs to win Needs respectful ways of resolving conflicts modeled Makes own rules Can be aggressive/contradictory Enjoys humor Begins to recognize similarities and differences in people Seeks more independence from parents 	 Shows enthusiasm when learning new things Enjoys sharing thoughts Reverses letters or numbers often Likes to make things Copies and creates patterns Makes observations and collects data about objects and environment 	 Uses fairly accurate grammar Speaks clearly and understandably Begins to listen to ideas of others Listens for pleasure and enjoyment Demonstrates attentiveness as listener 	
 Becomes willing to listen to other's side of story Withdraws from unpleasant situations Sometimes likes to play alone Becomes less selfish Becomes aware of peer pressure 	 Wants to do things right Enjoys collecting many things Likes to read, be read to Exhibits difficulty performing a task within given time frame (deadlines) 	 Uses language for social interaction Increases precision in language itself Uses more detailed language Uses language for selfexpression Demonstrates attentiveness as a listener Retells what is heard 	
 Becomes concerned about own appearance Lies, boasts, exaggerates Begins to take risks Shows sensitivity to criticism from others Identifies strongly with own gender Exhibits a more competitive style 	 Collects and sorts things Becomes aware of time/ punctuality Overestimates own ability 	 Uses language fluidly and expansively Uses slang and possibly some profanity Listens attentively without interrupting Listens for pleasure and enjoyment Asks specific questions Begins using multi-step directions 	





Language Arts

In language arts, students read to comprehend informational and literary text. Students communicate orally and in written form to inform, to persuade and to express personal ideas. During the course of the year, children will be offered a wide variety of opportunities to learn and develop these skills.

Reading Literature

Students will read and understand stories, poems, and plays.

Samp	les	of	Cur	ricula
p		•.		

who	k and answer such questions as o, what, where, when, and how demonstrate understanding in ext.	•	After reading, ask your child some questions, such as "Who was the story about? Where and when did it take place? What was the problem? How was the problem solved?"
and cultoners ceres controls control controls controls control controls control controls control control controls control c	count stories, including fables d folktales from diverse tures, and determine their ntral message, lesson, or moral. Impare and contrast two or re versions of the same story different authors or from ferent cultures.		Visit your local library. Ask the librarian to help you find stories from different cultures, such as different versions of folktales and fables (ex: Cinderella stories). Ask your child to tell you how the two stories are the same or different. After reading, ask your child what lesson was learned (ex: if at first you don't succeed, try again; if you don't do your share of the work, you don't get a share of the reward; treat people nicely).
sto	scribe how characters in a ory respond to major events d challenges.	•	While reading, discuss the actions of a character. Ask your child what could have been done in that situation.
illu: or (unc	e information gained from the strations and words in print digital text to demonstrate derstanding of its characters, tting, or plot.		Before reading, ask your child to predict what the story will be about using pictures, cover, and title. After reading, ask your child if the prediction was correct. Ask your child how the pictures helped him/her understand the story.



Reading Informational

Students will read and understand factual articles, non-fiction books, and other factual materials.

Samples of Curricula

Family Activities

- Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key ideas in a text.
- After reading, ask your child some questions, such as "What is the main idea of this text? What details do you remember that would tell the who, what, where, when, why, and how of the text?"
- Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
- Know and use various text features (ex: captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
- Before reading, look through the text for any maps, bold print, captions, labels, headings, diagrams, etc. that may help with understanding the text and talk about them.
- Explain how specific images (exdiagrams, maps, photographs) contribute to and clarify a text.
- After reading, ask your child how the diagram helped you understand what you read (ex: When reading a book about volcanoes, ask your child how the diagram showing the parts of a volcano helped him/her understand about volcanoes).
- Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
- Ask your child why the author wrote the text. Ask your child if it
 was to describe a topic, to explain how to do something, to convince
 you of his opinion.
- Describe how reasons support specific points the author makes in a text.
- Ask your child questions such as "Do you agree with the author's opinion? Why or why not?"
- · Find sentences in the text that are either fact or opinion.

Writing

Students will continue to develop the ability to express ideas in a variety of written forms.

Samples of Curricula

- Write opinion pieces in which they introduce the topic they are writing about, state an opinion, supply reasons that support the opinion, and provide a concluding statement.
- Have your child write a persuasive note to you about what to have for dinner, what movie the family should watch, which books should be read, etc. Make sure the note has your child's opinion and reasons to support the opinion.
- Write informative/explanatory texts in which they introduce a topic, use facts to develop points, and provide a concluding statement.
- Have your child write a factual paragraph about a topic of your child's choosing. You may need to go to the library to find books on the topic. Help your child restate the facts into his own words.
- Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, and provide a closing.
- Have your child keep a journal to recount events that occur in his life (ex: a baseball game, a family reunion, a holiday, winning a game, etc.).
- Have your child write a story including a problem, events, a solution, characters, and a setting. Discuss with your child where details could be added.
- Recall information from experiences or gather information from provided sources to answer a question.
- Keep a journal where you write letters back and forth with your child. Be sure to ask your child questions to answer (ex: What was the best part of your day? What did you learn in math today? Which friend did you play with at recess, why?).



| English Language Arts &

Language

Students will use correct grammar, spelling, and word choice in writing.

Samples of Curricula

 Form and use frequently occurring irregular plural nouns. Form and use the past tense of frequently occurring irregular verbs. 	 Give your child the singular form of a noun and have your child tell you the plural form (ex: goose-geese, foot-feet, tooth-teeth, child-children, man-men, etc.). Give your child the present tense of a verb and have your child tell you the past tense (ex: sit-sat, run-ran, tell-told, say-said, etc.). Do the above activities in reverse. You tell your child the plural or past tense and have your child tell you the singular or present tense.
Produce, expand, and rearrange complete simple and compound sentences.	 Tell your child a simple sentence and ask your child to add to it to make it more complex, and/or rearrange the words so that it still makes sense (ex: The boy watched the movie; The little boy watched the action movie; was watched by the little boy.).
Capitalize holidays, product names, and geographic names.	 Look for words in your everyday life. Discuss which letters are capitalized and why (ex: McDonalds™, Cheerios™, Frederick, Market Street, Memorial Day, etc.).
Use commas in greetings and closings of letters.	 Have your child write letters to relatives or friends. Check for commas in the greetings and closings.
Generalize learned spelling patterns when writing words.	 Play the letter change game. Give your child a spelling word and have your child change the beginning sound to make a new word and spell it using the spelling pattern. Use chalk, pencil and paper, shaving cream, sand, etc. to write the new word (ex: Name is spelled n-a-m-e; you spell the word 'game').
Use knowledge of the meaning of individual words to predict the meaning of compound words.	 Give your child 2 words. Have your child tell you the compound word that can be made (ex: You say bird and house and your child says birdhouse. You say butter and fly and your child says butterfly.). Have your child tell you about or draw the new word (ex: A birdhouse is a house for a bird.).

Speaking and Listening

Students will continue to develop effective speaking skills in a variety of situations. Students will continue to develop listening skills to learn, process, and analyze information.

Samples of Curricula

Family Activities

English Language Arts

Build on others' talk in conversation by linking their comments to the remarks of others.	 Play Seven Up Sentences. Start with a short sentence. Take turns adding a word at a time until the sentence gets to seven words. (ex: The bird flew. The blue bird flew. The blue bird flew home. The blue bird flew home quickly. The little blue bird flew home quickly.)
 Ask for clarification and further explanation as needed about the topics and texts under discussion. 	Encourage your child to ask questions when he does not understand.
 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. 	 After reading a story aloud to your child, have your child retell the story to you. Have your child recount an episode of his favorite TV show or movie.
 Tell a story or recount an experience with appropriate facts and relevant descriptive details, speaking audibly in coherent sentences. 	 Ask your child about his day. Encourage your child to focus on the main events or choose one experience to describe in detail (ex: the game learned in P.E., the song sung in music, how the caterpillar became a butterfly, etc.).

Foundational Skills

Students will continue to develop the ability to recognize and connect letters and sounds to words and to use word structure to sound out unknown words. Students will demonstrate fluency in word accuracy, reading rate, expression and phrasing while comprehending the text.

Samples of Curricula

Family Activities

etc. Inappropriate responses—cat, car, walked, etc.).

Distinguish long and short vowels When your child comes to an unfamiliar word, encourage the use of when reading regularly spelled onewhat has been learned about letter sounds to figure out the word. syllable words. Play a game, such as Memory™. Write down pairs of matching Decode regularly spelled two-syllable words that are irregularly spelled. Children must read the word words with long vowels. correctly before collecting the pair of cards. Decode words with common prefixes and suffixes. Recognize and read grade-appropriate irregularly spelled words. Ask for clarification and further Have your child reread the text read in school. Ask your child to explanation as needed about the tell what the text was about. topics and texts under discussion. Read the same sentence with different punctuation (ex: Cows moo. Recount or describe key ideas or Cows moo? Cows moo!). details from a text read aloud or information presented orally or While reading a story aloud, read the same sentence twice pausing through other media. in different places (ex: The red dog/ goes quickly down/ the long road. OR The red dog goes/ quickly down the/long road.). Talk about which way was easier to understand. If your child struggles with a word in a sentence, have your child Tell a story or recount an experience read to the end of the sentence. Discuss what the word means. with appropriate facts and relevant descriptive details, speaking audibly Ask if the rest of the sentence helped your child understand the in coherent sentences. word's meaning. Give your child sentences with a missing word. Have your child fill in the blank with an appropriate response. (ex: The ran through the field. Appropriate responses—large, brown, furry,



Mathematics is a way of thinking and communicating. Students must practice mathematical reasoning and skills with accuracy, efficiency and flexibility in order to:

- · Create and communicate strategies for solving a problem:
- Choose appropriate tools to solve problems:
- · Discuss, listen, observe and ask questions to obtain mathematical information, and
- Explore mathematical concepts as they apply to personal experiences.

The goal is for students to demonstrate positive attitudes toward mathematics in school, culture, and society.

Operations and Algebraic Thinking

Students will algebraically represent, model, analyze, or solve mathematical or real-world problems involving patterns or functional relationships.

Samples of Curricula Family Activities Lepresent and solve problems involving . Make up number problems, such as:

Represent and solve problems involving addition and subtraction.	Make up number problems, such as:
	o One candy bar costs 25 cents and another one costs 40 cents. How much more does the 40 cent candy bar cost?
	o Dad is 34 and Grandma is 59. How much older is Grandma than Dad?
	o It is 56°F today. Last Thursday was 87°F. How much colder is it today?
Add and subtract within 20.	 While riding in the car, have your child make license plate number sentences (ex: License plate 062BJP could be interpreted as 0+6+2=8).
	 Have your child practice all of the combinations that make up ten. (ex: 7+3, 2+8, etc.).
	 Use playing cards to practice facts. Flip over 2 cards and add or subtract the two numbers.
 Work with equal groups of objects to gain foundations for multiplication. 	 Show or count items around your house that show multiplication or repeated addition (ex: packs of juice boxes, pairs of socks, eggs in a carton, etc.).

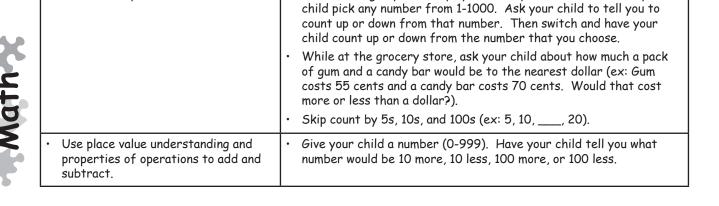
Number and Operations in Base Ten

Students will describe, represent, or apply numbers or their relationships and will estimate and compute using mental strategies, paper/pencil or technology.

While driving in your car, play "Count Up, Count Down". Have your

Samples of Curricula Family Activities

Understand place value.



Measurement and Data

Students will identify attributes, units, or systems of measurement or apply a variety of techniques, formulas, tools, or technology for determining measurements.

Students will collect, organize, display, analyze, or interpret data to make decisions or predictions.

Samples of Curricula

Family Activities

	· · · · · · · · · · · · · · · · · · ·
Measure and estimate lengths in standard units.	 Have your child measure things around the house using rulers, yardsticks, meter sticks, and measuring tape (ex: measure a bookshelf, the height of a table, the length and width of your bed, etc.). Keep a height chart for your child. Measure a sibling and record the measurement on the chart.
	 Have your child help in the kitchen (ex: when baking a cake, have your child determine the correct size pan to use- 9X13, etc.).
 Relate addition and subtraction to length. 	 Ask your child to compare sizes. Ask, "How much taller am I than you?"
	 Have your child measure how many steps it takes to cross the kitchen and how many steps it takes to get from the bedroom to the bathroom. Ask questions such as, "How many more/less steps did it take?"
	 Have your child do the "Number Line Hop." Use sidewalk chalk to draw a number line outside. Pick a set of numbers (1-25, 25-50, 50-75, 75-100) and write them in order on the number line. Say a number and have your child stand on it. Tell your child to hop to the other numbers on the number line as you call them out (10 more, 5 less, 2 more, etc.).
Work with time and money.	Ask your child to tell time to five minutes.
	 Have your child add up the change in your pockets at the end of the day. Determine the value of a given set of dollars and coins through \$10.
Represent and interpret data.	 Look for tables, graphs, and charts in magazines and newspapers. Discuss what can be learned from them and why the author chose to use a graph, chart, table, etc. to share this information. Keep a chart at home for chores, homework, etc.

Geometry

Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.predictions.

Samples of Curricula	Family Activities
 Reason with shapes and their attributes. 	 Find examples of 2-D shapes in the car, at the store, at the playground, home or on vacation. Have your child describe the attributes/characteristics of the shape (ex: "That yield sign is a triangle. I know that because it has 3 sides and 3 angles.").
	• Divide a cake, brownies, etc. into rows and columns. Have your child count and tell you the total number of pieces (the area).
	 Divide foods, such as sandwiches, oranges, apples, etc. into 2, 3, or 4 equal pieces. Use the words halves, thirds, and fourths to describe the part you are eating.



Geometry and Measurement

Students will apply the properties of one-, two-, or three-dimensional geometric figures to describe, reason, or solve problems about shape, size, position, or motion of objects.

Students will identify attributes, units, or systems of measurement or apply a variety of techniques, formulas, tools, or technology for determining measurements.

Samples of Curricula

Family Activities

Identifies and describes two- and three-dimensional shapes	 Find examples of 2-D shapes in the car, at the store, at the playground, home or on vacation. Have your child describe the characteristics of the shape (ex: "That yield sign is a triangle. I know that because it has 3 sides and 3 points.").
 Identifies measurable attributes (length/weight) 	 Keep a height/weight chart for your child. Have him measure a sibling, and write the result on a chart.
	 Have your child help in the kitchen (ex: when baking a cake, have him determine the correct size pan to use - 9x13, etc.).
 Measures length, temperature, and weight 	 Have your child measure things around the house (ex: temperature on the thermostat, weight on a scale, height of a bike, ingredients while cooking). Ask questions such as, "How many steps will it take you to get across the room?" or "About how much taller am I than you?"
Tells time to 5 minutes	Ask your child to tell time to five minutes.
	 Have him help keep time while cooking (ex: the macaroni started boiling at 10:15 am, it needs to come out in 5 minutes - what time will that be?).

Data Analysis

Students will collect, organize, display, analyze, or interpret data to make decisions or predictions.

Samples of Curricula

Collects, organizes, and displays data (pictograph, bar graph, and table)	 Look for tables, graphs and charts in magazines and newspapers. Discuss what can be learned from them and why the author chose to use a graph, chart, table, etc. to share this information.
Reads, interprets data displays (pictograph, bar graph, and table)	Keep a chart at home for chores, homework, etc.

Social Studies

Social Studies

Students will demonstrate commitment to human dignity, justice and the democratic process, work cooperatively and accept group decisions while respecting individual rights and developing a common culture.

Political Science

Students will understand the historical development and current status of the democratic principles and the development of skills and attitudes necessary to become responsible citizens.

Samples of Curricula	Family Activities
 Describe the roles of government leaders (county executives, county and/or city council, and mayor) and contributions they make to the community. 	 Talk with your child about who is the mayor and what he/she does. Attend a parade where the mayor and city council members may be participating. Discuss their role. Read pertinent newspaper articles to/with your child about the local government.
Explain how rules and laws are made and necessary to maintain order and protect citizens.	 Discuss school rules with your child and why they have been made and why they are appropriate. Talk about community rules of safety (ex: don't cross the street between parked cars, use the sidewalk, wear a helmet when riding a bike, etc.) and how these rules and laws help to keep citizens safe. Talk about rules the family has and why they are in place.
 Identify concerns in the community, such as safety issues and pollution problems and identify ways to resolve concerns. 	 Go for a walk with your child and discuss any safety or pollution problems you may encounter. Discuss how these could be remedied and if possible remedy them with your child.



Peoples of the Nation and World

Students will understand how people in Maryland, the United States, and around the world are alike and different.

Samples of Curricula	Family Activities
Give examples of how families in the community share and borrow customs and traditions from other cultures.	 Talk about how people from other countries and cultures celebrate holidays. Discuss other's traditions and customs when encountered. Attend local cultural events, such as Oktoberfest, Greek Festival, or restaurants that serve cultural specialties. Try making foods from other cultures. Play games that originated in other countries, such as chess, dominoes, Mancala™, jump rope, etc.
 Use fiction and non-fiction to compare the elements of two different cultures, and how they meet their human needs for food, shelter, and other commonalities such as recreation, music, and stories. 	 Visit the local library and read about different cultures and their traditions. Compare and contrast these cultures to your own family's culture and traditions. Read fairy tales from other cultures and compare and contrast to fairy tales the child knows.
 Identify and demonstrate appropriate social skills necessary for working in a cooperative group, such as sharing concern, care, and respect among group members. 	Play board games with your children. As you play, discuss and model appropriate social skills (taking turns, sharing, being a thoughtful winner and an accepting loser).



Social Studie

Geography

Students will use geographic concepts and processes to understand location and its relationship to human activities.

Samples of Curricula

 Use geographic tools (varieties of maps, globes, and atlases), map components (title, compass rose, simple grid system, scale, legend/ key, date, and author) and land features (natural, physical, and human) to locate and describe continents, oceans, and countries. 	 Display a map at home and use it to locate different areas of the world. Visit the local library to read about these places. Mark the map with places you and your child have read about. Compare and contrast the different places. Use the Internet to explore the different places of the world. Draw on a map to show different land features. Have your child create a map of your community with the different map components and land features.
 Describe ways that people modify their natural environment and the impact of those modifications, such as clearing trees, building a dam, and farming land. 	 Watch homes as they are built in your community. Discuss why the construction is occurring and how it will change the environment.
Compare ways people communicate ideas today and long ago.	 Write a letter and an email with your child. Send both the letter and the email and track the time it takes for each to reach its destination. Talk about how they are different, but the same, and how technology has changed the way people communicate.
	 Talk to people of different generations about how they communicated. Talk about the similarities and differences.
	 Explore your house and find new communication technologies that people did not have 20, 50, 100 years ago. Discuss how communication has changed in recent years.

Economics

Students will identify the economic principles and processes that are helpful to producers and consumers when making good decisions.

Samples of Curricula

Family Activities

- Identify the natural, capital, and human resources used in the production of goods and services in the community and the cost associated with each.
- When shopping, talk about the goods and services available.
 Discuss where the goods are made, how they are made, and who makes them.
- Compare two or more similar products. Discuss quality and cost.
- Explain different ways to pay for goods and services, such as credit cards, checks, debit cards, and money orders.
- Play "store" with your child using fake money, credit cards, checks, debit cards, and money orders.
- Take your child to the bank with you. Then draw a graphic showing where the money you have comes from and where it goes (work-paycheck-bank-debit card, cash, check).
- Explain that choices have positive and negative aspects, some of which are more important than others.
- With real or fake money, have your child make decisions about what he or she wants to "purchase". Play it so your child sometimes does not have enough money to purchase something he/she wants.
- Play the "If you could take only three things on our trip, what would they be?" game. Give scenarios to your child that would cause the child to consider alternate choices (i.e., iPod™ instead of Nintendo DS™, water instead of soda, fruit instead of candy, etc.).

History

Students will use historical thinking skills to understand how individuals and events have changed society over time.

Samples of Curricula

- Examine differences between past and present within a personal timeline.
- Talk with your child about how second grade is different than first grade.
- With your child, look at pictures of him and discuss how much your child has changed physically, emotionally, and socially over time.
- At the beginning of second grade, have your child write a
 letter to himself to be read at the end of second grade.
 In the letter, have your child describe the things he or she
 likes to do (ex: favorite TV shoes, foods, and friends). At
 the end of the year, read the letter together and talk about
 how much your child has changed.
- Compare community life now to community life in the past.
- · Share stories about your childhood with your child.
- Visit historical sites in the community and identify how objects such as tools, kitchen utensils, clothing, etc. have changed.

Science

Students explore the life, physical and earth/space sciences through a discovery, hands-on approach to learning. The essential science knowledge for grade 2 is embedded within the Observing the Sky, Life Cycles, and Interactions and Systems units.

During each of these science units, students will develop the thinking and acting that is part of the practice of science by:

- · Constructing knowledge through scientific investigations:
- · Applying evidence and reasoning to support explanations, and
- · Communicating findings to inform others.

Earth Science: Observing the Sky Unit

Students will use scientific skills and processes to explain the chemical and physical interactions (i.e. natural forces and cycles, transfer of energy) of the environment, Earth and the Universe that occur over time.

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 Observe celestial objects that are visible in the day and night sky. 	Describe ways in which the daytime and nighttime skies are different.
 Observe and describe changes over time in the properties, location, and motion of the sun, moon, and stars. 	 Make observations of the moon's phases and keep track of the changes on a calendar. Discuss changes in the position and shape of the moon over time. Use sidewalk chalk to trace your child's shadow at different times of the day. Discuss how it looks different.
	 Attend one of the evening programs with your child at the Earth and Space Science Lab at Lincoln Elementary. Refer to the FCPS Student Calendar/Handbook or the ESSL website (http://sites.fcps.org/essl) for specific dates and times.



Life Science: Life Cycles Unit

Students will use scientific skills and processes to explain 1) the dynamic nature of living things, their interactions, and the results from the interactions that occur over time and 2) the interactions of environmental factors (living and non-living) and analyze their impact from a local to a global perspective.

Samples of Curricula

Family Activities

 Identify the stages in the life cycle of plants and animals 	 Discuss the life cycles of family pets and compare these to the life cycles of the animals discussed at school.
 List certain animals that undergo the developmental stages of metamorphosis and relate them to the life cycle 	
 Explain that animals need air, water, and food and that plants need air, water, nutrients and light to survive. 	 Involve your child in the care of plants and animals in and around your home.
 Conduct experiments with seeds and eggs showing development and growth. 	 Plant a garden from seeds and observe what happens. Discuss with your child what you both see as the seeds grow and develop.

Physical Science: Changes Unit

Students will use scientific skills and processes to explain 1) the composition, structure, and interactions of matter in order to support the predictability of structure and energy transformation and 2) the interactions of matter and energy and the energy transformations that occur.

Samples of Curricula

Family Activities

- Based on investigations, describe what changes occur to the observable properties of various materials when they are subjected to the processes of wetting, cutting, bending, and mixing.
- Discuss how objects change when wet, cut, bent, or mixed.
 For example, how did the paper towel change after you dried your hands on it?
- Provide evidence from investigations to identify processes that can be used to change physical properties of materials
- While cooking, ask and seek answers to "What if..." questions about what might happen to materials if different processes, such as heating, freezing, and dissolving were used to change them (ex: Dissolve drink mix in water and freeze. Take ice out into the sun and discuss what happens.).

Science

Specials

All students in full day Kindergarten and grades one through five are offered daily opportunities to participate in specials-- art, music and physical education. Each special area has a curriculum that integrates classroom learning and strengthens student abilities in physical education and the arts. In addition, there is a health education curriculum for each grade level.

Music

Samples of Curricula	Family Activities
• Aesthetics	 Help your child perform a steady and strong beat through singing, speaking, moving, or playing an instrument or household object. Have your child clap different rhythm patterns (Ex: short, short, long OR long, rest, long, rest, short, short, long).
Historical/Cultural	 Listen to and talk with your child about the music of different cultures. Listen to and discuss how different kinds of music fit different situations (ex: a lullaby, a march, a sad song, a happy song, etc.). Attend a live musical performance. Talk about the type of behavior appropriate for the show.
Creative expression, production	 Help your child experiment with sounds using his voice, his body, and objects that make different sounds. Help your child create simple sound patterns to use to accompany simple songs.
· Criticism	 Listen to different types of music with your child. Ask your child what he hears. Ask your child what type of music he likes best and why.

Art

Family Activities

· Have your child explain why he likes one artwork more than another.

Samples of Curricula

Aesthetics

· Critical	Use the "language" of art. Have your child name the colors, shapes and lines that are seen in an artwork. Ask your child what the artist used to create the work.
Historical/Cultural	Looking at two or more pictures or pieces of art, ask your child to tell/explain how these pictures are the same and how they are different.
	Ask your child what he thinks the artist was thinking when he made this work.
	 Talk about ways we see art in our world. Notice things like restaurant/store signs, brand names, label designs and characters in film and storybooks.
· Production	Experiment with art materials by mixing two different colors together.
	Have your child draw a landscape, seascape, and a portrait.

Physical Education

Samples of Curricula

· Exercise Physiology	 Explain how nutritious foods provide a good source of energy. Recognize that the body is made of bones and muscles. Help your child identify the parts of the circulatory system: heart, lungs, and blood vessels.
Biomechanical Principles	 Help your child verbalize what he needs to do to maintain balance. Use the terms force, friction, gravity, resistance in everyday conversation.
· Skillfulness	 Play a variety of music and encourage your child to move to the beat. With your child, practice catching objects that have been thrown from different levels.
Social Psychological Principles	 Identify the need for safety rules. Demonstrate pillars of character: Respect, Trustworthiness, Citizenship, Caring, Responsibility and Fairness. Talk with your child about the importance of persistence.
Physical Activity	Talk with your child about the importance of "warm up" and "cool down" in order to prevent injury.
Motor Learning Principles	 Encourage your child to participate in a variety of physical activities. Encourage your child to talk about how he might improve his physical skills.

Health Education

Samples of Curricula

Mental and Emotional Health	Demonstrate appropriate methods of communication.
	 Practice cooperative activities with your child, such as baking a cake together, drawing a mural together, etc.
	· Identify choices to help make a decision.
	 Describe what makes your friends special, and encourage your child to do the same.
Safety and Injury Prevention	 Demonstrate the ability to stay safe on bikes/skates and in the sun.
	 Identify ways to stay safe from strangers.
Personal and Consumer Health	Describe ways to safety care for eyes/ears.
	 Identify health issues created by pollution.
Family Life and Human Sexuality	 Identify how you help your family and your family helps you. Identify the processes of physical, emotional, and mental growth.
· Alcohol, Tobacco, and Other	Identify practices for using medicines safely.
Drugs	· Identify products containing tobacco.
	· Identify alcohol as a drug.
	 Identify ways to say "no" to unsafe medicines/drugs.
Nutrition and Fitness	 Assist your child in understanding that foods are categorized into groups.
	 Help your child understand that proper nutrition helps build strong bodies.

FREDERICK COUNTY PUBLIC SCHOOLS ELEMENTARY REPORT CARD GRADE 2

Student:		Teacher:	School:				
Student ID:		School Year:	Principal:				
Enrolled Grade: 2		Term:					
Elliolled Grade: 2		renn:	Telephone:				
Instructional Level	√ Receives Essential Curriculu	1999	+ Receives Essential Curriculum with Extension				
Tristi uctional Level			* Receives Alternative Curriculum Based on Individualize	od Education	Dlan	/TED	,
F	/ Receives Essential Curriculus A = Exemplary performance to			eu Euucation	Pidii	(IEP	
Explanation of Grades	B = Skilled performance towar						
	C = Satisfactory performance						
	D = Minimal performance towards						
	F = Unacceptable performance		due level standards				
	NE = Not evaluated at this tim		2 M + CH T 2 T + H + A D + A	0 11 15			
Effort & Personal and Socia	l Development Coding	4 = Consistently	3 = Most of the Time 2 = Inconsistently 1=Rarely 0	0= Not Demo	nstra	ating	
Constants Assa	T		Constanta Anna	T 1	2	2	,
Curricular Area	Tern	n 1 2 3 4		Term 1	2	3	4
ENGLISH LANGUAGE AR		+++	ART				
Applies Skills and Concepts in R	-	\longrightarrow	Demonstrates Skills and Concepts	\vdash			\vdash
Applies Skills and Concepts in V	Vriting	\square	Demonstrates Effort		Į.		
Demonstrates Effort			Comments				
Comments							
			_				
			MUSIC				
			Demonstrates Skills and Concepts				l
MATHEMATICS	Instructional Level		Demonstrates Effort				l
Demonstrates Skills and Concep	pts		Comments				
Applies Problem Solving Strateg	gies						
Demonstrates Effort							
Comments		<u> </u>					
			PHYSICAL EDUCATION				
			Demonstrates Skills and Concepts		Т	I	
			Demonstrates Effort				
SOCIAL STUDIES			Comments				-
Demonstrates Skills and Conce	ate						
·	pis	 					
Demonstrates Effort			4				
Comments							
			DEDCOMAL AND COCTAL DEVELOPMENT				
			PERSONAL AND SOCIAL DEVELOPMENT			- 1	
COTENCE			Interacts appropriately with peers	\vdash			
SCIENCE			Shows initiative and self-direction			_	\vdash
Demonstrates Skills and Conce	pts		Uses classroom materials appropriately		-	_	-
Demonstrates Effort			Follows classroom/school rules and routines				ь Н
Comments			Engages/maintains attention to learning tasks				
			Shows courtesy and consideration for others				
			Uses strategies to solve social problems				
			Handles changes and transitions				
Services Received			Exhibits self-control				
IEP			Listens attentively to adults/peers				
ELL			Follows oral directions				
504			Follows written directions				
Intervention			Organizes self and materials				
			Comments				
			L				

School Absences			
	Lawful	Unlawful	
Partial days this term			
Days absent this term			
Days absent this school year			

Interim Issued				
Term	1	2	3	4

Cumulative attendance rate	94% is the proficient standard

If you would like additional information, please contact your child's teacher, the school administrator, or the following central office personnel:

Title	Phone Number
Coordinator of Early Childhood Education and Judy Center	301-696-6864
Elementary Language Arts Curriculum Specialist	301-644-5328
Elementary Mathematics Curriculum Specialist	301-644-5057
Elementary Science Curriculum Specialist	301-644-5057
Elementary Social Studies Curriculum Specialist	301-644-5328
Elementary Physical Education Curriculum Specialist	301-644-5161
Elementary Visual and Performing Arts Curriculum Specialist	301-644-5161

In addition, visit our Frederick County Public Schools website - www.fcps.org for more information about our curricula and school system.

