

# Richmond Community Schools

## A Parent's Guide to Report Cards



1

### Non-Discrimination Statement

In compliance with Title VI of the Civil Rights Act of 1964, Title IX of the Education amendments of 1972, Section 504 of Rehabilitation Act of 1973, the Age Discrimination Act of 1975, Title II of the Americans with Disability Act of 1990, and Elliott-Larsen Civil Rights Act of 1977, it is the policy of the Richmond Community School District that no person shall, on the basis of race, color, religion, military status, national origin or ancestry, sex (including sexual orientation), disability, age (except as authorized by law), height, weight, or marital status be excluded from participation in, be denied the benefits of, or be subjected to, discrimination during any program, activity, service or employment. Inquiries related to any nondiscrimination policies should be directed to the Superintendent, 35276 Division Road, Richmond, MI 48062, (586) 727-3565.

Dear Parents:

The information in this brochure is intended to serve as a guide to understanding the core curriculum for English Language Arts, Mathematics, Social Studies, and Science at each grade level. Each grade level report card has been aligned to reflect the most current standards for each subject. The curriculum in English Language Arts and Mathematics is aligned to the Michigan State Standards. The standards are a list of expectations that help teachers make sure their students have the skills and knowledge they need **at the end of each grade level** from kindergarten through 12<sup>th</sup> grade. They define the reading, writing, and math knowledge and skills needed at each grade level. Each year builds on the next so that by high school graduation young people are prepared to go to college or to enter the workplace. The standards offer consistent expectations for students learning across much of the nation. This guide will also identify the Science and Social Studies standards and concepts that your child will experience throughout the year as well.

The report cards represent a progression of your student's progress. Students will be assessed on additional sub-standards throughout the school year. Students' progress on each standard will vary by card marking as additional sub-standards/skills are introduced. Please see the explanation below regarding the grading key. Below the key you will find an analogy as if the key were applied to the standard of riding a bike.

**AP – Advanced Proficient: Above Grade Level**

(Wow! You not only ride a bike on your own, but you can pop a wheelie, jump ramps, and perform other bike stunts.)

**P – Proficient: Applies skill/concept independently at grade level**

(Congratulations! You are successfully riding a bike by yourself.)

**PP – Partially Proficient: Shows some understanding: needs assistance**

(You are pedaling well and staying upright as long as someone is holding on and giving you a little push.)

**NP – Not Proficient: shows little understanding of skill/concept**

(You are riding a bike, but using training wheels.)

Items not marked have not been introduced

# **Subject: English Language Arts (Michigan State Standards)**

## **Domain: Reading Literature**

### **Standard: Key Ideas and Details (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Marking Period)**

- Ask and answer questions about key details in a text. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Retell stories, including key details, and demonstrate understanding of their central message or lesson. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Describe characters, settings, and major events in a story, using key details. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

### **Standard: Craft and Structure (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Identify words and phrases in stories or poems that suggest feelings or appeal to the senses. (4<sup>th</sup>)
- Explain major difference between books that tell stories and books that give information, drawing on a wide reading of a range of text types. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Identify who is telling the story at various points in a text. (3<sup>rd</sup> and 4<sup>th</sup>)

### **Standard: Integration of Knowledge and Ideas (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Use illustrations and details in a story to describe its characters, setting, or events. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Compare and contrast the adventures and experiences of characters in stories. (3<sup>rd</sup> and 4<sup>th</sup>)

### **Standard: Range of Reading and Level of Text Complexity (4<sup>th</sup> Marking Period)**

- With prompting and support, read prose and poetry of appropriate complexity for grade 1.

## **Domain: Reading Informational Text**

### **Standard: Key Ideas and Details (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Ask and answer questions about key details in a text. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Identify the main topic and retell key details of a text. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Describe the connection between two individuals, events, ideas, or pieces of information in a text. (3<sup>rd</sup> and 4<sup>th</sup>)

### **Standard: Craft and Structure (3<sup>rd</sup> and 4<sup>th</sup> Marking Period)**

- Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. (3<sup>rd</sup> and 4<sup>th</sup>)
- Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. (3<sup>rd</sup> and 4<sup>th</sup>)
- Distinguish between information provided by picture or other illustrations and information provided by the words in a text. (3<sup>rd</sup> and 4<sup>th</sup>)

### **Standard: Integration of Knowledge and Ideas (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)**

- Use the illustrations and details in a text to describe its key ideas. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Identify the reasons an author gives to support points in a text. (4<sup>th</sup>)
- Identify basic similarities in and differences between two text on the same topic (e.g., in illustrations, descriptions, or procedures). (3<sup>rd</sup> and 4<sup>th</sup>)

**Standard: Range of Reading and Level of Text Complexity (4<sup>th</sup> Marking Period)**

- With prompting and support, read informational texts appropriate complexity for grade 1.

**Domain: Reading Foundational Skills**

**Standard: Print Concepts (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Demonstrate understanding of the organization and basic features of print. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation). (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

**Standard: Phonological Awareness (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes). (3<sup>rd</sup> and 4<sup>th</sup>)
- Distinguish long from short vowel sounds in spoken single-syllable words. (3<sup>rd</sup> and 4<sup>th</sup>)
- Orally produce single-syllable words by blending sounds (phonemes), including consonant blends. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes). (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

**Standard: Phonics and Word Recognition (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Know and apply grade-level phonics and word analysis skills in decoding words. (4<sup>th</sup>)
- Know the spelling-sound correspondences for common consonant digraphs. (3<sup>rd</sup> and 4<sup>th</sup>)
- Decode regularly spelled one-syllable words. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Know final –e and common vowel team conventions for representing long vowel sounds. (3<sup>rd</sup> and 4<sup>th</sup>)
- Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. (4<sup>th</sup>)
- Decode two-syllable words following basic patterns by breaking in words into syllables. (4<sup>th</sup>)
- Read words with inflectional endings. (3<sup>rd</sup> and 4<sup>th</sup>)
- Recognize and read grade-appropriate irregularly spelled words. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

**Standard: Fluency (3<sup>rd</sup> and 4<sup>th</sup> Marking Period)**

- Read with sufficient accuracy and fluency to support comprehension. (3<sup>rd</sup> and 4<sup>th</sup>)
- Read grade-level text with purpose and understanding. (3<sup>rd</sup> and 4<sup>th</sup>)
- Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings. (4<sup>th</sup>)
- Use context to confirm or self-correct word recognition and understandings, rereading as necessary. (3<sup>rd</sup> and 4<sup>th</sup>)

**Domain: Writing**

**Standard: Text Type and Purposes (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure. (4<sup>th</sup>)



- Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. (3<sup>rd</sup> and 4<sup>th</sup>)
- Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal even order, and provide some sense of closure. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

**Standard: Production and Distribution of Writing (4<sup>th</sup> Marking Period)**

- With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed. (4<sup>th</sup>)
- With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (4<sup>th</sup>)

**Standard: Research to Build and Present Knowledge (4<sup>th</sup> Marking Period)**

- Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (4<sup>th</sup>)
- With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (4<sup>th</sup>)

**Domain: Speaking and Listening**

**Standard: Comprehension and Collaboration (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. (3<sup>rd</sup> and 4<sup>th</sup>)
- Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Build on others’ talk in conversations by responding to the comments of other through multiple exchanges. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Ask questions to clear up any confusion about the topics and texts under discussion. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Ask and answer questions about key details in a text read aloud or information presented orally or through other media. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood. (4<sup>th</sup>)

**Standard: Presentation of Knowledge and Ideas (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Add drawing or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Produce complete sentences when appropriate to task and situation. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

**Domain: Language**

**Standard: Conventions of Standard English (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. (4<sup>th</sup>)
- Print many upper- and lowercase letters. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

- Use common, proper, and possessive nouns. (4<sup>th</sup>)
- Use singular and plural nouns with matching verbs in basic sentences. (4<sup>th</sup>)
- Use personal, possessive, and indefinite pronouns. (4<sup>th</sup>)
- Use verbs to convey a sense of past, present, and future. (4<sup>th</sup>)
- Use frequently occurring adjectives. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Use frequently occurring conjunctions. (4<sup>th</sup>)
- Use determiners. (4<sup>th</sup>)
- Use frequently occurring prepositions. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response prompts. (4<sup>th</sup>)
- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. (3<sup>rd</sup> and 4<sup>th</sup>)
- Capitalize dates and names of people. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Use end punctuation for sentences. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Use commas in dates and to separate single words in a series. (4<sup>th</sup>)
- Use conventional spelling for words with common spelling patterns for frequently occurring irregular words. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

**Standard: Vocabulary Acquisition and Use (4<sup>th</sup> Marking Period)**

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1 reading and content, choosing flexibly from an array of strategies. (4<sup>th</sup>)
- Use sentence-level context as a clue to the meaning of a word or phrase. (4<sup>th</sup>)
- Use frequently occurring affixes as a clues to the meaning of a word. (4<sup>th</sup>)
- Identify frequently occurring root words (e.g., look) and their inflectional forms (e.g., looks, looked, looking). (4<sup>th</sup>)
- With guidance and support from adults, demonstrate understanding of word relationships and nuances in word meanings. (4<sup>th</sup>)
- Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent. (4<sup>th</sup>)
- Define words by category and by one or more key attributes (e.g., a duck is a bird that swims; a tiger is a large cate with stripes). (4<sup>th</sup>)
- Identify real-life connections between words and their use (e.g., note places at home that are cozy). (4<sup>th</sup>)
- Distinguish shades of meaning among verbs differing in manner (e.g., look, peek, glance, stare, glare, scowl) and adjectives differing in intensity (e.g., large, gigantic) by defining or choosing them or by acting out the meanings. (4<sup>th</sup>)
- Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., because). (4<sup>th</sup>)

## **Subject: Math (Michigan State Standards)**

### **Domain: Operations and Algebraic Thinking**

#### **Standard: Represent and solve problems using addition and subtraction (2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Marking Period)**

- Use addition and subtraction within 20 to solve word problems involving situation of adding to taking from, putting together, taking apart, and comparing, with unknowns in all positions. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

#### **Standard: Understand and applying the properties of operations and the relationship between addition and subtraction (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Apply properties of operations as strategies to add and subtract. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Understand subtraction as an unknown-addend problem. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

#### **Standard: Add and subtract within 20 (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Relate counting to addition and subtraction. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using relationship between addition and subtraction; creating equivalent but easier or know sums. (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

#### **Standard: Work with addition and subtraction equations (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Understand the meaning of equal sign, and determine if equations involving addition and subtraction is true or false. (1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup>)
- Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)

### **Domain: Geometry**

#### **Standard: Reason with shapes and their attributes (4<sup>th</sup> Marking Period)**

- Distinguish between defining attribute versus non-defining attributes' build and draw shapes to possess defining attributes. (4<sup>th</sup>)
- Compose two and three-dimensional shapes to create composite shape, and compose new shapes from composite shape. (4<sup>th</sup>)
- Partition circles and rectangles into two and four equal shares, describe the shapes using words. (4<sup>th</sup>)

### **Domain: Measurement and Data**

#### **Standard: Measure lengths indirectly and by iterating length units (4<sup>th</sup> Marking Period)**

- Order three object by length, compare lengths of two object indirectly by using a third object. (4<sup>th</sup>)
- Express the length of an object as a whole number of length units, by laying multiple copies of shorter object end to end; understand that the length measurement of an object is the number of same-sized length units that span it with no gaps or overlaps. (4<sup>th</sup>)



**Standard: Tell and write time (4<sup>th</sup> Marking Period)**

- Tell and write time in hours and half hours using an analog and digital clocks. (4<sup>th</sup>)

**Standard: Represent and interpret data (4<sup>th</sup> Marking Period)**

- Organize, understand, and interpret data with up to 3 categories, ask and answer question about the total number of data points, how many in each category, and how many more or less are in one category than in another. (4<sup>th</sup>)

**Domain: Number and Operations in Base Ten**

**Standard: Extend the counting sequence (4<sup>th</sup> Marking Period)**

- Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (4<sup>th</sup>)

**Standard: Understand place value (2<sup>nd</sup> and 3<sup>rd</sup> Marking Period)**

- Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following for special cases: (2<sup>nd</sup>, 3<sup>rd</sup>)
  - 10 can be taught as a bundle of ones- called a “ten”
  - The number from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
  - Then numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens.
- Compare two two-digit numbers based on meaning of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ . (2<sup>nd</sup>, 3<sup>rd</sup>)

**Standard: Use place value understanding and properties of operations to add and subtract. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Marking Period)**

- Add within 100, including a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup>)
- Given a two-digit number, mentally find 10 more or less than the number, without having to count, explain the reasoning used. (2<sup>nd</sup> and 3<sup>rd</sup>)
- Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90, operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. (2<sup>nd</sup> and 3<sup>rd</sup>)



# Standards for Mathematical Practice

## PARENTS' GUIDE

As your son or daughter works through homework exercises, you can help him/her develop skills with these mathematical practice standards by asking some of these questions...

**1. Make sense of problems and persevere in solving them.**

- What are you solving for in the problem?
- Can you think of a problem that you have solved before that is like this one?
- How will you go about solving it? What's your plan?
- Are you making progress toward solving it? Should you try a different plan?
- How can you check your answer? Can you check using a different method?

**2. Reason abstractly and quantitatively.**

- Can you write or recall an expression or equation to match the situation?
- What do the numbers or variables in the equation refer to?
- What's the connection among the numbers and the variables in the equation?

**3. Construct viable arguments and critique the reasoning of others.**

- Tell me what your answer means.
- How do you know that your answer is correct?
- If I told you I think the answer should be (offer a wrong answer), how would you explain to me why I'm wrong.

**4. Model with mathematics.**

- Do you know a formula or relationship that fits this problem situation?
- What's the connection among the numbers in the problem?
- Is your answer reasonable? How do you know?
- What does the number(s) in your solution refer to?

**5. Use appropriate tools strategically.**

- What tools could use to solve this problem? How can each one help you?
- Which tool is more useful for this problem? Explain your choice.
- Why is this tool (the one selected) better to use than (another tool mentioned)?
- Before you solve the problem, can you estimate the answer?

**6. Attend to precision.**

- What do the symbols that you used mean?
- What units of measure are you using? (for measurement problems)
- Explain to me (a term from the lesson)

**7. Look for and make use of structure.**

- What do you notice about the answers to the exercises you've just completed?
- What do different parts of the expression or equation you are using tell you about possible correct answers?

**8. Look for and express regularity in repeated reasoning.**

- What shortcut can you think of that will always work for these kinds of problems?
- What pattern(s) do you see? Can you make a rule or generalization?

## **Subject: Social Studies (Michigan State Standards)**

### **Domain: History**

- Symbols
- Native Americans
- Early American Travelers
- Celebrating Holidays

### **Domain: Geography**

- Maps
- Resources
- Landforms

### **Domain: Civics & Government**

- Community Helpers
- Neighborhoods
- Getting Along
- Rules We Follow

### **Domain: Economics**

- Jobs at home and school
- Goods and Services
- Needs and Wants
- Spending and Saving



# **Subject: Science (Michigan State Standards)**

## **Domain: Physical Science**

### **Standard: Waves: Light and Sound**

- Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.
- Make observations to construct an evidence-based account that objects can be seen only when illuminated.
- Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.
- Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

## **Domain: Earth Science**

### **Standard: Space Systems: Patterns and Cycles**

- Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- Make observations at different times of year to relate the amount of daylight to the time of year.

## **Domain: Life Science**

### **Standard: Standard: Structure, Function, and Information Processing**

- Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
- Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
- Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

## **Domain: Engineering Design**

### **Standard: Engineering Design**

- Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
- Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.