

# Richmond Community Schools

## A Parent's Guide to Report Cards

# 4

### 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>, 4<sup>th</sup>**

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- Determine a theme of a story, drama, or poem from details in the text; summarize the text.
- Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

### **Standard: Craft and Structure 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).
- Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.
- Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

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

- Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.
- Compare and contrast the treatment of similar themes and topics and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

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

- By the end of the year, read and comprehend literature, including stories, dramas, and poetry in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

## **Domain: Reading Informational Text**

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

- Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- Determine the main idea of a text and explain how it is supported by key details; summarize the text.
- Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

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

- Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a Grade 4 topic or subject area.
- Describe the overall structure (e.g., chronology, comparison, cause/effect, and problem/solution) of events, ideas, concepts, or information in a text or part of a text.

- Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

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

- Interpret information presented visually, orally, or quantitatively and explain how the information contributes to an understanding of the text in which it appears.
- Explain how an author uses reasons and evidence to support particular points in a text.
- Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

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

- By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

**Domain: Reading Foundational Skills**

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

- Know and apply grade-level phonics and word analysis skills in decoding words.
- Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

**Standard: Fluency 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Read with sufficient accuracy and fluency to support comprehension.
- Read grade-level text with purpose and understanding.
- Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

**Domain: Writing**

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

- Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.
- Provide reasons that are supported by facts and details.
- Link opinion and reasons using words and phrases.
- Provide a concluding statement or section related to the opinion presented.
- Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Introduce a topic clearly and group related information in paragraphs and sections; include formatting, illustrations and multimedia when useful to aiding comprehension.
- Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.



- Link ideas within categories of information using words and phrases.
- Use precise language and domain-specific vocabulary to inform about or explain the topic.
- Provide a concluding statement or section related to the information or explanation presented.
- Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
- Use dialogue and description to develop experiences and events or show the responses of characters to situations.
- Use a variety of transitional words and phrases to manage the sequence of events.
- Use concrete words and phrases and sensory details to convey experiences and events precisely.
- Provide a conclusion that follows from the narrated experiences or events.

**Standard: Production and Distribution of Writing 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
- With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.
- With some guidance and support from adults, use technology, including the internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

**Standard: Research to Build and Present Knowledge 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.
- Draw evidence from literary or informational texts to support analysis, reflection, and research.
- Apply grade 4 reading standards to literature.
- Apply grade 4 reading standards to informational text.

**Standard: Range of Writing 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Write routinely over extended timeframes and shorter timeframes for a range of discipline-specific tasks, purposes, and audiences.

**Domain: Speaking and Listening**

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

- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on Grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- Come to discussions prepared having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- Follow agreed-upon rules for discussions and carry out assigned roles.

- Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
- Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.
- Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- Identify the reasons and evidence a speaker provides to support particular points.

**Standard: Presentation of Knowledge and Ideas 3<sup>rd</sup>, 4<sup>th</sup>**

- Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
- Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.
- Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation.

**Domain: Language**

**Standard: Conventions of Standard English 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.
- Use relative pronouns (who, whose, whom, which, that) and relative adverbs.
- Form and use the progressive verb tenses.
- Use modal auxiliaries (e.g., can, may, must) to convey various conditions.
- Order adjectives within sentences according to conventional patterns.
- Form and use prepositional phrases.
- Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.
- Correctly use frequently confused words (e.g., to, too, two; there, their).
- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- Use correct capitalization.
- Use commas & quotation marks to mark direct speech and quotations from a text.
- Use a comma before a coordinating conjunction in a compound sentence.
- Spell grade-appropriate words correctly, consulting references as needed.

**Standard: Knowledge of Language 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Choose words and phrases to convey ideas precisely.
- Choose punctuation for effect.
- Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).

**Standard: Vocabulary Acquisition and Use 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>**

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on Grade 4 reading and content, choosing flexibly from a range of strategies.
- Use context as a clue to the meaning of a word or phrase.
- Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph).
- Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Explain the meaning of simple similes and metaphors in context.
- Recognize and explain the meaning of common idioms, adages, and proverbs.
- Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).
- Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic.

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

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

#### **Standard: Use the four operations with whole numbers to solve problems 2<sup>nd</sup>**

- Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.
- Multiply or divide to solve word problems involving multiplicative comparison.
- Solve multistep word problems posed with whole numbers and having whole number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

#### **Standard: Gain familiarity with factors and multiples 3<sup>rd</sup>**

- Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range of 1-100 is prime or composite.

#### **Standard: Generate an analyze patterns 3<sup>rd</sup>**

- Generate a number or a shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit to the rule itself.

### **Domain: Geometry**

#### **Standard: Draw and identify lines and angles, and classify shapes by properties of their lines and angles 3<sup>rd</sup>**

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- Classify two dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

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

#### **Standard: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit 3<sup>rd</sup>**

- Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements of a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
- Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of



a smaller unit. Represent measurement quantities using diagrams such as a number line diagram that features a measurement scale.

- Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

**Standard: Represent and interpret data 3<sup>rd</sup>**

- Make a line plot to display a data set of measurements in fractions of a unit. Solve problems involving addition and subtraction of fractions by using information presented in line plots.

**Standard: Geometric measurement: understand concept of angles and measure angles 3<sup>rd</sup>**

- Recognize angles as geometric shapes that are formed whenever two rays share a common endpoint, and understand concepts of angle measurement:
- An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through  $\frac{1}{360}$  of a circle is called a "one-degree angle," and can be used to measure angles.
- An angle that turns through  $n$  1-degree angles is said to have an angle measure of  $n$  degrees.
- Measure angles in whole number degrees using a protractor. Sketch angles of a specified measure.
- Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems.

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

**Standard: Generalize place value understanding for multi-digit whole numbers 1<sup>st</sup>**

- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
- Read and write multi-digit whole numbers using base ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place using  $>$ ,  $=$ ,  $<$  symbols to record the results of comparisons.
- Use place value understanding to round multi-digit whole numbers to any place.

**Standard: Use place value understanding and properties of operations to perform multi-digit arithmetic 1<sup>st</sup>**

- Fluently add and subtract multi-digit whole numbers using the standard algorithm.
- Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

**Domain: Number and Operations - Fractions**

**Standard: Extend understanding of fraction equivalence and ordering 4<sup>th</sup>**

- Explain why a fraction  $a/b$  is equivalent to a fraction  $(n \times a) / (n \times b)$  by using visual fraction models, with attention to how the number and the size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
- Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ ,  $<$ , and justify the conclusions.

**Standard: Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers 4<sup>th</sup>**

- Understand a fraction  $a/b$  with  $a > 1$  as a sum of fractions  $1/b$ .
- Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions.
- Add and subtract mixed numbers with like denominators.
- Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators.
- Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
- Understand a fraction  $a/b$  as a multiple of  $1/b$ .
- Understand a multiple of  $a/b$  as a multiple of  $1/b$ , and use this understanding to multiply a fraction by a whole number.
- Solve word problems involving multiplication of a fraction by a whole number.

**Standard: Understand decimal notation for fractions, and compare decimal fractions 4<sup>th</sup>**

- Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.
- Use decimal notation for fractions with denominators 10 or 100.
- Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when two decimals refer to the same whole. Record the results of the comparisons with the symbols  $>$ ,  $=$ ,  $<$  and justify the conclusions.

# 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 4<sup>th</sup>**

- Michigan from Statehood to present
- Major events from each region
- People from each region
- Growth and Change in each region
- The Underground Railroad
- The War of 1812
- The Civil War

### **Domain: Geography 3<sup>rd</sup> & 4<sup>th</sup>**

- Features, Resources and Climate from each Region

### **Domain: Civics & Government 1<sup>st</sup>**

- Serving Communities
- Rights and Responsibilities
- Citizens and Issues
- Three Branches of Government

### **Domain: Economics 2<sup>nd</sup> & 3<sup>rd</sup>**

- Goods and the People
- Consumers and Producers
- Rules of a Market Economy



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

### **Domain: Physical Science**

#### **Standard: Energy (1<sup>st</sup> and 2<sup>nd</sup>) or (3<sup>rd</sup> and 4<sup>th</sup>)**

- Use evidence to construct an explanation relating the speed of an object to the energy of that object.
- Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
- Ask questions and predict outcomes about the changes in energy that occur when objects collide.
- Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.
- Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

#### **Standard: Waves and Information(1<sup>st</sup> and 2<sup>nd</sup>) or (3<sup>rd</sup> and 4<sup>th</sup>)**

- Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
- Generate and compare multiple solutions that use patterns to transfer information.

### **Domain: Earth Science**

#### **Standard: Processes that Shape the Earth(1<sup>st</sup> and 2<sup>nd</sup>) or (3<sup>rd</sup> and 4<sup>th</sup>)**

- Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.
- Identify evidence from patterns in rock formations and fossils in rock layers to support possible explanations of Michigan's geological changes over time.
- Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
- Analyze and interpret data from maps to describe patterns of Earth's features.
- Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.
- Generate and compare multiple solutions to reduce the impacts of natural Earth processes on Michigan's people and places.

### **Domain: Life Science**

#### **Standard: Structure, Function, and Information Processing (1<sup>st</sup> and 2<sup>nd</sup>) or (3<sup>rd</sup> and 4<sup>th</sup>)**

- Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.
- Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior and reproduction.
- Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

### **Domain: Engineering Design**

#### **Standard: Engineering Design (1<sup>st</sup> and 2<sup>nd</sup>) or (3<sup>rd</sup> and 4<sup>th</sup>)**

- Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem
- Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

