CHILDREN'S MUSEUM HOUSTON

Invention Convention is aligned to Reading/Language Arts, Math, Science, Social Studies TEKS for Kindergarten through Grade 5.

Kindergarten, Reading/Language Arts

- communicate ideas effectively through speaking and discussion
    - K.1(A) listen actively and ask questions to understand information and answer questions using multi-word responses
    - K.1(B) restate and follow oral directions that involve a short, related sequence of actions
    - K.1(C) share information and ideas by speaking audibly and clearly using the conventions of language
    - K.1(D) work collaboratively with others by following agreed-upon rules for discussion, including taking turns
    - K.1(E) develop social communication such as introducing himself/herself, using common greetings, and expressing needs and wants

- use research skills to plan and present in written, oral, or multimodal formats
    - K.12(A) generate questions for formal and informal inquiry with adult assistance
    - K.12(B) develop and follow a research plan with adult assistance
    - K.12(C) gather information from a variety of sources with adult assistance
    - K.12(D) demonstrate understanding of information gathered with adult assistance
    - K.12(E) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results

Kindergarten, Science

- **Scientific investigation and reasoning**
    - K.1(B) Demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reusing or recycling paper, plastic, and metal
    - K.2(A) Ask questions about organisms, objects, and events observed in the natural world
    - K.2(B) Plan and conduct simple descriptive investigations
    - K.2(C) Collect data and make observations using simple tools
    - K.2(E) Communicate observations about simple descriptive investigations
    - K.3(A) Identify and explain a problem such as the impact of littering and propose a solution
    - K.3(B) Make predictions based on observable patterns in nature
    - K.3(C) Explore that scientists investigate different things in the natural world and use tools to help in their investigations
    - K.4(B) Use the senses as a tool of observation to identify properties and patterns of organisms, objects, and events in the environment their investigations
- **Matter and energy**
    - K.5(A) Observe and record properties of objects, including bigger or smaller, heavier or lighter, shape, color, and texture
- **Force Motion and Energy**

- K.6(A) Use the senses to explore different forms of energy such as light, thermal, and sound
- K.6(B) Explore interactions between magnets and various materials
- K.6(C) Observe and describe the location of an object in relation to another such as above, below, behind, in front of, and beside
- K.6(D) Observe and describe the ways that objects can move such as in a straight line, zigzag, up and down, back and forth, round and round, and fast and slow

Kindergarten, Social Studies

- **Science, technology, and society**
  - K.13(A) Identify examples of technology used in the home and school
  - K.13(B) Describe how technology helps accomplish specific tasks and meet people's needs
  - K.13(C) Describe how his or her life might be different without modern technology

Kindergarten, Math

- **Geometry and measurement**
  - K.6(A) Identify two-dimensional shapes, including circles, triangles, rectangles, and squares as special rectangles
  - K.6(F) Create two-dimensional shapes using a variety of materials and drawings

  - K.7(A) Give an example of a measurable attribute of a given object, including length, capacity, and weight

First Grade, Reading/Language Arts

- communicate ideas effectively through speaking and discussion
    - 1.1(A) listen actively, ask relevant questions to clarify information, and answer questions using multi-word responses
    - 1.1(B) follow, restate, and give oral instructions that involve a short, related sequence of actions
    - 1.1(C) share information and ideas about the topic under discussion, speaking clearly at an appropriate pace and using the conventions of language
    - 1.1(D) work collaboratively with others by following agreed-upon rules for discussion, including listening to others, speaking when recognized, and making appropriate
    - contributions
    - 1.1(E) develop social communication such as introducing himself/herself and others, relating experiences to a classmate, and expressing needs and feelings

- use research skills to plan and present in written, oral, or multimodal formats
    - 1.13(A) generate questions for formal and informal inquiry with adult assistance
    - 1.13(B) develop and follow a research plan with adult assistance
    - 1.13(C) identify and gather relevant sources and information to answer the questions with adult assistance
    - 1.13(D) demonstrate understanding of information gathered with adult assistance
    - 1.13(E) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results

First Grade, Science

- **Scientific investigation and reasoning**
    - 1.1(B) Identify and learn how to use natural resources and materials, including conservation and reuse or recycling of paper, plastic, and metals
    - 1.2(A) Ask questions about organisms, objects, and events observed in the natural world
    - 1.2(B) Plan and conduct simple descriptive investigations
    - 1.2(C) Collect data and make observations using simple tools
    - 1.2(E) Communicate observations and provide reasons for explanations using student-generated data from simple descriptive investigations
    - 1.3(A) Identify and explain a problem and propose a solution
    - 1.3(B) Make predictions based on observable patterns
    - 1.3(C) Describe what scientists do
- **Matter and energy**
    - 1.5(A) Classify objects by observable properties such as larger and smaller, heavier and lighter, shape, color, and texture
    - 1.5(C) Classify objects by the materials from which they are made
- **Force, motion, and energy**
    - 1.6(A) Identify and discuss how different forms of energy such as light, thermal, and sound are important to everyday life

  - 1.6(C) Demonstrate and record the ways that objects can move such as in a straight line, zig zag, up and down, back and forth, round and round, and fast and slow
- **Earth and space**
  - 1.8(D) Demonstrate that air is all around us and observe that wind is moving air

First Grade, Social Studies

- **Science, technology, and society**
  - 1.16(B) Describe how technology changes communication, transportation, and
  - recreation
  - 1.16(A) Describe how technology changes the ways families live
  - 1.16(C) Describe how technology changes the way people work

Second Grade, Reading/Language Arts

- **communicate ideas effectively through speaking and discussion**
  - 2.1(A) listen actively, ask relevant questions to clarify information, and answer questions using multi-word responses
  - 2.1(B) follow, restate, and give oral instructions that involve a short, related sequence of actions
  - 2.1(C) share information and ideas that focus on the topic under discussion, speaking clearly at an appropriate pace and using the conventions of language
  - 2.1(D) work collaboratively with others by following agreed-upon rules for discussion, including listening to others, speaking when recognized, making appropriate contributions, and building on the ideas of others
  - 2.1(E) develop social communication such as conversing politely in all situations

- **use research skills to plan and present in written, oral, or multimodal formats**
  - 2.13(A) generate questions for formal and informal inquiry with adult assistance
  - 2.13(C) identify and gather relevant sources and information to answer the questions
  - 2.13(E) demonstrate understanding of information gathered
  - 2.13(G) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results

Second Grade, Science

- **Scientific investigation and reasoning**
  - 2.1(B) Identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal
  - 2.2(A) Ask questions about organisms, objects, and events during observations and investigations
  - 2.2(B) Plan and conduct descriptive investigations
  - 2.2(E) Communicate observations and justify explanations using student-generated data from simple descriptive investigations
  - 2.2(F) Compare results of investigations with what students and scientists know about the world
  - 2.3(A) Identify and explain a problem and propose a task and solution for the problem
  - 2.3(B) Make predictions based on observable patterns
  - 2.3(C) Identify what a scientist is and explore what different scientists do
- **Matter and energy**
  - 2.5(C) Demonstrate that things can be done to materials such as cutting, folding, sanding, and melting to change their physical properties
  - 2.5(D) Combine materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties
- **Force, motion, and energy**
  - 2.6(A) Investigate the effects on objects by increasing or decreasing amounts of light, heat, and sound energy such as how the color of an object appears different in dimmer light or how heat melts butter
  - 2.6(C) Trace and compare patterns of movement of objects such as sliding, rolling, and spinning over time

Second Grade, Social Studies

- **Science, technology, and society**
  - 2.17(A) Describe how science and technology change communication, transportation, and recreation

Third Grade, Reading/Language Arts

- communicate ideas effectively through speaking and discussion
    - 3.1(A) listen actively, ask relevant questions to clarify information, and make pertinent comments
    - 3.1(B) follow, restate, and give oral instructions that involve a series of related sequences of action
    - 3.1(C) speak coherently about the topic under discussion, employing eye contact, speaking rate, volume, enunciation, and the conventions of language to communicate ideas effectively
    - 3.1(D) work collaboratively with others by following agreed-upon rules, norms, and protocols
    - 3.1(E) develop social communication such as conversing politely in all situations

- use research skills to plan and present in written, oral, or multimodal formats
    - 3.13(A) generate questions on a topic for formal and informal inquiry
    - 3.13(C) identify and gather relevant information from a variety of sources
    - 3.13(E) demonstrate understanding of information gathered
    - 3.13(H) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results

Third Grade, Science

- **Scientific investigation and reasoning**
    - 3.1(B) Make informed choices in the use and conservation of natural resources by recycling or reusing materials such as paper, aluminum cans, and plastics
    - 3.2(A) Plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world
    - 3.2(E) Demonstrate that repeated investigations may increase the reliability of results
    - 3.2(B) Collect and record data by observing and measuring using the metric system and recognize differences between observed and measured data
    - 3.2(D) Analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations
    - 3.2(F) Communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion
    - 3.3(A) Analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing
    - 3.3(C) Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists

- **Matter and energy**
  - 3.5(A) Measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float
- **Force, motion, and energy**
  - 3.6(A) Explore different forms of energy, including mechanical, light, sound, and thermal in everyday life
  - 3.6(B) Demonstrate and observe how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons
  - 3.6(C) Observe forces such as magnetism and gravity acting on objects

Third Grade, Social Studies

- **Science, technology, and society**
  - 3.16(B) Identify the impact of scientific breakthroughs and new technology in computers, pasteurization, and medical vaccines on various communities
  - 3.16(A) Identify scientists and inventors, including Jonas Salk, Maria Mitchell, and others who have discovered scientific breakthroughs or created or invented new technology such as Cyrus McCormick, Bill Gates, and Louis Pasteur

Fourth Grade, Reading/Language Arts

- **communicate ideas effectively through speaking and discussion**
  - 4.1(A) listen actively, ask relevant questions to clarify information, and make pertinent comments
  - 4.1(B) follow, restate, and give oral instructions that involve a series of related sequences of action
  - 4.1(C) express an opinion supported by accurate information, employing eye contact, speaking rate, volume, enunciation, and the conventions of language to communicate ideas effectively

- **use research skills to plan and present in written, oral, or multimodal formats**
  - 4.13(A) generate and clarify questions on a topic for formal and informal inquiry
  - 4.13(B) develop and follow a research plan with adult assistance
  - 4.13(C) identify and gather relevant information from a variety of sources
  - 4.13(E) demonstrate understanding of information gathered
  - 4.13(H) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results

Fourth Grade, Science

- **Scientific investigation and reasoning**
  - 4.1(B) Make informed choices in the use and conservation of natural resources and reusing and recycling of materials such as paper, aluminum, glass, cans, and plastic
  - 4.2(A) Plan and implement descriptive investigations, including asking well defined questions, making inferences, and selecting and using appropriate equipment or technology to answer his/her questions
  - 4.2(E) Perform repeated investigations to increase the reliability of results
  - 4.4(A) Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, balances, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks, timing devices; and materials to support observation of habitats of organisms such as terrariums and aquariums
  - 4.2(D) Analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured
  - 4.2(F) Communicate valid oral and written results supported by data
  - 4.3(A) Analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing
  - 4.3(C) Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists
- **Matter and energy**
  - 4.5(A) Measure, compare, and contrast physical properties of matter, including mass, volume, states (solid, liquid, and gas), temperature, magnetism, and the ability to sink or float
- **Force, motion, and energy**
  - 4.6(A) Differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal
  - 4.6(C) Demonstrate that electricity travels in a closed path, creating an electrical circuit
  - 4.6(D) Design a descriptive investigation to explore the effect of force on an object such as a push or a pull, gravity, friction, or magnetism
  - 4.1(D) work collaboratively with others to develop a plan of shared responsibilities

Fourth Grade, Social Studies

- **Science, technology, and society**
  - 4.20(A) identify famous inventors and scientists such as Gail Borden, Joseph Glidden, Michael DeBakey, and Millie Hughes-Fulford and their contributions

Fifth Grade, Reading/Language Arts

- **communicate ideas effectively through speaking and discussion**
  - 5.1(A) listen actively to interpret verbal and nonverbal messages, ask relevant questions, and make pertinent comments
  - 5.1(B) follow, restate, and give oral instructions that include multiple action steps
  - 5.1(C) give an organized presentation employing eye contact, speaking rate, volume, enunciation, natural gestures, and conventions of language to communicate ideas effectively
  - 5.1(D) work collaboratively with others to develop a plan of shared responsibilities

- **use research skills to plan and present in written, oral, or multimodal formats**
  - 5.13(A) generate and clarify questions on a topic for formal and informal inquiry
  - 5.13(C) identify and gather relevant information from a variety of sources
  - 5.13(E) demonstrate understanding of information gathered
  - 5.13(H) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results

Fifth Grade, Science

- **Scientific investigation and reasoning**
  - 5.1(B) Make informed choices in the conservation, disposal, and recycling of materials
  - 5.2(A) Describe, plan, and implement simple experimental investigations testing one variable
  - 5.2(B) Ask well defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology
  - 5.2(E) Demonstrate that repeated investigations may increase the reliability of results
  - 5.4(A) Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices; and materials to support observations of habitats or organisms such as terrariums and aquariums
  - 5.2(D) Analyze and interpret information to construct reasonable explanations from direct (observable) evidence and indirect (inferred) evidence
  - 5.3(A) Analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing
  - 5.3(C) Connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists
- **Matter and energy**
  - 5.5(A) classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy
- **Force, motion, and energy**

- 5.6(A) explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy
- 5.6(B) demonstrate that the flow of electricity in closed circuits can produce light, heat, or sound
- 5.6(C) demonstrate that light travels in a straight line until it strikes an object and is reflected or travels through one medium to another and is refracted
- 5.6(D) design a simple experimental investigation that tests the effect of force on an object

Fifth Grade, Social Studies

- **Science, technology, and society**
  - 5.23(A) identify the accomplishments of notable individuals in the fields of science and technology, including Benjamin Franklin, Eli Whitney, John Deere, Thomas Edison, Alexander Graham Bell, George Washington Carver, the Wright Brothers, and Neil Armstrong