Kindergarten Physical Science
Grade Standards, Supporting Skills, and Examples

Indicator 1: Describe structures and properties of, and changes in, matter.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**K.P.1.1. Students are able to use senses to describe solid objects in terms of physical attributes.** • Explain how larger objects are made of smaller pieces. Examples: Use hand lenses to observe particle board to conclude that it is made from sawdust and wood chips and to see that fabric is made from fibers. • Identify similarities /differences of various objects. Example: Given a collection of shoes, students can describe ways the shoes are alike and ways the shoes are different.
(Knowledge)	**K.P.1.2. Students are able to identify water in its solid and liquid forms.** • Observe ice in the environment. Examples: Observe ice in/on ponds, icicles, frost on playground surfaces. • Observe water in the environment. Examples: Observe rain, puddles, river, water fountain. ✓ Students are able to observe physical changes in matter. Examples: Observe melting chocolate, freezing ice cubes, bending straws, tearing paper.

Indicator 2: Analyze forces, their forms, and their effects on motions.

Note: These skills should be taught and practiced although mastery is not expected until a later grade level.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
	✓ Students are able identify things that move. Examples: wheels, swings, bicycles, bodies ✓ Students are able to explore magnets. Example: Use a variety of magnets (horseshoe, donut, bar,

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
	ball/marble, wand magnets) to test attraction. Test on wood, paper, water, metals, etc.

Indicator 3: Analyze interactions of energy and matter.

Note: These skills should be taught and practiced although mastery is not expected until a later grade level.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
	✓ Students are able to explore vibration and sound. Examples: Use musical instruments, voice box, rubber bands, to see/feel vibrations and hear different sound tones, pitches, etc.

Kindergarten Physical Science
Performance Descriptors

Advanced	**Kindergarten students performing at the advanced level:** • categorize solid objects by physical attributes; • describe how to transform water from a solid to a liquid.
Proficient	**Kindergarten students performing at the proficient level:** • describe solid objects in terms of physical attributes; • identify water in its solid and liquid forms.
Basic	**Kindergarten students performing at the basic level:** • describe solid objects in terms of one physical attribute; • identify water in its liquid form.

Kindergarten Physical Science
ELL Performance Descriptors

Proficient	**Kindergarten ELL students performing at the proficient level:** • ask questions related to science topics.
Intermediate	**Kindergarten ELL students performing at the intermediate level:** • give simple oral responses to questions on topics presented in class.
Basic	**Kindergarten ELL students performing at the basic level:** • participate in science activities and experiments with other students; • use correct pronunciation of science words; • respond correctly to yes or no questions on topics presented in class.

Emergent	**Kindergarten ELL students performing at the emergent level:** • use correct pronunciation of science words; • use non-verbal communication to express scientific ideas.
Pre-emergent	**Kindergarten ELL students performing at the pre-emergent level**: • observe and model appropriate cultural and learning behaviors from peers and adults; • listen to and observe comprehensible instruction and communicate understanding non-verbally.

First Grade Physical Science
Grade Standards, Supporting Skills, and Examples

Indicator 1: Describe structures and properties of, and changes in, matter.

Bloom's Taxonomy Level	Standards, Supporting Skills, and Examples
(Analysis)	**1.P.1.1. Students are able to categorize objects by physical attributes such as color, size, and shape.** **Examples**: Sort leaves, rocks, buttons, seeds, beans, animals.
(Comprehension)	**1.P.1.2. Students are able to compare objects in terms of heavier or lighter.** **Example**: Use film canisters filled with various materials such as pennies, sand, yarn, popcorn, washers. Students order the canisters from lightest to heaviest.
(Application)	**1.P.1.3. Students are able to predict how common materials interact with water.** • Floating/sinking Example: Use items to float/sink: clay, wood, cork, pencils, crayons, coins, cotton balls, etc. ✓ Soluble/nonsoluble Example: Try to dissolve or mix salt, sugar, toothpaste, oil, etc. in water.

Indicator 2: Analyze forces, their forms, and their effects on motions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**1.P.2.1. Students are able to describe relative positions of objects.** **Examples**: Use positional words (far, near, in front, behind) to describe the location of objects in the classroom or on the playground. ✓ Show how magnets can be used to make some things move without being touched. Example: Use magnetic games such as fishing pole with magnet attached to line and fish with paper clips attached. Example: Use a magnet under a maze page to move the

	paper clip across the page. ✓ Demonstrate ways to make objects move faster or slower or in a different direction. Example: Use inclined planes with smooth surfaces and rough surfaces (sandpaper or felt) to observe change in motion of an object. For objects use balls, boxes, toy cars, blocks, etc.

Indicator 3: Analyze interactions of energy and matter.

Note: These skills should be taught and practiced although mastery is not expected at these grade levels.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
	✓ Identify heat and light sources. Example: Identify heat and light sources in student's home: oven, lamp, furnace, candle, etc. (Warning: DO NOT TOUCH) ✓ Create shadows. Example: Use a light source and solid objects to create shadows on the wall.

First Grade Physical Science
Performance Descriptors

Advanced	**First grade students performing at the advanced level:** • create and explain categories for sorting solid objects by physical attributes; • describe motion in terms of changes in position; • identify sources of heat and light; • show how magnets make things move; • predict solubility of common materials with water.
Proficient	**First grade students performing at the proficient level:** • categorize solid objects by multiple physical attributes such as color, size, and shape; • compare objects in terms of heavier or lighter; • describe relative positions of objects; • predict how common materials interact with water.
Basic	**First grade students performing at the basic level:** • categorize objects by one physical attribute; • demonstrate the relative positions of over, under, in, and out; • identify a material that will float in water and one that will

	sink.

First Grade Physical Science
ELL Performance Descriptors

Proficient	**First grade ELL students performing at the proficient level:** • categorize objects by one physical attribute; • demonstrate the relative positions of over, under, in, and out; • identify a material that will float in water and one that will sink; • ask questions related to science topics.
Intermediate	**First grade ELL students performing at the intermediate level:** • sort objects by observable attributes; • demonstrate the relative positions of over and under; • identify material that will sink; • give simple oral responses to questions on topics presented in class.
Basic	**First grade ELL students performing at the basic level:** • sort objects; • demonstrate the relative positions of in and out; • identify material that will float; • participate in science activities and experiments with other students; • use correct pronunciation of science words; • respond correctly to yes or no questions on topics presented in class.
Emergent	**First grade ELL students performing at the emergent level:** • use correct pronunciation of science words; • use non-verbal communication to express scientific ideas.
Pre-emergent	**First grade ELL students performing at the pre-emergent level:** • observe and model appropriate cultural and learning behaviors from peers and adults; • listen to and observe comprehensible instruction and communicate understanding non-verbally.

Second Grade Physical Science
Grade Standards, Supporting Skills, and Examples

Indicator 1: Describe structures and properties of, and changes in, matter.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**2.P.1.1. Students are able to classify solids in terms of the materials they are made of and their physical properties.** **Examples** of materials: cloth, paper, wood, metal, plastic, etc. **Examples** of physical properties: color, size, shape, opacity, mass, texture, flexibility, etc. • Define a solid.
(Comprehension)	**2.P.1.2. Students are able to describe visually observable properties of liquids and classify liquids by their physical properties.** **Examples:** translucent, transparent, opaque, color, foamy, bubbly, viscous, etc. • Define a liquid. ✓ Explore properties of gases. Example: Use a balloon to demonstrate air taking the shape of the container.
(Application)	**2.P.1.3. Students are able to identify mixtures of solid substances and ways to separate them.** **Examples**: Separate trail mix, rocks and sand, types of beans.

Indicator 2: Analyze forces, their forms, and their effects on motions.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Application)	**2.P.2.1. Students are able to demonstrate how moving objects exhibit different types of motion.** **Examples**: straight, circular, back and forth • Describe motions of common objects in terms of change in position or direction (e.g., up-down, left- right, fast-slow). • Describe how pushes or pulls can change motion of an object.

(Application)	**2.P.2.2. Students are able to predict the effects of magnets on other magnets and other objects.** • Attracting and repelling Example: Stack donut magnets on a pencil. Example: Use classroom objects to test which objects are attracted to the magnet. ✓ Explore magnetic poles. Example: Use a bar magnet to move another bar magnet.

Indicator 3: Analyze interactions of energy and matter.

Bloom's Taxonomy Level	Standard, Supporting Skills, and Examples
(Comprehension)	**2.P.3.1. Students are able to compare sounds in terms of high pitch, low pitch, loud and soft (volume).** **Example**: Use a variety of rubber band widths and sizes to compare the pitch and volume when the band is plucked. ✓ Describe ways heat can be produced. Example: Create heat by rubbing hands together. Example: Turn on heat lamp to warm incubator. ✓ Demonstrate how light can pass through some objects and not others. • Predict the casting of shadows. Example: Use 2- and 3-dimensional objects at different distances from light source to cast a variety of shadows. ✓ Explore sources of energy. Examples: Discuss moving water, food, wind, sun, rubber bands, batteries as sources of energy.

Second Grade Physical Science
Performance Descriptors

Advanced	**Second grade students performing at the advanced level:** • predict the casting of shadows; • select materials based on physical properties to solve a task; • identify ways to separate mixtures, including solids and liquids; • describe interactions of magnetic poles; • demonstrate ways to change pitch; • describe ways heat can be produced.
Proficient	**Second grade students performing at the proficient level:** • describe and classify solids and liquids in terms of physical properties; • identify and separate mixtures; • demonstrate different ways objects move and affect other objects; • compare sounds in terms of pitch and volume.
Basic	**Second grade students performing at the basic level:** • describe solids and liquids in terms of physical properties; • demonstrate ways objects move; • compare sounds in terms of volume.

Second Grade Physical Science
ELL Performance Descriptors

Proficient	**Second grade ELL students performing at the proficient level:** • describe solids and liquids in terms of physical properties; • demonstrate ways objects move; • compare sounds in terms of volume; • ask questions related to science topics.
Intermediate	**Second grade ELL students performing at the intermediate level:** • describe liquids; • show how objects move; • use words to describe sounds heard (loud/soft); • give simple oral responses to questions on topics presented in class; • give simple oral responses to questions on topics presented in class.
Basic	**Second grade ELL students performing at the basic level:** • describe solids; • know that an object moves; • recognize that words can describe sounds heard;

	• participate in science activities and experiments with other students; • use correct pronunciation of science words; • respond correctly to yes or no questions on topics presented in class.
Emergent	**Second grade ELL students performing at the emergent level:** • use correct pronunciation of science words; • use non-verbal communication to express scientific ideas.
Pre-emergent	**Second grade ELL students performing at the pre-emergent level:** • observe and model appropriate cultural and learning behaviors from peers and adults; • listen to and observe comprehensible instruction and communicate understanding non-verbally.