

# **VTAAP Science GE Entry Points**

**Grades 3-4**

2016-2017

This document contains the VTAAP Science assessment targets, also known as “entry points”. GE entry points are not to be confused with the assessed target behaviors. Entry points can be found in the VTAAP Student Performance Scoring Guide.

Each entry point is written to reflect the assessment of academic learning as demonstrated at different levels of symbolic development. The student’s level of symbolic development, indicated on VTAAP Form 2, will determine which set of entry points will be used as their instructional outcome measures. The entry points in this document have been grouped according to the levels A, B, and C, as the student will use the same level for all strands and across all content areas. Please refer to the Student Performance Scoring Guide when selecting entry points for the VTAAP Form 2. DO NOT select entry points from this document.

Since there is no separate generalization score, the strength of learning must be demonstrated within the assessment target. Efforts were made to identify applications of each entry point that are associated with strength of performance. *As a general rule, the emphasis of all the entry points is the strength of learning of the concepts, skills and knowledge.* Teams can expect endline scoring to reflect this focus on demonstration of learning that is enduring and meaningful, not just an isolated performance task. *The use of supports and applications of skills across contexts, materials and content are presumed criteria for all GE entry points, at all levels.*

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student will demonstrate understanding that various objects and materials have different properties by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing the physical properties of materials.	Describes multiple physical properties* each for 6 different materials (e.g., a maple block is hard, smooth, and floats in water, etc.).
<b>B</b>	AT supports	Classifying materials based on physical properties.	Classifies at least 6 materials according to a variety of physical properties* and labels groups using pictures or symbols with text (e.g., uses chart to sort a given set of 6 different materials or pictures of materials according to hard/soft, then rough/ smooth, and then dark/light).
<b>C</b>	AT supports	Matching materials to similar materials with the same property.	Matches at least 6 different objects to similar objects with the same property (e.g., rough rock to rough rock and not smooth rock, etc.).

\* Properties include texture, luster, elasticity, color, odor, magnetic, conductivity, buoyancy, and hardness. Weight and size are characteristics of objects, and are not considered properties.

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Students will demonstrate understanding that materials exist in different states (e.g., solids and liquids) by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing properties of solid and liquid states of matter.	Describes solids as keeping their shape and liquids as taking the shape of their container.  AND Provides at least 5 examples of each to support the explanation of solid and liquid states of matter.
<b>B</b>	AT supports	Classifying materials based on states of matter (solids/liquids).	Classifies at least 10 materials into labeled (symbols, pictures with text) groups of solids and liquids.
<b>C</b>	AT supports	Matching materials in the same state of matter.	Indicates that at least 3 different liquids are in the same state of matter and different from their solid equivalent (e.g., indicates the water, milk, and apple juice belong in one group and ice, yogurt, and apple popsicle belong in another).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student will demonstrate understanding that liquids and solids are altered when heat is applied by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing changes in states of matter when heat is applied to liquids and solids.	Describes or illustrates with text the changes that occur when heat is applied to a liquid or solid for at least 5 substances (e.g., ice melts to water and flows or takes shape of container; water changes into a gas/water vapor and spreads out in all directions; chocolate and butter melt and flow, etc.).
<b>B</b>	AT supports	Sorting objects into groups according to the states of matter at room temperature.	Sorts at least 10 solids and liquids into labeled groups according to their state of matter at room temperature (e.g., water, milk, juice, and oil are liquids; books, soap, pencils, and rulers are solids).
<b>C</b>	AT supports	Indicating a difference between warm and cold objects of the same material.	Indicates which objects are cold and which objects are warm in a group of at least 6 objects (e.g., separates cold aluminum water bottles from warm aluminum water bottles; cold carrots from warm/cooked carrots, etc.).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student will demonstrate understanding that different types of force (push-pull; strong-weak) will impact objects differently by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing that objects move differently as a result of different amounts of force.	Describes the consequences when 3 different amounts of force (push or pull) are applied to move 3 different objects (e.g., shows how a strong, medium, and weak push/toss will result in a baseball traveling a long, medium, or short distance, etc.).
<b>B</b>	AT supports	Compares the change of position as a result of applying different amounts of force to an object.	Identifies and compares the change in position that occurs when 3 different strengths of force are applied to the different objects (e.g., uses multiple trials to show relative placement of a marker to indicate where 2 different race cars will stop for 3 different ramp inclines).
<b>C</b>	AT supports	Applying necessary forces to everyday experiences/objects to effect change of position.	Causes a change in position by intentionally applying the expected force in context in at least 2 different situations over multiple occurrences (e.g., applies appropriate force to pull adult closer; pulls a string to retrieve an object, pushes a button to open a door).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student will demonstrate understanding that electricity can produce heat, light, and sound by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Creating circuits which produce light, heat, sound, and/or motion.	Demonstrates the ability to construct and label components of a circuit (loop) to produce at least 3 different outcomes (e.g., assembles circuit components to make light from bulb, sound from horn or buzzer, and motion from fan).
<b>B</b>	AT supports	Using a given circuit to identify and classify materials as conductors or insulators.	Classifies and labels at least 8 different materials as conductors or non-conductors (e.g., sorts paper clips, nails, copper wire, and labels as conductors; then crayons, erasers, wooden blocks, etc. and labels as non-conductors/insulators).
<b>C</b>	AT supports	Completing a given circuit to produce light, heat, motion, or sound.	Intentionally completes simple electrical circuits to produce light, heat, motion, or sound on at least 6 occurrences (e.g., uses a lever switch in a given circuit to produce light, activate a buzzer, or turn on a fan).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student will demonstrate understanding that magnets attract and repel certain materials by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Demonstrates when magnets attract or repel one another.	Identifies and labels North and South poles on magnets. AND Uses labeled magnets (N&S) to demonstrate and describe how different poles attract and like poles repel each other.
<b>B</b>	AT supports	Classifying objects which are and are not attracted to magnets.	Classifies at least 10 different objects into groups labeled magnetic or non-magnetic (e.g., paper clips are magnetic; crayons are non-magnetic, etc.).
<b>C</b>	AT supports	Identifying items that are attracted to magnets.	Test materials to selects the magnetic items from a field of at least 6 familiar magnetic and non-magnetic items (e.g., indicates that magnet attracts washer, nail, etc., but does not attract pencil, peanut, plastic spoon, etc.).

<b>Entry Point</b>	<b>CONDITIONS</b>	<b>TARGET BEHAVIORS</b>	<b>CRITERIA</b>
	<i>Given...</i>	<i>Student demonstrates understanding that plants and animals have life cycles by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing four stages in the life cycles of plants and animals.	Labels, sequences, and identifies connections for at least four stages of at least 3 different life cycles, including at least 1 plant and 1 animal (e.g., baby to child to teenager to adult and back to baby; eggs to caterpillar to pupa or chrysalis to butterfly and back to egg, etc.).
<b>B</b>	AT supports	Diagramming the life cycle of a plant and an animal	Illustrates or constructs a model of a life cycle of a plant and an animal, labeling at least 3 stages for each. (e.g., draws and labels a 3 stage life cycle of a frog and a tree).
<b>C</b>	AT supports	Matching stages in a life cycle.	Given a field of 3 items that represent a life cycle, matches the same stages of growth for 2 different life cycles (e.g., places seed with seed; tomato plant with tomato plant; and fruit with fruit, etc.).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student demonstrates understanding that animals and plants need air, water, food, and space to live by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing how living things (plant and animal) meet their basic survival needs.	Describes how 2 plants and 2 animal meet their needs for water, food, and space/shelter in their habitat (e.g., a deer eats from the apple tree, drinks from the stream, and finds shelter in the fields and forest; a plant produces its own food, gets water from the rain, and grows in the soil, etc.).
<b>B</b>	AT supports	Identifying the basic survival needs (air, water, food, space, and shelter) of a plant and an animal.	Connects at least 2 animals and 1 plant to at least 3 of its basic survival needs (e.g., a bird needs a nest for shelter, worms or insects for food, and water from a pond; a plant makes its own food, needs water from the rain, and space in a field or forest, etc.).
<b>C</b>	AT supports	Matching a plant and an animal to their basic survival needs (i.e., food, water, and shelter).	Associates at least 1 animal and 1 plant to at least 2 of its basic needs (e.g., links human to food and house and flower to sun and water.

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student demonstrates understanding that animals depend on plants for food in a food chain by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing how food for animals can be traced back to plants.	Describes at least 3 examples of how animal food can be traced back to plants (e.g., a deer eats an apple that comes from a tree; an eagle eats a snake that eats a mouse that eats seeds from a plant; a shark eats a fish which eats a plant).
<b>B</b>	AT supports	Sequencing the components of a food chain.	Sequences at least 3 food chains to identify relationship between at least 3 organisms and their food (e.g., a fox eats a mouse, the mouse eats a grasshopper, and the grasshopper eats grass; and hawk eats snake, snake eats frog, frog eats a beetle, beetle eats plant leaves, etc.).
<b>C</b>	AT supports	Recognizing connections in a simple food chain.	Identifies the connections in the components of a food chain for at least 3 different food chains (e.g., selects chicken as human food and chicken feed as chicken food; mice as hawk food and seeds as mouse food, etc.).

	CONDITIONS	TARGET BEHAVIORS	CRITERIA
<b>Entry Point</b>	<i>Given...</i>	<i>Student demonstrates understanding that the human body has different structures to help us survive by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Identifying body parts, both internal and external, and functions needed for survival.	Identifies and locates at least 2 internal and at least 3 external body parts.  AND Describes how each body part helps to meet survival needs (e.g., legs to run from danger; nose to smell fire, lungs to breathe, and stomach to digest food, etc.).
<b>B</b>	AT supports	Identifying external body parts and functions needed for survival.	Identifies at least 5 different external body parts.  AND Describes how each body part helps to meet survival needs (e.g., legs to run from danger; eyes to find food, nose to smell fire, hands to feel temperature, and ears to hear danger, etc.).
<b>C</b>	AT supports	Indicating specific body parts associated with specific tasks or functions in response to contextual or other cues.	Responds to situational cue by choosing/using the appropriate body part in at least 3 different circumstances (e.g., uses eye gaze to locate objects, lifts arms when coat is presented; and extends hands for mittens).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
<b>A</b>	AT supports if needed	Identifying and describing celestial objects in the day and night sky.	<p><i>As demonstrated by a Student Product that...</i></p> <p>Identifies the celestial objects that are in the day and night sky (e.g., names sun, moon, stars).</p> <p>AND</p> <p>Describes how objects look in the day and night sky (e.g., labels sun and shows the sun is bright and warm in the day sky, the moon changes shape and looks white in the night sky and is sometime pale white in the day sky, and stars are yellow/white and sparkle at night).</p>
<b>B</b>	AT supports	Labeling celestial objects in the day and night sky.	Identifies and labels pictures of objects in the appropriate context (e.g., shows sun and faint full moon pasted on light blue background; and bright quarter moon and different size stars pasted on dark background).
<b>C</b>	AT supports	Indicating natural objects in the sky.	Indicates that the sun is up in the sky in different locations throughout the day and the moon has different shapes and locations in the night sky on multiple occurrences.

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student demonstrates understanding that earth materials have distinct and identifiable properties by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Describing and comparing properties (e.g., color, texture, odor, hardness, buoyancy, or magnetism) of rocks or minerals.	<p>Classifies and describes at least 6 rocks or minerals according to 2 different properties* (e.g., first classifies and describes rocks according to color and then by texture).</p> <p>* Properties include texture, luster, elasticity, color, odor, magnetic, conductivity, buoyancy, and hardness. Weight and size are characteristics of objects, and are <u>not</u> considered properties.</p>
<b>B</b>	AT supports	Identifying characteristics (e.g., color, weight, texture, size, shape) of earth materials.	<p>Describes at least 3 characteristics* of at least 3 different earth materials (e.g., indicates gravel is hard, gray, and rounded; sand is tan with small particles and crystals, etc.).</p> <p>*Characteristics include weight and size as well as properties.</p>
<b>C</b>	AT supports	Matching earth materials with the same characteristics.	Indicates that earth materials with identical properties are the same for at least 6 materials (e.g., matches gravel to gravel, white sand to white sand, and red granite to red granite, black pumice to black pumice, etc.).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
<b>A</b>	AT supports if needed	Describing changes in common landforms/earth materials.	As demonstrated by a Student Product that...  Describes or uses before and after documentation to represent the changes in landforms for at least 5 transformations (e.g., stream beds dry up or change course, mountains are eroded by landslides, beaches lose sand, etc.).
<b>B</b>	AT supports	Identifying features of local landforms.	Identifies distinctive features of at least 3 landforms (e.g., the mountain is tall and rocky; the island is surrounded by water, and a beach is sandy, has dunes, and borders the ocean).
<b>C</b>	AT supports	Matching earth materials to landforms	Connects different earth materials to their related landform for at least 6 different locations (e.g., sand to beaches, broken rock to cliffs, freshwater water to ponds and rivers, salt water to oceans, etc.).

	CONDITIONS	TARGET BEHAVIORS	CRITERIA
<b>Entry Point</b>	<i>Given...</i>	<i>Student demonstrates understanding that weather changes through the year by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Identifies patterns and trends in the weather by analyzing recorded data.	Records weather data (temperature, rainfall, snowfall, cloud cover, wind etc.) over a period of at least 3 months.  AND Compares findings to identify patterns (e.g., temperature rises from winter to spring; it snows more in January than February; and April was the windiest month of those for which data was collected, etc.).
<b>B</b>	AT supports	Identifying how humans change their behaviors in response to seasonal weather changes.	Identifies at least 8 examples of how humans change their behavior in response to changing seasonal weather (e.g., wear sandals and swim in the summer; wear hats and gloves and ski in the winter; use rain jacket or poncho in rain; wear flannel shirts and sweaters in fall, etc.).
<b>C</b>	AT supports	Indicating appropriate items for wearing/using in different seasons.	Associates at least 6 items related to weather in different seasons (e.g., wear mittens in the cold winter, use a shovel with snow in winter, use umbrella when it rains in spring and summer, etc.).

Entry Point	CONDITIONS	TARGET BEHAVIORS	CRITERIA
	<i>Given...</i>	<i>Student demonstrates understanding that humans depend on natural resources for many uses by:</i>	<i>As demonstrated by a Student Product that...</i>
<b>A</b>	AT supports if needed	Identifying the natural sources of the materials the humans depend on.	Identifies the natural sources and uses for materials that humans regularly require in daily life for at least 8 materials (e.g., milk that we drink comes from cows; steel that we need for cars comes from iron ore; gasoline for engines comes from oil; cotton for clothes comes from cotton plant, etc.).
<b>B</b>	AT Supports	Connects the materials that human use to their natural sources.	Links at least 10 products that humans use in their daily life to their natural source (e.g., maple syrup from maple tree, plastic and rubber from petroleum, rope from hemp; wire from copper ore, etc.).
<b>C</b>	AT Supports	Identifying how humans use natural resources.	Connects the natural resource to its everyday use for at least 6 items (wood from trees is for building and heating, eggs from chickens are for eating, rocks are for stone walls and chimneys, etc.).