

Science Targets - Grade 7

Earth and Space Science	Environmental Science	History and Nature	Life Science	Physical Science	Science as a Process
		___ I can explore the use of science as a tool that can help investigate and answer questions about life, physical and earth science.	___ I can list the characteristics all living things share.		___ I can communicate results in a variety of ways.
		___ I can explain how classroom scientific investigations relate to established scientific principles.	___ I can explain where living things come from.		___ I can describe how collaboration can be a useful way to solve scientific problems.
		___ I can explain that scientific investigations involve the common elements of systematic observations, the careful collection of relevant evidence, logical reasoning and innovation in developing hypotheses and explanations.	___ I can identify what all living things need to survive.		___ I can explain that different kinds of scientific questions may lead to different types of scientific investigations.
		___ I can trace the development of an invention, theory, or discovery to demonstrate the dynamic nature of science.	___ I can tell why biologists classify organisms.		___ I can use appropriate steps to create a plan using the scientific method.
		___ I can describe how people use science and technology in their professions.	___ I can relate the levels of organisms to the relationships between organisms.		___ I can carry out various investigations using the appropriate steps of the scientific method.
		___ I can describe how the use of science and technology can help solve an individual or community problem.	___ I can explain how taxonomic keys are useful.		___ I can collect data and make observations by analyzing trends in various collections at an age-appropriate level.
		___ I can describe contributions to the advancement of science made by people of different cultures, and different times in history.	___ I can explain the relationship between evolution and classification.		___ I can use appropriate metric measurements and tools to collect and organize data.
			___ I can list characteristics used to classify organisms.		___ I can formulate a hypothesis to create a written plan for investigation.
			___ I can contrast bacteria and archaea.		___ I can build and create models to make observations and predict an outcome.

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			___ I can name the kingdoms within Eukarya.		___ I can identify and predict cause-effect relationships within a system.
			___ I can contrast the atmosphere of early Earth with today's atmosphere.		___ I can explain how scientific knowledge changes as new knowledge is acquired and previous theories are modified.
			___ I can describe the characteristics of animal-like protists and give examples.		___ I can describe the relationship between evidence and explanations at an age-appropriate level.
			___ I can describe the characteristics of plantlike protists and give examples.		___ I can explain that the same experiment must have comparable results.
			___ I can describe the characteristics of funguslike protists and give examples.		___ I can explain that new scientific ideas can emerge from unexpected findings.
			___ I can describe the causes and effects of red tides.		
			___ I can describe the causes and effects of eutrophication.		
			___ I can name the characteristics fungi share.		
			___ I can explain how fungi reproduce.		
			___ I can describe the roles fungi play in nature.		
			___ I can identify the characteristics all plants share.		
			___ I can name all the things that a plant needs to live successfully on land.		
			___ I can compare vascular and nonvascular plants.		
			___ I can describe the stages of a plant's life cycle.		

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			___ I can explain what happens when light strikes a green leaf.		
			___ I can describe the overall process of photosynthesis.		
			___ I can name some nonvascular plants and list the characteristics they share.		
			___ I can describe the structure of a moss plant.		
			___ I can name some seedless vascular plants and list the characteristics they share.		
			___ I can describe the structure of a fern plan and how it reproduces.		
			___ I can identify the characteristics that seed plants share.		
			___ I can explain how seeds become new plants.		
			___ I can describe the functions of roots, stems, and leaves.		
			___ I can identify the characteristics of gymnosperms.		
			___ I can describe how gymnosperms reproduce.		
			___ I can list important products from gymnosperms.		
			___ I can describe the characteristics shared by angiosperms.		
			___ I can state the function of an angiosperm's flowers.		
			___ I can explain how angiosperms reproduce.		

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			___ I can tell how monocots differ from dicots.		
			___ I can identify three stimuli that produce plant responses.		
			___ I can describe how plants respond to seasonal changes.		
			___ I can state how long different angiosperms live.		
			___ I can identify technologies that may help farmers produce more crops.		
			___ I can describe levels of organization in animal bodies.		
			___ I can identify four functions that enable animals to meet their basic needs.		
			___ I can explain how animals are classified.		
			___ I can define symmetry.		
			___ I can infer general characteristics of an animal based on its symmetry.		
			___ I can identify the characteristics of sponges.		
			___ I can describe the characteristics of cnidarians.		
			___ I can explain the importance of coral reefs.		
			___ I can identify the three main phyla of worms.		
			___ I can describe the characteristics of each worm phylum.		
			___ I can identify the main characteristics of mollusks.		

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			___ I can describe the major groups of mollusks and tell how they differ.		
			___ I can identify four major groups of arthropods and the main characteristics of arthropods.		
			___ I can describe how crustaceans, arachnids, and centipedes and millipedes differ.		
			___ I can identify the main characteristics of insects.		
			___ I can explain how insects are adapted to obtain food.		
			___ I can name the two types of metamorphosis found in insects.		
			___ I can explain why insects are important in food chains.		
			___ I can name two other ways insects interact with their environments.		
			___ I can describe some methods used to control pest insects.		
			___ I can list the main characteristics of echinoderms.		
			___ I can name the major groups of echinoderms.		
			___ I can name the characteristics that chordates share.		
			___ I can describe the main characteristics shared by all vertebrates.		

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			___ I can describe how vertebrates differ in the way they control body temperature.		
			___ I can name the main characteristics of fishes.		
			___ I can name the major groups of fishes and describe how they differ.		
			___ I can describe amphibian characteristics.		
			___ I can examine how adult amphibians are adapted for life on land.		
			___ I can identify adaptations that allow reptiles to live on land.		
			___ I can contrast the characteristics of each of the three main groups of reptiles.		
			___ I can describe one adaptation that helped dinosaurs survive before they became extinct.		
			___ I can identify the kind of rock in which fossils are frequently found.		
			___ I can describe what scientists can learn from studying fossils.		
			___ I can identify the common characteristics of birds.		
			___ I can explain how birds are adapted to their environments.		
			___ I can explain how a bird is able to fly.		
			___ I can identify three types of flight birds use.		

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			___ I can describe the characteristics common to all mammals.		
			___ I can list the three main groups of mammals.		
			___ I can identify the levels of organization in the body.		
			___ I can define homeostasis.		
			___ I can identify the functions of the skeleton.		
			___ I can explain the role the joints play in the body.		
			___ I can describe the characteristics of bone and how to keep bones strong and healthy.		
			___ I can describe some injuries of the skeletal system and how they can be identified.		
			___ I can explain how bone and joint injuries can be treated.		
			___ I can identify the types of muscles found in the body.		
			___ I can explain why skeletal muscles work in pairs.		
			___ I can describe the functions and the structures of skin.		
			___ I can identify habits that can help keep skin healthy.		
			___ I can explain why the body needs food.		
			___ I can describe how the six nutrients needed by the body help carry out essential processes.		
			___ I can explain how the food guide pyramid can help in planning a healthy diet.		

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			___ I can list and describe the information that is included on food labels.		
			___ I can describe the functions carried out in the digestive system.		
			___ I can explain the roles of the mouth, esophagus, and stomach in digestion.		
			___ I can describe the digestive processes that occur in the small intestine and how other digestive organs are involved.		
			___ I can explain the role of the large intestine in digestion.		
			___ I can explain the functions of the cardiovascular system.		
			___ I can describe the structure and function of the heart.		
			___ I can sequence the path taken by blood through the cardiovascular system.		
			___ I can describe the structures and functions of arteries.		
			___ I can describe the structures and functions of veins.		
			___ I can explain what causes blood pressure.		
			___ I can describe the components of blood.		
			___ I can explain what determines the type of blood that a person can receive in a transfusion.		
			___ I can name the structures and functions of the lymphatic system.		

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			___ I can identify some diseases of the cardiovascular system.		
			___ I can describe behaviors that can help maintain cardiovascular health.		
			___ I can describe the functions of the respiratory system.		
			___ I can identify the structures that air passes through as it travels to the lungs.		
			___ I can describe what happens during gas exchange and breathing.		
			___ I can identify the harmful chemicals contained in tobacco smoke.		
			___ I can explain how tobacco smoke affects a person's health over time.		
			___ I can identify the structures and functions of the excretory system.		
			___ I can state how the kidneys filter wastes from the blood.		
			___ I can explain how excretion contributes to homeostasis.		
			___ I can identify the functions of the nervous system.		
			___ I can describe the structure of a neuron and the kinds of neurons found in the body.		
			___ Student will explain how nerve impulses travel from one neuron to another.		
			___ I can describe how your eyes enable you to see.		
			___ I can describe how you hear and maintain your sense of balance.		

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			___ I can explain how your senses of smell and taste work together.		
			___ I can explain how your skin is related to your sense of touch.		
			___ I can describe how the endocrine systems controls body processes.		
			___ I can identify the endocrine glands.		
			___ I can explain how negative feedback controls hormone levels.		
			___ I can list characteristics of viruses and state reasons why viruses are considered to be nonliving.		
			___ I can describe the components of the basic structure of a virus.		
			___ I can explain how both active and hidden viruses multiply.		
			___ I can discuss both positive and negative ways that viruses affect living things.		
			___ I can name and describe structures, shapes, and sizes of a bacterial cell.		
			___ I can compare autotrophs to heterotrophs, and explain how energy is released through respiration.		
			___ I can contrast asexual and sexual methods of bacterial reproduction.		
			___ I can explain roles of bacteria in the production of oxygen and food, in environmental recycling and cleanup, and in health and medicine.		
			___ I can list four ways that infectious diseases spread.		

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			<p>___ I can describe treatments available for bacterial and viral diseases.</p>		
			<p>___ I can describe how to protect themselves against infectious diseases.</p>		