

Science Targets - Grade 6

Earth and Space Science	Environmental Science	History and Nature	Life Science	Physical Science	Science as a Process
___ I can describe how the chemical structure of water molecules causes them to stick together.	___ I can identify ways that people use water.	___ 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 tell what cells are.	___ I can experience constructing and using levers.	___ I can communicate results in a variety of ways.
___ I can describe some of water's unusual properties.	___ I can discuss some possible sources of water for the future.	___ I can explain how classroom scientific investigations relate to established scientific principles.	___ I can explain how the invention of the microscope contributed to scientists' understanding of living things.	___ I can learn the concepts of lever arm, fulcrum, load, and effort.	___ I can describe how collaboration can be a useful way to solve scientific problems.
___ I can identify the three states in which water exists on Earth.	___ I can identify factors that affect water quality.	___ 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 state the cell theory.	___ I can experience one advantage that can be gained by using a lever – reduced effort.	___ I can explain that different kinds of scientific questions may lead to different types of scientific investigations.
___ I can state how people and other living things use water.	___ I can explain why drinking water is often treated before people drink it.	___ I can trace the development of an invention, theory, or discovery to demonstrate the dynamic nature of science.	___ I can describe how microscopes produce magnified images.	___ I can collect, organize, and analyze data from lever experiments.	___ I can use appropriate steps to create a plan using the scientific method.
___ I can describe how Earth's water is distributed.	___ I can describe what happens to wastewater in most communities.	___ I can describe how people use science and technology in their professions.	___ I can identify the role of the cell wall and the cell membrane in cells.	___ I can learn to identify class 1, class 2, and class 3 levers.	___ I can carry out various investigations using the appropriate steps of the scientific method.
___ I can explain how Earth's water moves through the water cycle.	___ I can explain one way that sources of pollution are classified.	___ I can describe the advantages and disadvantages which accompany the existing technology or the introduction of a new technology.	___ I can describe the functions of cell organelles.	___ I can diagram levers to show placement and direction of the load and effort.	___ I can collect data and make observations by analyzing trends in various collections at an age-appropriate level.
___ I can tell what a river system is.	___ I can identify three sources of water pollution.	___ I can describe how the use of science and technology can help solve an individual or community problem.	___ I can explain how cells are organized in many-celled organisms.	___ I can analyze common tools in terms of levers.	___ I can use appropriate metric measurements and tools to collect and organize data.
___ I can explain how ponds and lakes form.	___ I can describe the two parts of the solution to water pollution.	___ I can describe contributions to the advancement of science made by people of different cultures, and different times in history.	___ I can tell how bacterial cells differ from plant and animal cells.	___ I can analyze pictures of tools in terms of levers.	___ I can formulate a hypothesis to create a written plan for investigation.

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___ I can describe the changes that occur in ponds and lakes.	___ I can describe some ways to conserve available fresh water.		___ I can define elements and compounds.	___ I can assemble and investigate one-pulley and two-pulley systems.	___ I can build and create models to make observations and predict an outcome.
___ I can describe the common types of freshwater wetlands.	___ I can explain what a drought is.		___ I can identify the four main kinds of organic compounds in living things.	___ I can learn vocabulary associated with pulley systems.	___ I can identify and predict cause-effect relationships within a system.
___ I can identify human activities that threaten the Florida Everglades.	___ I can state what a flood is and explain how the dangers of floods can be reduced.		___ I can explain how water is important to the function of cells.	___ I can discover the advantages of using pulleys: decrease in effort and change in direction of effort.	___ I can explain how scientific knowledge changes as new knowledge is acquired and previous theories are modified.
___ I can explain important functions that wetlands serve.			___ I can describe how most small molecules cross the cell membrane.	___ I can diagram pulley systems.	___ I can describe the relationship between evidence and explanations at an age-appropriate level.
___ I can describe how water moves through underground layers of soil and rock.			___ I can explain why osmosis is important to cells.	___ I can discover the relationship between the number of ropes pulling on a load and the effort required to lift that load.	___ I can explain that the same experiment must have comparable results.
___ I can explain how people obtain water from an aquifer.			___ I can tell the difference between passive transport and active transport.	___ I can record and compare the distance moved by the load and the effort in four different pulley systems.	___ I can explain that new scientific ideas can emerge from unexpected findings.
___ I can describe the composition of Earth's atmosphere.			___ I can explain how the sun supplies living things with the energy they need.	___ I can describe the six kinds of simple machines.	
___ I can state how the atmosphere is important to living things.			___ I can describe what happens during the process of photosynthesis.	___ I can describe the mechanical advantage of a machine.	
___ I can identify some properties of air.			___ I can describe the events that occur during respiration.	___ I can describe compound machines.	
___ I can name instruments that are used to measure air pressure and density.			___ I can tell what fermentation is.	___ I can describe what force is.	

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___ I can identify the four main layers of the atmosphere.			___ I can identify the events that take place during the three stages of the cell cycle.	___ I can describe friction.	
___ I can describe the characteristics of each layer.			___ I can explain how the structure of DNA helps account for the way in which DNA copies itself.	___ I can describe gravity.	
___ I can state how scientists describe and explain winds.			___ I can identify how mutations can affect an organism.	___ I can identify when work is done on an object.	
___ I can distinguish between local winds and global winds.			___ I can explain how cancer is related to the cell cycle.	___ I can describe Newton's Laws of Motion.	
___ I can identify where the major global wind belts are located.			___ I can describe how cancer can be treated and prevented.		
___ I can describe how water moves to and from the atmosphere during the water cycle.			___ I can describe the results of Mendel's experiments.		
___ I can explain how clouds form.			___ I can identify what controls the inheritance of traits in organisms.		
___ I can name the three main types of clouds.			___ I can define probability and describe how it helps explain the results of genetic crosses.		
___ I can identify the major types of air masses that affect the weather in North America, and describe how they move.			___ I can explain what is meant by genotype and phenotype.		
___ I can name the main types of fronts.			___ I can tell what codominance is.		
___ I can explain the type of weather that is associated with cyclones and anticyclones.			___ I can describe the role chromosomes play in inheritance.		

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___ I can list the main kinds of storms and explain how they form.			___ I can identify the events that occur during meiosis.		
___ I can describe measures that can be taken to ensure safety in a storm.			___ I can explain the relationship between chromosomes and genes.		
___ I can explain how weather forecasters predict the weather.			___ I can identify some patterns of inheritance in humans.		
___ I can explain how technology has helped improve weather forecasts.			___ I can describe the functions of the sex chromosomes.		
___ I can describe what can be learned from information shown on weather maps.			___ I can explain the relationship between genes and the environment.		
___ I can identify factors that influence temperature and precipitation.			___ I can identify two major causes of genetic disorders in humans.		
___ I can explain what causes the seasons.			___ I can explain how geneticists trace the inheritance of traits.		
			___ I can describe how genetic disorders are diagnosed and treated.		
			___ I can describe three ways of producing organisms with desired traits.		
			___ I can state the goal of the Human Genome Project.		