

Science Grade 5 Daily PASS Review Questions

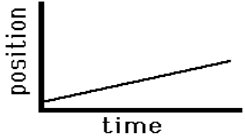
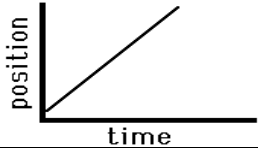
DATE	QUESTION	ANSWER
Question 1	5-1.2: What is an Independent variable?	The manipulated variable It is the one the scientist controls
Question 2	5-1.2: What is a dependent variable?	The responding variable It is the one the scientist measures
Question 3	5-1.5 On a graph, the independent variable should go on which axis?	The “x” axis
Question 4	5-1.5: On a graph, the dependent variable should go on which axis?	The “y” axis
Question 5	5-2-1: What is the smallest unit of life?	The cell
Question 6	5-2-1: What is the function of the cell membrane?	It controls what goes in and out of the cell
Question 7	5-2-1 What is the function of the nucleus?	It is the control center of the cell
Question 8	5-2.2: What is an ecosystem?	An interacting system of plants, animals and humans and the surrounding <u>physical</u> environment. An ecosystem contains living and non-living factors that contribute to the functioning of other organisms. An ecosystem is not just a collection of organisms. It is a system of interrelationships, interactions, and processes. Ecosystems can be as small as a puddle or a rotting log to a whole forest or the planet.
Question 9	5-2.2: Give an example of two abiotic factors in an ecosystem.	Water, air, rocks, soil, temperature, sunlight, and space
Question 10	5-2.2 What is an organism?	A single form of life; the simplest level of organization in ecology. (Microorganisms are very small, often one-celled, living things.)
Question 11	5-2.3: What is an estuary?	The boundary where freshwater ecosystems meet salt water ecosystems
Question 12	5-2.4: Give an example of a decomposer.	Microorganisms, worms, termites or fungi
Question 13	5-2.4: What is a decomposer?	An organism that breaks down wastes and the remains of other organisms.
Question 14	5-2.5: How does a limiting factor affect the populations in an ecosystem?	Limiting factors such as space, water, and food determine how many organisms an ecosystem can support
Question 15	5-3.1: What is weathering? Is it a constructive or destructive force?	It is the process through which rocks or other materials are broken down into smaller pieces. It is a destructive force.
Question 16	5-3.2: Explain what a mid ocean ridge is in your own words.	It is a continuous mountain range that can be found along the ocean floor. It is formed when melted rock is forced up from below the ocean floor. It is a constructive process.
Question 17	5-3.2: What do forces pulling apart plates under the ocean floor cause?	rift zones
Question 18	5-3.4: How do barrier islands help protect our	They serve as a block from storms

	beaches and shorelines?	and erosion and help lessen the effects of both on our shores.
Question 19	5-3.5: How do currents move the water in our oceans?	Temperature and salinity level differences in the ocean and winds cause currents. Currents circulate warm and cold water. Warm water moves away from the equator and cool water away from the poles. These currents move large amounts of water.
Question 20	5-3.6: What is pollution and how has it affected our environment?	Pollution is an unwanted change in an environment. Chemicals, trash, and run off have caused changes in our oceans and land that are killing many species.
Question 21	5-4.1: What is matter? How big is it?	Matter is anything that has mass and takes up space. It can be microscopic or larger than your house.
Question 22	5-4.2: Compare the movement and spacing of particles in a solid, liquid, and gas?	Particles are close together in a solid and move a little. Particles in a liquid move more than particles in a solid and they are not as close together as particles in a solid. Particles in a gas move freely and they take up as much space as possible.
Question 23	5-4.2: What is volume?	The amount of space an object takes up. It is a physical property.
Question 24	5-4.3: What is a mixture?	A mixture is two or more types of matter that are mixed together but keep their own properties.
Question 25	5-4.3: What is a solution?	A type of mixture in which one or more types of matter are mixed evenly in another kind of matter.
Question 26	5-4.4: How can you use chromatography to separate a liquid mixture?	Chromatography will separate a mixture based on weight. Different substances in a solution have different weights. You can separate a liquid mixture by putting filter paper in the mixture. The heavier parts will not travel up the filter paper as far as the lighter parts of the mixture.
Question 27	5-4.4: How can you use evaporation to separate a sugar solution?	Put the solution in a warm or heated area. The water will evaporate off leaving the sugar behind.
Question 28	5-4.5: How does the amount of solute and solvent in a solution determine the concentration?	The more solute there is the higher the concentration of a substance. The more solvent there is the lower the concentration. Think of adding solvent as watering down a drink you might have.

Question 29	5-4.6: Explain how a change in temperature and stirring of a solution will affect the rate that the particles dissolve.	The higher the temperature the quicker things dissolve because at higher temperature particles are moving faster. Also if you stir something up you are causing a faster movement and particles will dissolve faster then too.
Question 30	5-4.6: How does particles size affect the rate of dissolving?	The smaller the particle size the quicker something will dissolve.
Question 31	5-4.7: What is a chemical change?	It is when a substance changes into a new substance. This new substance can be from combining other substances. This new substance also now has its own physical properties and can not be separated using physical methods.
Question 32	5-4.8: Explain how the mixing and dissolving of foreign substances is related to the pollution of the water, air, and soil.	Pollution or harmful substances in our environment result from the mixing and dissolving of foreign substances in water, air, and soil. These harmful substances are often produced as a result of activities associated with industry, agriculture, burning fossil fuels, or other processes associated with human activities.
Question 33	5-5.1: What is force?	Any push or pull that makes an object start moving, stop moving, speed up, slow down, or change direction.
Question 34	5-5.1: What is magnetism and how do the different poles of a magnet affect each other?	<i>Magnetism</i> is a force that acts at a distance and cannot be seen. Materials that create this force are said to be magnetic and are called magnets. The needle of a compass moves because of Earth's <i>magnetism</i> . When like poles of magnets are near each other, a repulsive force exists, and the magnets <u>move away</u> from each other if the force is great enough. When opposite poles of magnets are near each other, an attractive force exists and the magnets <u>move toward</u> each other if the force is great enough. The closer the objects, the greater the magnetic force.

Question 35	5-5.1: Describe gravity as a force and address when you notice the effects of gravity the most.	The force of <i>gravity</i> is a pull that attracts objects to each other. This attraction is not noticeable unless one of the objects is very large, for example a planet, moon, or the Sun. The force of gravity between Earth and anything on it is extremely noticeable because the mass of Earth is so large. The pull of Earth's gravity makes any object fall to the ground. As The Moon goes around Earth, its gravity pulls on Earth causing water in the oceans to move toward the Moon
Question 36	5-5.1: Explain what friction is and how it affects movement; also address what can affect the amount of friction on an object.	<i>Friction</i> is the force that opposes motion between two surfaces that are touching. The rougher the surfaces are, and the harder they press together, the more friction there will be. Friction can be reduced by using lubricants for example motor oil, wax, or grease, by making surfaces smoother, or by using rollers.
Question 37	5-5.2: What three things must you use to describe the motion of an object?	Position, direction , and speed
Question 38	5-5.2: What is the definition of speed?	<i>Speed</i> is a measure of how fast an object is moving NOTE TO TEACHER: Students should be able to measure the distance specific objects move in a given time. They can then determine if an object is speeding up or slowing down, and they can also compare the relative speeds of different moving objects.
Question 39	5-5.2: What is the definition of position?	The <i>position</i> of an object is its location relative to another object (the reference point) for example "above", "below", "beside", "behind", "ahead of" plus the distance from the other object. The distance (length) from the reference point changes when the object moves.

Question 40	5-5.2: What is the definition of direction?	<i>Direction</i> of motion can be determined by reading a compass. Students should give directions using the terms “north”, “south”, “east”, or “west.” shown by the needle of a compass lined up with the direction of the moving object. They should also describe the direction of motion by using the terms “right”, or “left” relative to another object, or “up”, or “down” relative to Earth.
Question 41	5-5.3: What is an unbalanced force? What can it cause and what can it affect?	Unbalanced forces occur when one force is greater than its opposite force. Unbalanced forces acting on an object cause the object’s motion to speed up, slow down, or stop. Unbalanced forces cause a non-moving object to start moving
Question 42	5-5.3: How can unbalanced forces affect the rate of motion?	<i>Rate of motion</i> is the speed of the object or how fast or slow the object is moving. Unbalanced forces can cause the speed or the rate of motion to change by increasing, decreasing, or stopping the motion
Question 43	5-5.3: How can an unbalanced force affect the direction that an object is traveling?	If the total force, everything that is pushing or pulling on the object, acting on an object is “unbalanced,” the forces acting on an object are not equal in all <i>directions</i> . Thus, the unbalanced force causes a change in the <i>direction</i> of the motion as follows: The object <i>moves away</i> from the unbalanced force if it is a <i>push</i> , or <i>toward</i> the unbalanced force if it is a <i>pull</i> . The object will move in the <i>direction</i> of the greatest force acting on it.
Question 44	5-5.4: Name the three things that can affect friction	Texture of surfaces, amount of surface area, and lubrication
Question 45	5-5.4: How does the texture of a surface affect friction?	The <i>rougher the surface</i> , the greater the friction. <i>Smooth surfaces</i> reduce friction. Carpets have more friction than tile floors. Soles of shoes have rough textures to increase friction between the shoes and the floor so that it is possible to walk without slipping
Question 46	5-5.4: How does the amount of surface area affect friction?	The greater the <i>surface area</i> , the greater the friction. If more surface of an object touches another object, the friction will be greater. If tires of a car or truck are larger, more surface area of the tire will touch the road making friction greater. Trucks have larger tires to make it easier for them to stop or slow down.

Question 47	5-5.4: How does lubrication affect friction?	<i>Lubrication</i> , for example oil or grease, reduces the effects of friction. Without lubrication, moving parts of machines would slow down or stop very quickly
Question 48	5-5.5: In examining a graph of the speed of an object, would an object moving faster have a steeper slope than an object moving slower?	<p><i>Slower speed</i> The line on the position vs. time graph below (Graph A) is a <i>flatter</i> line than the line on Graph B; therefore, the line on Graph A is illustrating a <i>slower speed</i> than the line on Graph B.</p> <p style="text-align: center;">Graph A</p>  <p><i>Faster Speed</i> The line on Graph B below is a <i>steeper</i> line than the line in Graph A; therefore, the line on Graph B is illustrating a faster speed than in Graph A.</p> <p style="text-align: center;">Graph B</p> 
Question 49	5-5.6: How can a change in force affect the motion of an object?	As the <i>force</i> increases, the speed of an object increases. As the force applied to an object is decreased, the object will move slower than the object that was given a greater push or pull. If there is no friction (for example, in outer space), an object that is already moving does not need a force to keep it moving. Because of friction, however, an object slows or stops eventually.
Question 50	5-5.6: How can a change in mass affect the motion of an object?	As the <i>mass</i> increases, the speed of an object decreases if the force remains the same. The speed decreases as the object's mass increases. It is much harder to change the speed of a heavy object than a light object. An object with a small mass is easier to stop or cause a change in motion than an object with a large mass

Question 51	5-3.2: What is an ocean trench?	Ocean <i>trenches</i> are the deepest part of the ocean basin and are deeper than any valley found on land.
Question 52	5-2.3: Name two types of terrestrial ecosystems.	forests and grasslands
Question 53	5-2.3: Name the types of aquatic ecosystems. Put them into the category of either freshwater or saltwater.	Fresh water: ponds and lakes Saltwater: oceans, estuaries and saltwater marshes
Question 54	5-2.3: Compare and contrast biotic and abiotic factors.	<ul style="list-style-type: none"> • Examples of biotic factors are the types and numbers of organisms living in the ecosystem. • Examples of abiotic factors are amount of sunlight, temperature, soil, nutrients, salinity, water clarity, or depth, all of which affect the variety and abundance of species.