

Science: 'Beat the forgetting curve'

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Science: Why is the left ventricle more muscular than the right?	It must pump the blood around the entire body.
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Science: What is kinetic energy?	The moving energy of an object
Science: What is efficiency?	The proportion of transferred energy that is useful
Science: What is transpiration?	The movement of water in one direction to all parts of the plant.
Science: What type of blood vessel does blood leave the heart via	Artery - Pulmonary artery - Aorta
Science: Who suggested the plum pudding model of the atom and which scientist disproved it?	J.J. Thomson Ernest Rutherford
Science: Name one difference between an animal and plant cell	Plant: cell wall, vacuole or chloroplast
Science: What is the equation for photosynthesis?	Carbon dioxide + water → Glucose + Oxygen $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$

Science: What happens to the temperature in an exothermic reaction?	Temperature increases
Science: Why is a polystyrene cup used in an energy change reaction?	Prevents energy transfer to the surroundings
Science: What is the difference between a scalar and a vector?	Scalar - Size (magnitude) only Vector - Size (magnitude) and direction
Science: Which type of radiation is the least penetrating?	Alpha
Science: If the forces on an object are balanced, what could the object be doing?	Moving at a constant speed OR stationary.
Science: Why did Mendeleev leave spaces in his periodic table?	1. For undiscovered elements. 2. To make groups have similar properties.
Science: How is the modern periodic table arranged?	In order of atomic number.
Science: What is the function of the cell wall in a plant?	For support.
Science: What are the 4 types of pathogen that can cause disease?	Virus, bacteria, fungi and protist
Science: What pathogen is responsible for malaria? What is the vector?	Pathogen - Protist Vector - mosquito
Science: What pH value would you expect a strong acid to have?	pH 1-3
Science: What salt would be made with the following acids? Hydrochloric? Sulphuric? Nitric?	Hydrochloric - Chloride Sulphuric - Sulphate Nitric - Nitrate
Science: On a distance vs. time graph - What would a horizontal line represent?	The object is stationary
Science: What is the equation for Photosynthesis?	
Science: What factors limit the rate of Photosynthesis?	Light intensity, Carbon Dioxide concentration, Temperature, Chlorophyll
Science: What is needed for a chemical reaction to happen (Collision Theory)?	1. Particles must collide 2. They must have enough energy to react (the activation energy)
Science: What are the charges of; Protons Neutrons Electrons	Protons +1 Neutrons 0 Electrons -1

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Science: What is the word equation for photosynthesis?	carbon dioxide + water $\xrightarrow{\text{light energy}}$ glucose + oxygen.
Science: What is the word equation for aerobic respiration?	glucose + oxygen $\rightarrow$ carbon dioxide + water + energy (ATP)
Science: How do you calculate the relative formula mass of a compound?	Add the relative atomic masses of each element together.
Science: What is an acid and what is an alkali?	An acid donates hydrogen ions. An alkali accepts hydrogen ions
Science: How do you find the volume of an irregular shaped object?	You fill a eureka can up to the outflow spout with water. Lower the object slowly on a piece of string into the water. Collect the displaced water in a measuring cylinder. This is the volume of the object.
Science: What is the difference between an animal and plant cell?	Cell wall, chloroplasts, vacuole all present in plant not animal cells
Science: What are the adaptations of a root hair cell?	Increased surface area, increased mitochondria, large vacuole.
Science: What is ionic bonding?	Atoms lose electrons and become positive and negative ions. Opposite charges attract and bond.
Science: What is 1 dm ³ in cm ³	1000
Science: How many forces are acting on you while you sit still in your seat?	2
Science: Which gland produces oestrogen?	Ovaries
Science: Which hormones trigger ovulation?	LH
Science: What is the reactivity series of metals?	A list of metals in order of most reactive to least reactive
Science: What are the two electrodes called	Cathode and Anode

when carrying out electrolysis?	
Science: What is an alpha particle and what is its charge	2 protons and 2 neutrons (helium nucleus) 2+
Science: What is the half life of a radioactive element	The time taken for half the radioactive nuclei to decay
Science: Why can't you treat measles with antibiotics?	It is a virus
Science: Where does protein synthesis take place?	Ribosomes
Science: In which type of reaction is energy absorbed from the surroundings?	Endothermic
Science: In which type of reaction is energy released to the surroundings?	Exothermic
Science: If an object is stationary on earth how many forces are acting on it?	Two - weight and reaction
Science: What is acceleration?	The rate of change of velocity
Science: Is photosynthesis an endothermic or exothermic reaction?	Endothermic as light energy is needed for the reaction to take place.
Science: Is respiration an endothermic or exothermic reaction	Exothermic as energy is released by the reaction
Science: Explain how concentration affects rate of reaction.	More particles in the same volume. Greater frequency of successful collisions
Science: Explain how a catalyst affects the rate of reaction.	It lowers the activation energy of the reaction by providing an alternative route
Science: Define velocity	Rate of change of displacement
Science: Define acceleration	Rate of change of velocity
Science: Plants move mineral ions from a low concentration in the soil to a high concentration in the root cells. What is this process called?	Active Transport
Science: What do animals compete for in an ecosystem?	Space (territory), food, water, mates (reproduction)
Science: What is the process called when a liquid turns into a gas?	Evaporation
Science: What is electrolysis?	Using electrical current to cause a reaction
Science: What is the difference between an exothermic reaction and an endothermic reaction?	Exothermic - transfers energy to the surroundings Endothermic - takes energy from the surroundings
Science: What are renewable and non-renewable energy resources? Give some examples of each.	Renewable - they will not run out and can be renewed (eg, Solar, Wind, Hydro-electric, Geothermal)

	Non-renewable - they will run out eventually (eg, Coal, Oil, gas)
Science: What are the three types of radioactive decay and how are they different?	Alpha - 2 protons and 2 neutrons, 2+ charge, travels very short distance, highly ionising. Beta - High energy electron, 1- charge, travels further than alpha, less ionising. Gamma - Electromagnetic wave, 0 charge, travels 100s of metres.