

Self-assessment

NAME: _____

TEACHER: _____

FORM: _____



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Topic 1a How science works	Check 1	Check 2	Check 3	Check 4
I can explain why science lessons are conducted in a science lab rather than a normal classroom				
I can define risk				
I can define hazard				
I can define precaution				
I can describe a Bunsen Burner				
I can state which flame is the safety flame				
I can state which flame is used for heating				
I can list precaution that should be taken when using a Bunsen Burner				
I can convert from cm ³ to dm ³				
I can name the apparatus used for measuring temperature				
I can state the conventions for recording results				
I can describe how to correctly read a thermometer				
I can explain what scientists do				
I can describe how to make observations				
I can define a hypothesis				
I can define a prediction				
I can explain why conventions are used in science				
I can list the sections in a lab report				

Topic 1b Energy, matter and particles	Check 1	Check 2	Check 3	Check 4
I can define matter				
I can define volume				
I can define mass				
I can explain what matter is made up of				
I can describe particles				
I can define atom				
I can define a molecule				
I can define a bond				
I can give an example of a particle				
I can define energy				
I can state the stores of energy				
I can describe chemical energy				
I can describe kinetic energy				
I can state how kinetic energy is measured				
I can describe gravitational potential energy				
I can describe elastic potential energy				
I can describe how energy is transferred				
I can describe conservation of energy				
I can recall the conventions for drawing energy transfer diagrams				
I can recall the name given to the curve up the sides of a container made by water				
I can describe how to correctly 'read' a measuring cylinder				
I can explain why group work is important in science				
I can define independent variable				
I can define dependent variable				
I can explain why graphs and charts are used in science				
I can explain why bar graphs are used in science				
I can state which variable goes on the x axis				
I can state which variable goes on the y axis				
I can state the rules to follow when drawing the bars on a bar chart				
I can define force				
I can state the unit for measuring forces				
I can define a contact force				
I can define a non-contact force				
I can describe how particles in a solid are arranged				
I can describe how the particles in a liquid are arranged				
I can describe how the particles in a gas are arranged				
I can describe how the particle model explains the properties of a solid				
I can describe how the particle model explains the properties of a liquid				
I can describe how the particle model explains the properties of a gas				
I can state the meaning of 'change of state				
I can state the terms used for changes of state				
I can explain why changes of state occur				

I can explain why the internal temperature of the particles not change during a change of state				
I can use the particle model to explain changes of state				
I can define expansion and contraction				
I can use the particle model to explain expansion and contraction				
I can define density				
I can use the particle model explain density changes				
I can explain why the density of liquid water higher than that of solid water				
I can define Brownian motion				
I can define diffusion				
I can describe how concentration affects the rate of diffusion				

Topic 2 Forces	Check 1	Check 2	Check 3	Check 4
I can define force				
I can define a contact force				
I can define friction				
I can describe how to increase friction				
I can describe how to reduce friction				
I can define air resistance				
I can define water resistance				
I can define upthrust				
I can define a non-contact force				
I can describe gravity				
I can describe static electricity				
I can describe magnetism				
I can recall the unit for measuring forces				
I can define weight				
I can explain how mass and weight are different				
I can recall the units for mass				
I can describe balanced forces				
I can describe unbalanced forces				
I can show balanced and unbalanced forces diagrammatically				
I can describe resultant forces				
I can calculate resultant forces				
I can state another way of saying the forces are balanced				
I can give some examples of forces in equilibrium				
I can describe how balanced forces affect motion				
I can describe how unbalanced forces affect motion				
I can describe top speed				
I can describe relative speed				
I can define speed				
I can recall the units for time				
I can calculate speed				
I can describe mean(average) speed				
I can describe what a steep gradient on a distance-time graph shows				
I can describe what a shallow gradient on a distance time graph shows				
I can describe what a horizontal line on a distance-time graph shows				

Topic 3 Atoms, molecules and mixtures	Check 1	Check 2	Check	Check 4
I can describe an atom				
I can define a subatomic particle				
I can name the three subatomic particles				
I can describe how the subatomic particles are arranged in an atom				
I can define charge				
I can state the charges of protons, neutrons, and electrons				
I can explain the variety of atoms				
I can use a periodic table to state the proton (atomic) number and mass number of an atom				
I can calculate the proton number for different atoms				
I can explain why conventions are used to represent atoms as symbols				
I can define an element				
I can use the periodic table to find the symbol representing an atom				
I can state the chemical symbols for oxygen, carbon, hydrogen, calcium, chlorine, magnesium, sodium				
I can define a molecule				
I can describe a chemical bond				
I can define a compound				
I can represent atoms and molecules as particle diagrams				
I can define a property				
What is a property?				
I can explain why an initial input of energy is needed in order for a chemical reaction to take place				
I can explain how compounds get their names				
I can define a pure substance				
I can define a mixture				
I can describe how to identify a pure substance				
I can define a suspension				
I can name some examples of suspensions				
I can describe how to separate suspensions				
I can describe filtration				
I can define a colloid				
I can name some colloids				
I can describe how to separate substances in a colloid				
I can define a solution				
I can describe what happens when a solute dissolves				
I can define a solvent				
I can define a solute				
I can define solubility				
I can state the factors that affect solubility				
I can name the apparatus used for filtration				
I can state the principle behind filtration				
I can name the apparatus is used for evaporation				

I can state the principle behind evaporation				
I can describe how to collect a solute from a solution				
I can state when distillation is used				
I can explain how distillation separates a mixture				
I can state the principle behind chromatography				
I can explain how chromatography can be used to tell if a substance is pure or a mixture				
I can describe some further uses for chromatography				
I can define acids and alkalis				
I can describe the tests for acids or alkalis				
I can name some examples of acids or alkalis				
I can explain how neutralisation occurs				
I can state the products of neutralisation reactions				
I can give some uses of neutralisation				

Topic 4 Chemical reactions 1	Check 1	Check 2	Check 3	Check 4
I can describe the features of a physical change				
I can explain how a chemical change different to a physical change				
I can define a chemical reaction				
I can explain how elements can be changed into compounds				
I can state observations that are proof of chemical reactions				
I can define a word equation				
I can define reactants				
I can define products				
I can define a molecular substance				
I can name five molecular substances				
I can describe a chemical formula				
I know what the small numbers in a chemical formula represent				
I can state the chemical formula for hydrogen				
I can state the chemical formula for oxygen				
I can state the chemical formula for water				
I can the chemical formula for methane				
I can state the chemical formula for carbon dioxide				
I can state the chemical formula for nitrogen				
I can define air				
I can define a symbol equation				
I can explain how to balance an equation				
I can state the law of conservation of mass				
I can define photosynthesis				
I can state the reactants of photosynthesis				
I can state the products of photosynthesis				
I can represent photosynthesis with a word equation.				
I can represent photosynthesis with a symbol equation.				
I can state the type of chemical reaction that is photosynthesis				
I can explain why plants photosynthesise				
I can state where the energy needed for photosynthesis comes from				
I can explain where is the energy transferred to				
I can define aerobic respiration				
I can explain what 'aerobic' means				
I can state the reactants of respiration				
I can state the products of respiration				
I can represent respiration with a word equation.				
I can represent respiration with a symbol equation.				
I can explain what type of chemical reaction respiration is				
I can explain why does respiration occurs				
I can explain where the energy is released from				

Topic 5 Cells	Check 1	Check 2	Check 3	Check 4
I can name the life processes				
I can define a cell				
I can describe how atoms and cells are linked				
I can define organelles				
I can state the function of the cytoplasm				
I can state the function of the nucleus				
I can define DNA				
I can state the function of cell membrane				
I can state the function of the mitochondria				
I can state the word equation for aerobic respiration				
I can state the function of the cell wall				
I can state the function of the permanent vacuole				
I can state the function of the chloroplast				
I can state the word equation for photosynthesis				
I can describe the differences between animal and plant cells				
I can describe eukaryotic cells				
I can describe prokaryotic cells				
I can give examples of eukaryotes and prokaryotes				
I can name seven organelles found in bacteria.				
I can describe the relative sizes of eukaryotes and prokaryotes				
I can explain what is meant by the range of values				
I can explain the benefit of having a higher IV range				
I can explain the benefit of having more intervals between the values for the IV				
I can describe extrapolation				
I can describe interpolation				
I can explain how to maintain the temperature of a manual water bath				
I can explain how to improve the quality of my data				
I can define a specialised cell				
I can define differentiation				
I can state the function of a nerve cell				
I can describe how nerve cells are specialised				
I can state the function of a muscle cell				
I can describe how muscle cells are specialised				
I can state the function of a sperm cell				
I can describe how sperm cells specialised				
I can describe the function of a root hair cell				
I can describe how root hair cells are specialised				
I can describe the function of a photosynthetic cell				
How are photosynthetic cells specialised?				
I can explain why a microscope specimen must be thin				
I can explain why a stain must be used				
I can explain how to remove bubbles from the slide				
I can explain how to make an image clearer				
I can calculate total magnification				
What is a tissue?				
What is an organ?				
What is an organ system?				

Topic 6 Reproduction	Check 1	Check 2	Check 3	Check 4
I can name the life processes				
I can define reproduction				
I can state the two types of reproduction				
I can explain what happens during sexual reproduction				
I can define a zygote				
I can define fertilisation				
I can state the function of the nucleus				
I can define gametes				
I can state where gametes are produced				
I can explain how sperm cells are specialised				
I can state the two types of fertilisation				
I can define an organ system				
I can describe the male reproductive system				
I can state the function of the testes				
I can state the function of the scrotum				
I can state the function of the sperm ducts				
I can state the function of the glands				
I can state the function of the urethra				
I can state the function of the foreskin				
I can describe the female reproductive system				
I can state the function of the ovaries				
I can state the function of the oviduct				
I can state the function of the uterus				
I can state the function of the cervix				
I can state the function of the vagina				
I can define puberty				
I can define hormones				
I can describe the main changes that happen during puberty				
I can state when sperm is produced				
I can state when eggs are released				
I can define ovulation				
I can define the menstrual cycle				
I can describe menstruation				
I can state when the menstrual cycle stops				
I can explain the reasons behind the choice of apparatus for measuring				
I can define precision				
I can explain how minutes and seconds converted to seconds				
I can explain why there are often slight variations in repeat readings				
I can define sexual intercourse				
I can define an erection				
I can define ejaculation				
I can state where the sperm travels to				
I can describe fertilisation				
I can explain why the baby will have features from both the mother and father				
I can define implantation				
I can define an embryo				

I can define amniotic fluid				
I can define the amnion				
I can define the placenta				
I can name the nutrients that are passed into the embryo's blood via the placenta				
I can explain why the embryo needs oxygen and nutrients				
I can name the waste removed by the placenta				
I can explain why carbon dioxide is produced as waste				
I can explain why the mother's blood does not mix directly with the baby's blood				
I can explain how the embryo's blood travels to and from the placenta				
I can define the gestation period				
I can state how long the gestation period in humans is				
I can define a foetus				
I can describe how the mother's lifestyle can affect the foetus				
I can name substances that affect the foetus				
I can describe how smoking affects the foetus				
I can define labour				
I can define contractions				
I can name the stages of birth				
I can define the afterbirth				
I can explain why babies are fed milk				
I can define antibodies				