

KS3 SCIENCE

BROCKINGTON COLLEGE

ABILITY BAND AND ASSESSMENT POINT DESCRIPTORS

KS3 Science Year 7 AP1

Biology
 Chemistry
 Physics
 Scientific literacy (SL)

Ability Band 3	Ability Band 2	Ability Band 1
<ul style="list-style-type: none"> Recognise that viruses are not cells and describe how some cells in an organism are specialised to carry out particular functions (7A) Estimate sizes of specimens viewed under the microscope and justify the sample chosen in an investigation of pollen tubes (7A) The main developmental changes at each stage in the life cycle (7B) To describe the process of menstruation and relate it to hormone cycles (7B) 	<ul style="list-style-type: none"> Recognise that all organisms are made from cells and name some parts of a cell (7A) Relate drawings to observations made using a microscope and describe what they found out from their investigation (7A) State the functions of key parts of the reproductive system (7B) Describe the role of the placenta, umbilical cord and amniotic sac (7B) 	<ul style="list-style-type: none"> Identify and name features of cells and describe some differences between plant and animal cells (7A) Make observations using a microscope and record them in simple drawings (7A) Names the common parts of the male and female reproductive system (7B) Know the length of pregnancy and describe the changes in the foetus (7B)
<ul style="list-style-type: none"> Use the particle model to compare explanations of phenomena and evaluate whether evidence supports or refutes them (7G) Use the particle model to explain a range of phenomena (7H) 	<ul style="list-style-type: none"> Use the particle model to classify materials as solids, liquids or gases and explain the classification of some 'difficult materials' (7G) Classify materials as solid, liquid or gas and recognise that materials are made of particles (7H) Name some soluble and insoluble solids; describe how pure water can be obtained from sea water (7H) 	<ul style="list-style-type: none"> Classify materials as solid, liquid or gas and recognise that materials are made out of particles (7G) Using the particle model, classify materials as solid, liquid or gas (7H)
<ul style="list-style-type: none"> Compare the advantages and disadvantages of different energy resources. (7I) Describe energy transfer links between the Sun, energy resources and themselves. (7I) Relate voltage of cells and batteries to energy transfer in circuits. (7J) Use a flow model to explain the difference between electric current and energy transfer. (7J) Apply the idea that nerves are electrical conductors to explain electrical hazards (7J) 	<ul style="list-style-type: none"> Describe how renewable energy resources can be used to generate electricity. (7I) Explain why conservation of fuels is important. (7I) Construct a range of working electrical circuits and represent these in circuit diagrams. (7I) State that electric current is the same at all points in a series circuit and divides along the branches of a parallel circuit. (7J) Compare and contrast the advantages of series and parallel circuits in use. (7J) 	<ul style="list-style-type: none"> Name a range of fuels. (7I) Name some renewable energy resources. (7I) Identify energy transfers in some systems. (7I) Construct simple electrical circuits and represent these with a circuit diagram. (7J) Give examples of useful circuits. (7J) State safety rules for using electricity. (7J)

KS3 Science Year 7 AP1 (continued)

Ability Band 3	Ability Band 2	Ability Band 1
<ul style="list-style-type: none">• Can apply own knowledge and understanding to a range of contexts including unfamiliar situations.• Can produce (unaided) precise plans for an investigation.• Can explain conclusions using a high level of scientific language.• Can evaluate their investigations and produce structured reports.• Can apply their scientific knowledge from other investigations to plan an investigation.	<ul style="list-style-type: none">• Can explain their conclusions using the evidence collected and using their own knowledge and understanding of science.• Can carry out an investigation using equipment accurately and repeating results.• Can make predictions using their own scientific knowledge.• Can plan (with guidance) investigations.• Can identify key factors that need to be considered in an investigation.• Can draw line graphs to explain what happened in an experiment.	<ul style="list-style-type: none">• Can select the correct equipment and record results in a table.• Can follow a method and gain some results.• Can design a fair test to answer some questions that arise from their work in science.• Can draw conclusions and relate it to their own knowledge and understanding.• Can draw simple graphs.

KS3 Science Year 7 AP2

Ability Band 3	Ability Band 2	Ability Band 1
<ul style="list-style-type: none"> Recognise that inherited and environmental causes of variation cannot be completely separated. (7D) Name some organisms which are not readily classified as a plant or animal. (7D) Explain why a variety of habitats is needed in a community (7C) Describe how different organisms contribute to the community in which they are found and relate food chains to energy transfer (7C) 	<ul style="list-style-type: none"> Identify similarities and differences between organisms of the same species and classify organisms into animals and plants. (7D) Identify a few taxonomic groups of animals. (7D) Identify differences between different habitats and describe how familiar organisms are suited to the habitat in which they are found; describe some simple food chains (7C) 	<ul style="list-style-type: none"> Identify differences between different habitats and relate these to the organisms found in them (7C) Describe food chains within an environment and combine these into food webs (7C) Identify similarities and differences in organisms of the same species and attribute these to environmental or inherited factors. (7D) Explain the importance of classifying things (7D) Identify the main taxonomic groups of animals and describe some features of these. (7D)
<ul style="list-style-type: none"> Explain how a neutral solution can be obtained and relate the pH of an acid or alkali to its hazards and corrosiveness (7E) Predict that carbon dioxide and water will be made when hydrocarbons burn and use word equations to represent reactions in which materials burn (7F) 	<ul style="list-style-type: none"> Describe how to deal with hazards. Classify solutions using indicators and pH values. Describe everyday uses of neutralisation (7E) Identify new materials formed during a chemical reaction. Generalise that hydrogen is formed when acids react with metal, carbon dioxide is formed when acids react with carbonates. Describe tests for carbon dioxide and hydrogen (7F) 	<ul style="list-style-type: none"> Name some common acids and alkalis stating some everyday uses. Describe some hazards of acids and alkalis (7E) Describe some hazards of acids and of burning (7F)
<ul style="list-style-type: none"> Describe how weight is caused by gravity and how gravity is different on the Earth and on the Moon. (7K) Explain contact friction in simple terms. (7K) Explain, using models, patterns or associations in data about the Earth and other planets in the solar system (7L) Make comparisons between the Sun and other stars (7L) 	<ul style="list-style-type: none"> Identify directions in which forces act. (7K) Describe situations in which forces are balanced. (7K) Distinguish between mass and weight. (7K) Describe some ways of reducing friction and some situations in which friction is useful. (7K) Describe how the Moon orbits the Earth and the Earth spins while orbiting the Sun (7L) Identify some differences between features of the Earth and other planets (7L) 	<ul style="list-style-type: none"> Identify forces, <i>eg friction, upthrust and weight.</i> (7K) Recognise that friction opposes motion. (7K) Know that upthrust pushes upwards and weight pulls downwards. (7K) Describe the relative positions of the planets and their conditions compared to Earth (7L) State that the Sun is a star and that stars are light sources, while planets and other objects in the solar system reflect light (7L)

KS3 Science Year 7 AP2 (continued)

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