

My target level

Topic	Objective	Level	R 	A 	G 
Biology					
Respiration	Know how oxygen and glucose are transported around the body	4			
	Describe differences between inhaled and exhaled air	4			
	Describe aerobic respiration	5			
	Explain differences between inhaled and exhaled air	5			
	Use a word equation to represent the process of aerobic respiration	6			
	Use a symbol equation to represent the process of aerobic respiration	7			
	Describe the features of alveoli that make them good at gas exchange	7			
Variation and Inheritance	Know what inheritance means	3			
	Know what characteristics are	3			
	Know that sexual reproduction needs two parents	3			
	Identify some inherited characteristics	4			
	Identify some characteristics that are caused by the environment	4			
	I can describe sexual reproduction as the joining of two cells	4			
	Know that sex cells are called gametes	4			
	Know how sexual reproduction results in genetic information being inherited from both parents	5			
	Identify characteristics that are affected by genetics and environmental conditions	5			
	I can describe how selective breeding can result in offspring with particular characteristics	6			
	Know that asexual reproduction needs one parent	7			
	Know that asexual reproduction produces clones	7			
	I can illustrate how gender is inherited	7			



Microbes and Disease	I can name some diseases which can be caught from other people	3			
	I know jabs are a way of protecting against some diseases	3			
	I know what a 'microbe' is	4			
	I know not all microbes are harmful	4			
	I know how microbes can enter the body	4			
	I know that immunisation is possible to protect against some diseases	4			
	I can name some infectious diseases and describe how they can be transmitted	5			
	I can describe the role of immunisation (even 'good' drugs can be harmful if misused)	5			
	I can classify bacteria, fungi and viruses as micro-organisms, name some of the diseases they can cause and describe how they can be transmitted	6			
	I know that diseases are caused when microbes get into body cells and reproduce. Symptoms appear when enough microbes have grown	6			
	I can describe some of the defences the body has against disease	6			
	I recognise the difference between the effect of antibodies on bacteria and viruses	6			
	I know how immunisation can improve immunity and can describe how antibiotics may be – specific and non specific	7			
	I understand how resistance to antibiotics may occur	7			
I know how the body also combats disease by producing antibodies	7				

Chemistry					
The Rock Cycle	I know that there are different sorts of rocks and can describe basic properties from observations	3			
	I can name the three types of rock and give at least one example of each	4			
	I can describe some characteristics of each rock type	4			
	I can explain that high temperature and pressure can change existing rocks into different types of rocks	4			
	I can describe and explain how sediment becomes sedimentary rock	5			
	I can describe the conditions under which metamorphic rock is formed and how igneous rocks crystallise from magma	5			



The Rock Cycle	I can describe some distinctive features of igneous, sedimentary and metamorphic rocks and use these to distinguish between the rock types	5			
	I know that rain can be acidic and this weathers rock	5			
	I know that water expands when frozen and understand this causes weathering	5			
	I can relate crystal size to rate of cooling	6			
	I understand the rock cycle	6			
	I can describe some effects of weathering and recognise sedimentary layers	6			
	I can explain in terms of the particle model how different rates of cooling lead to different crystal sizes	7			
	I can bring together physical and chemical processes to explain the formation of different rock types and the rock cycle	7			

Physics

Energy and Electricity	Name some renewable energy resources	3			
	Know two things that are released when fuels are burnt	4			
	List the eight forms of energy	4			
	Identify which sort of energy an object has, or is using	5			
	Describe how renewable energy resources can be used to make electricity	5			
	Describe some energy transfers including some which involve living things	5			
	Describe how energy is transferred between the Sun and energy resources (e.g. how the energy got into coal)	6			
	Make a simple circuit that includes a bulb, buzzer, motor or switch	3			
	Draw a simple circuit and know the symbol for a bulb, buzzer, motor and switch	3			
	Know how to measure current	4			
	Know the unit of measurement for current	4			
	Know the difference between a series and parallel circuit	4			
	Know what happens to the current in a series circuit when more bulbs are added to the circuit	4			
	Explain what happens to the current when a switch is in the 'on' and 'off' position	4			
	Know what happens to the current in a parallel circuit	5			
	Know what resistance means	5			
	Know how messages are carried through the nerves in our bodies	5			



Electricity	Know how voltage of cells and batteries affects energy transfer in circuits	6			
	Know how switches can control parallel circuits	6			
	Use a flow model to explain the difference between electric current and energy transfer	7			
	I can describe how electricity is generated by energy from fuels	5			
	I can link an electric generator to magnetic effects	7			
Levers	Know what a lever is	3			
	Know how a see-saw works	3			
	I can describe the effect of increasing the length of the lever has on the turning effect of a force	4			
	I can give an example of this	4			
	Know how to balance a see-saw	4			
	Know how to explain the action of levers	5			
	I can describe the turning effect of a force and use the human skeleton as an example	5			
	I can explain balance, using moments, and give examples, e.g. crane counterweight	6			

Useful websites

Respiration

<http://www.bbc.co.uk/education/guides/zq349j6/revision>

Variation and inheritance

<http://www.bbc.co.uk/education/guides/zp7thyc/revision>

<http://www.bbc.co.uk/education/guides/z9gk87h/revision>

Microbes and Disease

http://www.bbc.co.uk/bitesize/ks3/science/organisms_behaviour_health/disease/revision/3/

The Rock Cycle

http://www.bbc.co.uk/bitesize/ks3/science/environment_earth_universe/rock_cycle/revision/1/

Energy and Electricity

<http://www.bbc.co.uk/education/topics/zc3g87h>

<http://www.bbc.co.uk/education/guides/zsfgr82/revision>

Levers

http://www.bbc.co.uk/bitesize/ks3/science/energy_electricity_forces/forces/revision/8/

Please encourage students to follow us @sciencedeptleaf for revision questions. Prizes for students who come back to us with the answers to the daily questions.

