Switched on Science Year 5

Autumn 1 - Unit 1 - Out of this world

Week	Unit	National Curriculum strand	Activity Title	Subject knowledge Learning outcomes	Working scientifically learning outcomes	Page link	Personal Notes
1	1.1 The Solar System	Earth and Space	What's in our Solar System?	Describe the movement of the Earth, and other planets, relative to the sun in the solar system.	Planning different scientific enquiry to answer questions – research using secondary data.	8	
2	1.1 The Solar System	Earth and Space	Let's make a model Solar System	Describe the movement of the Earth, and other planets, relative to the sun in the solar system.	Planning different scientific enquiry to answer questions – research using secondary data.	9	
3	1.2 Meet the scientists	Earth in Space	What is at the centre of the Solar System?	Describe the movement of the Earth, and other planets, relative to the sun in the solar system.	Identify scientific evidence that has been used to support or refute ideas or arguments. Know about the life and work of scientists – Aristotle, Ptolemy, Copernicus.	12	

4	1.2 Meet the scientists	Earth in Space	Galileo, Galileo!	Describe the movement of the Earth, and other planets, relative to the sun in the Solar System.	Identify scientific evidence that has been used to support or refute ideas or arguments. *To know about the life and work of a scientist – Galileo (not statutory)*	13	
5	1.3 Night and Day	Earth in Space	What makes a month?	Describe the movement of the Moon relative to the Earth.	Identify scientific evidence that has been used to support or refute ideas or arguments.	16	
6	1.3 Night and Day	Earth in Space	What is a time zone?	Use the idea of the Earth's rotation to explain day and night.	To use simple models to explain scientific ideas. *(not in Statutory Requirements)*	17	

Autumn 2 - Unit 2 - Material World

Week	Unit	National Curriculum strand	Activity Title	Subject knowledge Learning outcomes	Working scientifically learning outcomes	Page link	Personal Notes
1	2.1 Why materials matter	Properties and changes of materials	Why that material?	Compare and group together everyday materials on the basis of their properties.	Planning different types of enquiries to answer questions, including recognising and controlling variables where necessary.	22-23	
2	2.1 Why materials matter	Properties and changes of materials	Foamy fun	Compare and group together everyday materials on the basis of their properties.	Planning different types of enquiries to answer questions, including recognising and controlling variables where necessary.	24-25	
3	2.2 Solutions	Properties and changes of materials	Going, going, gone!	Know that some materials will dissolve in liquid to form a solution.	Planning different types of enquiries to answer questions, including recognising and controlling variables where necessary.	28-29	
4	2.2 Solutions	Properties and changes of materials	Mix it up	Use knowledge of solids, liquids and gases to decide how mixtures might be separated,	Planning different types of enquiries to answer questions, including recognising	30-31	

				including through filtering, sieving and evaporating.	and controlling variables where necessary.		
5	2.3 Making changes	Properties and changes of materials	Signs of change	Explain that some changes result in the formation of new materials, and this kind of change is not usually reversible.	Recording data and results using a range of scientific equipment reporting and presenting findings, including conclusions, causal relationships.	34	
6	2.3 Making changes	Properties and changes of materials	Modern accidental discoveries	Explain that some changes result in the formation of new materials, and this kind of change is not usually reversible	*To know about the life and work of scientists –(not statutory)*	37	

Spring 1 - Unit 3 - Circle of life

Week	Unit	National Curriculum strand	Activity Title	Subject knowledge Learning outcomes	Working scientifically learning outcomes	Page link	Personal Notes
1	3.1 Make new plants	Living things and their habitats	Making new plants	Describe the life processes of reproduction in some plants.	Planning different types of enquiries to answer questions, including recognising and controlling variables where necessary.	42	
2	3.1 Make new plants	Living things and their habitats	Taking plant cuttings	Describe the life processes of reproduction in some plants.	Recording data and results using a range of scientific equipment, reporting and presenting findings, including conclusions, causal relationships	43	
3	3.2 Animal behaviour	Living things and their habitats	Metamorphosis	Describe the differences in the life cycles of an insect and a frog.	Planning different types of enquiries to answer questions researching using secondary sources.	46	
4	3.2 Animal behaviour	Living things and their habitats	What came first?	Describe the differences in the life cycles of a bird and a mammal.	Planning different types of enquiries to answer questions researching using secondary sources.	47	

5	3.3 Making babies	Living things and their habitats	Finding a mate	Describe the process of reproduction in some animals.	Record data and results, report and present findings, including conclusions, causal relationships.	50	
6	3.3 Making babies	Living things and their habitats	Endangered animals	Describe the process of reproduction in some animals.	*To know about the life and work of a scientist – Jane Goodall (not statutory)*	51	

Spring 2 - Unit 4 - Let's get moving

Week	Unit	National Curriculum strand	Activity Title	Subject knowledge Learning outcomes	Working scientifically learning outcomes	Page link	Personal Notes

1	4.1 Forces of nature	Forces	Down we go	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	Take measurements (Newton Metres) with increasing accuracy and precision, record data and results. Report and present findings, including conclusions. *To know about the life and work of scientists – Galileo and Isaac Newton (not statutory).*	58	
2	4.1 Forces of nature	Forces	Falling objects	Identify the effects of air resistance that act between moving surfaces.	Plan a fair test recognising and controlling variables where necessary, taking measurements, recording data and results, reporting and presenting findings, including conclusions.	59	

3	4.2 It's a drag!	Forces	Rubbing together	Identify the effects of friction that acts between moving surfaces.	Plan a fair test recognising and controlling variables where necessary, taking measurements, recording data and results reporting and presenting findings, including conclusions.	62	
4	4.2 It's a drag!	Forces	Water resistance	Identify the effects of water resistance that acts between moving surfaces.	Plan a fair test recognising and controlling variables where necessary, taking measurements, recording data and results reporting and presenting findings, including conclusions.	63	
5	4.3 Magnificent machines	Forces	Simple machines	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	Record using diagrams.	66	

6	4.3 Magnificent machines	Forces	Make a machine	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	*To know about the life and work of an inventor and engineer – Rube Goldberg (not statutory).*	67	

Summer 1 – Unit 5 - Growing up and growing old

Week	Unit	National Curriculum strand	Activity Title	Subject knowledge Learning outcomes	Working scientifically learning outcomes	Page link	Personal Notes
1	5.1 Human timeline	Animals, including humans	Cradle to grave	Describe the changes humans develop to old age.		72	
2	5.1 Human timeline	Animals, including humans	Baby boom	Describe the changes humans develop to old age.	Record data, report and present findings.	73	
3	5.2 Growing pains	Animals, including humans	Growing up	Describe the changes humans develop to old age.	Plan different types of scientific enquiry – survey and record data using graphs.	76	
4	5.2 Growing pains	Animals, including humans	Terrible teenagers	Describe the changes humans develop to old age.	Plan different types of scientific enquiry to answer questions – research using secondary sources	77	

5	5.3 Getting old	Animals, including humans	Act your age	Describe the changes humans develop to old age.	Plan different types of scientific enquiry to answer questions – research using secondary sources	80	
6	5.3 Getting old	Animals, including humans	Live forever	Describe the changes humans develop to old age.	Plan different types of scientific enquiry to answer questions – research using secondary sources	81	

Summer 2 - Unit 6 – Super scientists

**** This topic is an additional creative topic and goes beyond National Curriculum requirements.**

Week	Unit	National Curriculum strand	Activity Title	Subject knowledge Learning outcomes	Working scientifically learning outcomes	Page link	Personal Notes
1	6.1 How do scientists work?	Working scientifically	What is a scientist?	Compare everyday materials on the basis of their properties.	Planning different types of scientific enquiry to answer questions.	86	
2	6.1 How do scientists work?	Working scientifically	Discoveries	*To know about the life and work of a forensic scientist – (not statutory).*	Plan different types of scientific enquiry to answer questions – research using secondary sources.	87	
3	6.2 Crime solvers	Working scientifically	Forensic techniques	*To know about the life and work of a forensic scientist – (not statutory).*	Identify scientific evidence that has been used to support or refute ideas or arguments.	90	

4	6.2 Crime solvers	Working scientifically	A crime at school	*To know about the life and work of a forensic scientist – (not statutory).*	Record data and results, report and present findings, including conclusions, causal relationships and explanations.	91	
5	6.3 Spread the word	Working scientifically	Science in the news	*To know about the life and work of a scientist – (not statutory).*	Report and present findings in oral and written forms such as displays and other presentations.	94	
6	6.3 Spread the word	Working scientifically	Science for all	Be able to research different kinds of science activities and share them with other people. *(not – statutory)*	Plan different types of scientific enquiry	95	