Switched on Science Second Edition: Year 1 Topic 1: Lesson Planning

The following is a suggested plan for teaching the Year 1 Science programme of study using Switched on Science Second Edition Year 1. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 1 – Who am I?	1	Identify, name, draw and label the basic parts of the human body.	1. My body apron 2. Dog biscuit skeleton 3. Under the microscope 4. The tallest person	Observe closely, using simple equipment. Identify and classify. Gather and record data to help in answering questions.	Pages 10–12	Activity Resource 1.4
Autumn Term: Topic 1 – Who am I?	2	Say which part of the body is associated with each sense.	1. Smell table 2. Smell pots 3. Stinky socks 4. Smelly herbs 5. Smells outdoors	Observe closely, using simple equipment. Identify and classify. Gather and record data to help in answering questions.	Pages 13–15	
Autumn Term: Topic 1 – Who am I?	3	Say which part of the body is associated with each sense.	1. What's that taste? 2. Favourite tastes 3. Tricking our taste buds	Observe closely, using simple equipment. Identify and classify. Gather and record data to help in answering questions.	Pages 16–17	Activity Resource 1.5
Autumn Term: Topic 1 – Who am I?	4	Say which part of the body is associated with each sense.	1. My eyes 2. Why are eyes important? 3. Senses without sight 4. What is it? 5 Match the eyes 6. Kim's game 7. Helping us to see better?	Observe closely, using simple equipment. Identify and classify. Gather and record data to help in answering questions.	Pages 17–20	
Autumn Term: Topic 1 – Who am I?	5	Say which part of the body is associated with each sense.	1. Using my hands 2. Naming parts of my hands 3. Feely picture 4. Which is best?	Observe closely, using simple equipment. Identify and classify. Gather and record data to help in answering questions.	Pages 20–21	
Autumn Term: Topic 1 – Who am I?	6	Say which parts of the body is associated with each sense.	1. Using our ears to hear 2. Where is the sound? 3. Match the sound	Observe closely, using simple equipment. Identify and classify. Gather and record data to help in answering questions.	Page 22–23	
Assessment	**Smelly herbs** **Sensing without sight**				**Pages 15 and 18**	

Switched on Science Second Edition: Year 1 Topic 2: Lesson Planning

The following is a suggested plan for teaching the Year 1 Science programme of study using Switched on Science Second Edition Year 1. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 2 – Celebrations	1	Say which part of the body is associated with each sense.	1. Introducing candles 2. Observing a candle 3. Bright, brighter, brightest	Observe things using simple equipment. Identify and classify. Use observations and ideas to suggest answers to questions.	Pages 28–29	
Autumn Term: Topic 2 – Celebrations	2	Distinguish between an object and the material from which it is made. Describe the simple physical properties of a variety of everyday materials.	4. In the dark, dark, cave 1. Shadow shapes 2. Hand shadows 3. Make a shadow puppet play	Observe things using simple equipment. Perform simple tests. Use observations and ideas to suggest answers to questions.	Pages 30–31	Activity Resource 2.1
Autumn Term: Topic 2 – Celebrations	2	Say which part of the body is associated with each sense.	1. Introducing candles 2. Observing a candle 3. Bright, brighter, brightest		Pages 28–29	
Autumn Term: Topic 2 – Celebrations	3	Describe the simple properties of a variety of everyday materials.	1. Bottle top clackers 2. Kazoo 3. Ice cube tray xylophone	Perform simple tests.	Pages 32–33	Activity Resource 2.2 Activity Resource 2.3 Activity Resource 2.4
Autumn Term: Topic 2 – Celebrations	4	Describe the simple properties of a variety of everyday materials.	4. Tin can drums	Perform simple tests.	Page 33	Activity Resource 2.5
Autumn Term: Topic 2 – Celebrations	5	Identify and describe the basic structure of a variety of common flowering plants.	1. Which part of the plant is it? 2. Charoset		Pages 34–35	Activity Resource 2.6 Activity Resource 2.7
Autumn Term: Topic 2 – Celebrations	6	Say which part of the body is associated with each sense. Identify and describe the basic structure of a variety of common flowering plants.	3. Chinese spring rolls 4. Stuffed dates 5. A Christingle	Identify and classify.	Pages 35–36	Activity Resource 2.8 Activity Resource 2.9 Activity Resource 2.10
Assessment						

Switched on Science Second Edition: Year 1 Topic 3: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 3 – Polar places	1	Describe the simple physical properties of a variety of everyday materials.	1. Polar places 2. What do we need? Planning a polar adventure 3. How will we get there? 4. Home-school activity	Ask simple questions and recognise that they can be answered in different ways. Identify and classify.	Pages 40–42	Activity Resource 3.2
Spring Term: Topic 3 – Polar places	2	Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple properties.	5. What to wear?! 6. Which material? 7. Investigate! Gloves	Ask simple questions and recognise that they can be answered in different ways. Perform simple tests. Identify and classify. Use their observations and ideas to suggest answers to questions.	Pages 42–44	Activity Resource 3.3
Spring Term: Topic 3 – Polar places	2	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Identify and name a variety of common animals that are carnivores, herbivores and omnivores.	1. Adopt an animal 2. Am I a herbivore, carnivore or omnivore?	Identify and classify.	Pages 45–46	Activity Resource 3.4
Spring Term: Topic 3 – Polar places	3	Identify and name a variety of common animals that are carnivores, herbivores and omnivores.	3. The Big Freeze 4. Camouflage?	Perform simple tests. Identify and classify. Use their observations and ideas to suggest answers to questions.	Pages 46–47	
Spring Term: Topic 3 – Polar places	4	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores.	5. Polar Documentary	Identify and classify.	Page 48	

Spring Term: Topic 3 – Polar places	5		1. Warm me up 2. Soup	Use their observations and ideas to suggest answers to questions.	Pages 49–50	
Spring Term: Topic 3 – Polar places	6		3. Porridge	Use their observations and ideas to suggest answers to question.	Page 50	
Assessment	**Investigate gloves** **The big freeze**				**Pages 43 and 46**	

Switched on Science Second Edition: Year 1 Topic 4: Lesson Planning

The following is a suggested plan for teaching the Year 1 Science programme of study using Switched on Science Second Edition Year 1. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 4 – Plants and animals where we live	1	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.	1. Which plants and animals live here?	Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions.	Page 54	Activity Resource 4.1
Spring Term: Topic 4 – Plants and animals where we live	2	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees.	2. What's my name? 3. Adopt a tree	Observe closely, using simple equipment. Identify and classify. Use their observations and ideas to suggest answers to questions.	Pages 55–56	Activity Resource 4.1 Activity Resource 4.2 Activity Resource 4.3
Spring Term: Topic 4 – Plants and animals where we live	3	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees.	4. Leaves	Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Identify and classify.	Pages 56–57	Activity Resource 4.1 Activity Resource 4.2
Spring Term: Topic 4 – Plants and animals where we live	4	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals including fish, amphibians, reptiles, birds and mammals.	1. Birdwatching	Observe closely, using simple equipment. Identify and classify. Gather and record data to help in answering questions.	Page 58	Activity Resource 4.4

Spring Term: Topic 4 – Plants and animals where we live	5	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals including fish, amphibians, reptiles, birds and mammals.	2. Making bird feeders	Identify and classify. Gather and record data to help in answering questions.	Page 59	
Spring Term: Topic 4 – Plants and animals where we live	6	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores.	3. Which group does the animal belong to?	Identify and classify.	Page 60	Activity Resource 4.5
Assessment	**Which group does the animal belong to?**				**Page 60**	

Switched on Science Second Edition: Year 1 Topic 5: Lesson Planning

The following is a suggested plan for teaching the Year 1 Science programme of study using Switched on Science Second Edition Year 1. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 5 – On safari	1	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	1. Organising safari backpacks 2. We are going on safari	Observe closely, using simple equipment. Identify and classify.	Pages 64–65	Activity Resource 5.1
Summer Term: Topic 5 – On safari	2	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	1. Organising safari backpacks 2. We are going on safari	Observe closely, using simple equipment. Identify and classify.	Pages 64–65	Activity Resource 5.1
Summer Term: Topic 5 – On safari	3	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	1. Observing invertebrates	Observe closely, using simple equipment. Identify and classify.	Pages 66–67	

Summer Term: Topic 5 – On safari	4	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	1. Observing invertebrates	Observe closely, using simple equipment. Identify and classify.	Pages 66–67	
Summer Term: Topic 5 – On safari	5		2. Asking questions	Ask simple questions and recognise that they can be answered in different ways.	Pages 67–68	
Summer Term: Topic 5 – On safari	6		3. Answering our questions	Ask simple questions and recognise that they can be answered in different ways.	Page 68	Activity Resource 5.2
Assessment	**Observing invertebrates** **Answering questions**				**Pages 66–68**	

Switched on Science Second Edition: Year 1 Topic 6: Lesson Planning

The following is a suggested plan for teaching the Year 1 Science programme of study using Switched on Science Second Edition Year 1. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 6 – Holiday	1	Distinguish between an object and the material from which it is made. Compare and group together a variety of everyday materials on the basis of their simple physical properties.	1. Packing a case 2. Sun safety	Identify and classify. Observe closely, using simple equipment. Perform simple tests. Use observations and ideas to suggest answers to questions.	Pages 72–73	
Summer Term: Topic 6 – Holiday	2		3. Keeping cool	Observe closely, using simple equipment. Perform simple tests. Use observations and ideas to suggest answers to questions.	Page 74	Activity Resource 6.1
Summer Term: Topic 6 – Holiday	3	Describe the simple physical properties of a variety of everyday materials.	4. Sunglasses	Perform simple tests. Use observations and ideas to suggest answers to questions.	Pages 74–75	Activity Resource 6.2

Summer Term: Topic 6 – Holiday	4	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	1. Marine biologist 2. Identify marine and seashore animals 3. Marine animal puppets	Gather and record data to help in answering questions. Identify and classify.	Pages 76–77	Activity Resource 6.3 Activity Resource 6.4
Summer Term: Topic 6 – Holiday	5	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	4. Classroom rock pool 5. Seashells	Identify and classify.	Page 78	Activity Resource 6.5
Summer Term: Topic 6 – Holiday	6	Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials including wood, plastic, glass, metal, water and rock.	1. Messy humans	Identify and classify.	Pages 79–80	
Assessment	**Classroom rock pool** **Messy humans**				**Pages 78–80**	

Switched on Science Second Edition: Year 2 Topic 1: Lesson Planning

The following is a suggested plan for teaching the Year 2 Science programme of study using Switched on Science Second Edition Year 2. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 1 – Healthy me	1	Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	1. What makes me happy? 2. How do we like to keep fit?		Pages 9–10	
Autumn Term: Topic 1 – Healthy me	2	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	3. How does exercise help me? 4. Keeping fit challenge	Gather and record data to help answer questions.	Pages 11–12	

Autumn Term: Topic 1 – Healthy me	3	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	5. Safe cyclists 6. Design, make and test a helmet	Perform simple tests. Observe closely, using simple equipment. Use their observations and ideas to suggest answers to questions.	Page 12–13	
Autumn Term: Topic 1 – Healthy me	4	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	1. Why do we need food? 2. Sorting food	Identify and classify.	Pages 14–15	
Autumn Term: Topic 1 – Healthy me	5	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	3. Favourite snack 4. Swapping snacks	Gather and record data to help answer questions.	Pages 15–16	
Autumn Term: Topic 1 – Healthy me	6	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	1. Spraying germs 2. Snot trail	Perform simple tests.	Pages 17–18	Activity Resource 1.1
Assessment	**Swapping snacks**				**Page 16**	

Switched on Science Second Edition: Year 2 Topic 2: Lesson Planning

The following is a suggested plan for teaching the Year 2 Science programme of study using Switched on Science Second Edition Year 2. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 2 – Materials monster	1	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	1. Feeding time 2. Sorting for materials monster	Identify and classify.	Pages 22–23	

Autumn Term: Topic 2 – Materials monster	2	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	3. Talk to materials monster	Observe closely, using simple equipment. Identify and classify.	Page 24	Activity Resource 2.1
Autumn Term: Topic 2 – Materials monster	3	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	4. Taking materials monster outside 5.Take the materials monster home	Identify and classify. Observe closely, using simple equipment.	Pages 25–26	Activity Resource 2.2 Activity Resource 2.3 Activity Resource 2.4
Autumn Term: Topic 2 – Materials monster	4	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	1. Silly Materials Monster Book		Page 27	
Autumn Term: Topic 2 – Materials monster	5	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	2. Squash, bend, twist, stretch	Perform a simple test.	Page 28	
Autumn Term: Topic 2 – Materials monster	6	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	3. Make your own materials monster		Page 29	
Assessment	**Make your own materials monster**				**Page 29**	

Switched on Science Second Edition: Year 2 Topic 3: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources

Spring Term: Topic 3 – Squash, bend, twist and stretch	1	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	1. Flexible me		Page 32	
Spring Term: Topic 3 – Squash, bend, twist and stretch	2	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	2. Squash me, bend me, twist me, stretch me 3. Sort me	Identify and classify.	Pages 33–34	
Spring Term: Topic 3 – Squash, bend, twist and stretch	3	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	4. At home	Identify and classify.	Page 34	
Spring Term: Topic 3 – Squash, bend, twist and stretch	4	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	5. Balloon shapes		Page 34	
Spring Term: Topic 3 – Squash, bend, twist and stretch	5	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	6. Stretchy socks 7. Stretch and squash		Pages 35–36	
Spring Term: Topic 3 – Squash, bend, twist and stretch	6	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	8. Flying mouse	Perform simple tests. Gather and record data to help answer questions.	Pages 36–37	Activity Resource 3.1 Activity Resource 3.2
Assessment	**Stretchy socks** **Flying mouse**				**Pages 35–37**	

Switched on Science Second Edition: Year 2 Topic 4: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 4 – Our local environment	1	Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.	1. My habitat 2. Find a microhabitat		Pages 43–44	
Spring Term: Topic 4 – Our local environment	2	Identify and name a variety of plants and animals in their habitats, including micro-habitats.	3. Micro-habitat survey		Page 44	
Spring Term: Topic 4 – Our local environment	3	Identify and name a variety of plants and animals in their habitats, including microhabitats. Gather and record data to help in answering questions.	4. Animals and plants in different habitats		Pages 44–45	
Spring Term: Topic 4 – Our local environment	4	Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.	5. Make a micro-habitat		Page 45	
Spring Term: Topic 4 – Our local environment	5	Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food.	1. Food chain pairs 2. Extending the food chain		Pages 46–47	
Spring Term: Topic 4 – Our local environment	6	Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food.	3. Food chain mobile 4. Food chain hunt		Page 47	
Assessment	**Make a micro-habitat** **Food chain hunt**				**Pages 45 and 47**	

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 5 – Young gardeners	1	Identify and name a variety of plants and animals in their habitats, including microhabitats.	1. What is growing in our school grounds?	Identify and classify using simple equipment.	Page 51	
Summer Term: Topic 5 – Young gardeners	2	Observe and describe how seeds and bulbs grow into mature plants.	2. What shall we grow?	Ask simple questions and recognise that they can be answered in different ways.	Page 52	Activity Resource 5.1
Summer Term: Topic 5 – Young gardeners	3	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	3. What do seeds need for germination?	Observe closely, using simple equipment. Perform simple tests and use observations and ideas to suggest answers to questions.	Page 53	
Summer Term: Topic 5 – Young gardeners	4	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Compare the suitability of a variety of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	4. What do plants need to grow? 5. Newspaper plant pots	Observe closely, using simple equipment. Perform simple tests and use observations and ideas to suggest answers to questions.	Pages 54–55	Activity Resource 5.2
Summer Term: Topic 5 – Young gardeners	5	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	6. Grow a salad 7. Growing bulbs	Observe closely, using simple equipment. Gather and record data to help answer questions.	Pages 55–56	
Summer Term: Topic 5 – Young gardeners	6	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	8. Quirky container contest	Observe closely, using simple equipment. Use their observations and ideas to suggest answers to questions. Gather and record data to help answer questions.	Page 57	Activity Resource 5.3
Assessment	**Quirky container contest**				**Page 57**	

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 6 – Little masterchefs	1	Find out about, and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	1. What do we need to survive? 2. What is a masterchef? 3. Health and safety 4. Make a and wear a chef's hat 5. What are kitchen utensils made from?	Identify and classify.	Pages 61–63	Activity Resource 6.1
Summer Term: Topic 6 – Little masterchefs	2	Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.	6. Sort the shopping - keeping food fresh and safe 7. Sort the shopping - eating and drinking well	Identify and classify.	Pages 63–64	
Summer Term: Topic 6 – Little masterchefs	3	Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.	1. Design, prepare and cook a vegetable pizza-licious 2. Design your own salad	Observe closely, using simple equipment.	Pages 65–67	
Summer Term: Topic 6 – Little masterchefs	4	Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.	3. Carrot and courgette muffins 4. Bread tasting	Observe closely, using simple equipment. Identify and classify.	Pages 67–68	Activity Resource 6.2 Activity Resource 6.3
Summer Term: Topic 6 – Little masterchefs	5	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	5. How can we keep our muffins and bread fresh?	Perform simple tests, using their observations and ideas to suggest answers to questions. Gather and record data to help answer questions.	Pages 68–69	
Summer Term: Topic 6 – Little masterchefs	6	Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.	6. Fruit choice 7. Design and make a sandwich		Page 69	Activity Resource 6.4 Activity Resource 6.5
Assessment	**Design and make a sandwich**				**Page 69**	

The following is a suggested plan for teaching the Year 3 Science programme of study using Switched on Science Second Edition Year 3. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.						
Term	**Week**	**Subject Knowledge Objective**	**Use all or some of the following activities to cover this objective**	**Working scientifically skills developed in the activities**	**Teacher's Guide reference**	**Switched on Science resources**
Autumn Term: Topic 1 – Rocks, soils and fossils	1	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	1. Sorting rocks 2. Being a geologist 3. Moh's Scale of Hardness	Gather, record, classify and present data in a variety of ways to help answer questions.	Pages 9–11	
Autumn Term: Topic 1 – Rocks, soils and fossils	2	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	4. Comparing rocks 5. Permeable or impermeable? 6. Adopt a rock	Set up simple practical enquiries, comparative and fair tests. Ask relevant questions and use different types of scientific enquiries to answer them.	Pages 11–13	Activity Resource 1.1
Autumn Term: Topic 1 – Rocks, soils and fossils	3	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	1. Sedimentary sandwiches 2. Chocolate metamorphic rocks 3. Chocolate igneous rocks		Page 13–15	Activity Resource 1.2
Autumn Term: Topic 1 – Rocks, soils and fossils	4	Recognise that soils are made from rock and organic matter.	1. What is soil 2. Shaking soil 3. How much soil is air and water?	Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units using a range of equipment.	Pages 16–17	Activity Resource 1.3
Autumn Term: Topic 1 – Rocks, soils and fossils	5		4. Are all soils the same? 5. Are worms good for the soil? 6. Is soil an important resource?	Ask relevant questions and use different types of scientific enquiries to answer them. Gather, record, classify and present data in a variety of ways to help answer questions. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 18–19	Activity Resource 1.3
Autumn Term: Topic 1 – Rocks, soils and fossils	6	Describe in simple terms how fossils are formed when things that have lived are trapped within rock.	1. Looking at fossils 2. Making a mould fossil 3. Making a cast fossil	Ask relevant questions and using different types of scientific enquiries to answer them.	Pages 20–21	Activity Resource 1.4
Autumn Term: Topic 1 – Rocks, soils and fossils	7	Describe in simple terms how fossils are formed when things that have lived are trapped within rock.	4. Asking questions about fossils 5. Other kinds of fossils 6. Finding fossils role play	Ask relevant questions and using different types of scientific enquiries to answer them.	Pages 22–23	
Assessment	**Adopt a rock** **Is soil an important resource?** **Finding fossils role play**				**Pages 12, 19 and 23**	**Activity Resource 1.1**

Switched on Science Second Edition: Year 3 Topic 2: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 2 – Food and our bodies	1	Identify that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food, they get nutrition from what they eat.	1. What do humans and other animals need to live? 2. Who eats what? 3. My food diary 4. Bird feeders		Pages 28–30	Activity Resource 2.1
Autumn Term: Topic 2 – Food and our bodies	2	Identify that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food, they get nutrition from what they eat.	5. Food groups 6. Which food groups do I eat? 7. Sugary drinks 8. School lunches 9. Meal planner	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	Pages 30–32	Activity Resource 2.2 Activity Resource 2.3
Autumn Term: Topic 2 – Food and our bodies	3	Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	1. Our skeletons 2. Bones 3. Researching bones 4. Build a skeleton		Pages 33–34	Activity Resource 2.4
Autumn Term: Topic 2 – Food and our bodies	4	Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	1. Protecting the brain 2. Animals without a skeleton 3. Broken bones survey	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 35–36	
Autumn Term: Topic 2 – Food and our bodies	5	Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	1. Muscles 2. How do our arm muscles work?		Pages 37–38	Activity resource 2.4
Autumn Term: Topic 2 – Food and our bodies	6	Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	3. Make a model of a muscle 4. Getting to know joints	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 39–40	
Assessment	**Which food group do I eat?** **Build a skeleton** **Make a model of a muscle**				**Pages 31, 34 and 39**	**Activity Resource 2.4**

Switched on Science Second Edition: Year 3 Topic 3: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 3 – Light and shadows	1	Recognise that they need light in order to see things and that dark is the absence of light.	1. Sources of light 2. Darkness box 3. Dark area	Set up simple practical enquiries, comparative and fair tests.	Pages 45–46	
Spring Term: Topic 3 – Light and shadows	2	Notice that light is reflected from surfaces.	4. Shiny and dull 5. Finding out about mirrors 6. Concave and convex mirrors	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 47–49	Activity Resource 3.1 Activity Resource 3.2
Spring Term: Topic 3 – Light and shadows	3	Notice that light is reflected from surfaces.	7. Mirror maths - How many? 8. Mirror maths - Making shapes	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Pages 49–50	
Spring Term: Topic 3 – Light and shadows	4	Notice that light is reflected from surfaces.	9. Mirror maths - Symmetry 10. Same but different	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 50–51	Activity Resource 3.3
Spring Term: Topic 3 – Light and shadows	5	Recognise that shadows are formed when the light from a light source is blocked by a solid object.	1. Which material is best for making shadows? 2. How is Black Rabbit's shadow made?	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.	Pages 52–53	Activity Resource 3.4 Activity Resource 3.5
Spring Term: Topic 3 – Light and shadows	6	Find patterns in the way that the sizes of shadows change.	3. Black Rabbit 4. Exploring my shadow	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.	Pages 53–54	Activity Resource 3.5
Assessment	**Black Rabbit**				**Page 53**	

Switched on Science Second Edition: Year 3 Topic 4: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 4 – How does your garden grow?	1	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.	1. Parts of a plant 2. Plants in our school grounds		Pages 59–60	Activity Resource 4.1
Spring Term: Topic 4 – How does your garden grow?	2	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.	3. Grow a seed 4. How is water transported in a plant? 5. Multi-coloured	Investigate the way in which water is transported within plants. Set up simple practical enquiries, comparative and fair tests.	Pages 60–62	
Spring Term: Topic 4 – How does your garden grow?	3		1. What do I want to know? Asking questions 2. How to answer my questions	Ask relevant questions and using different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests.	Pages 63–64	
Spring Term: Topic 4 – How does your garden grow?	4	Explain the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary from plant to plant.	3. How much water do plants need to be healthy? 4. Do plants need soil to grow? 5. Do plants need light to grow?	Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Use results to draw simple conclusions. Make predictions for new values, suggest improvements and raise further questions.	Pages 64–66	
Spring Term: Topic 4 – How does your garden grow?	5	Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	1. Parts of a flower 2. What is pollination? 3. Pollination playtime 4. A day in the life of a flower	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 67–69	Activity Resource 4.2
Spring Term: Topic 4 – How does your garden grow?	6	Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	5. Lets go on a pollination hunt 6. Parts of a flower 7. How do these seeds spread?	Gather, record, classify and present data in a variety of ways to help answer questions.	Pages 70–71	Activity Resource 4.2 Activity Resource 4.3
Assessment	**Copy nature** **What do seeds and velcro have in common?**				**Page 72**	

Switched on Science Second Edition: Year 3 Topic 5: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 5 – Forces and magnets	1	Compare how things move on different surfaces.	1. Pushes and pulls		Page 76	
Summer Term: Topic 5 – Forces and magnets	2	Compare how things move on different surfaces.	2. Moving things on different surfaces	Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Page 77	
Summer Term: Topic 5 – Forces and magnets	3	Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Notice that some forces need contact between two objects, but magnetic forces can act at a distance.	3. Which magnet is the strongest? 4. Magnetism	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 78–79	Activity Resource 5.1
Summer Term: Topic 5 – Forces and magnets	4	Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.	5. Do magnets work through different materials? 6. North and south poles	Set up simple practical enquiries, comparative and fair tests. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 79–80	Activity Resource 5.2 Activity Resource 5.3
Summer Term: Topic 5 – Forces and magnets	5	Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others.	1. Fun magnetic games		Page 81	

Summer Term: Topic 5 – Forces and magnets	6	Notice that some forces need contact between two objects, but magnetic forces can act at a distance.	2. Where are magnets used?		Page 82	Activity Resource 5.4
Assessment	**Fun magnetic games** **Where are magnets used?**				**Pages 81–82**	**Activity Resource 5.4**

Switched on Science Second Edition: Year 3 Topic 6: Lesson Planning

The following is a suggested plan for teaching the Year 3 Science programme of study using Switched on Science Second Edition Year 3. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 6 – The nappy challenge	1		1. Exploring a disposable nappy	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Gather, record, classify and present data in a variety of ways to help answer questions.	Page 87	
Summer Term: Topic 6 – The nappy challenge	2		2. Asking questions: What else do we want to know about a disposable nappy? 3. Checking our questions for maths and scientific language	Ask relevant questions and use different types of scientific enquiries to answer them.	Page 88	
Summer Term: Topic 6 – The nappy challenge	3		4. How can we answer our questions?	Ask relevant questions and use different types of scientific enquiries to answer them.	Page 89	
Summer Term: Topic 6 – The nappy challenge	4		5. Which nappy is the most absorbent? 6. Which nappy elastic stretches the furthest? 7. Who invented nappies?	Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Ask relevant questions and use different types of scientific enquiries to answer them.	Pages 90–91	Activity Resource 6.1
Summer Term: Topic 6 – The nappy challenge	5		1. Nappy survey	Ask relevant questions and use different types of scientific enquiries to answer them. Gather, record, classify and present data in a variety of ways to help answer questions. Use straightforward scientific evidence to answer questions or to support their findings.	Page 92	

Summer Term: Topic 6 – The nappy challenge	6		2. Should disposable nappies be banned?	Ask relevant questions and use different types of scientific enquiries to answer them. Use straightforward scientific evidence to answer questions or to support their findings.	Page 93	Activity Resource 6.2
Assessment	**Design and make your own nappy**				**Page 94**	

Switched on Science Second Edition: Year 4 Topic 1: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 1 – What's that sound?	1	Identify how sounds are made, associating some of them with something vibrating.	1. Sources of sound 2. Let's make a sound 3. Feeling and seeing the vibrations	Set up simple practical enquiries, comparative and fair tests. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 10–12	
Autumn Term: Topic 1 – What's that sound?	2	Identify how sounds are made, associating some of them with something vibrating. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Find patterns between the pitch of a sound and features of the object that produced it.	4. Percussion sounds 5. How does a guitar work?	Set up simple practical enquiries, comparative and fair tests. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 12–14	Activity Resource 1.1
Autumn Term: Topic 1 – What's that sound?	3	Identify how sounds are made, associating some of them with something vibrating. Find patterns between the pitch of a sound and features of the object that produced it.	6. Glass bottle orchestra 7. Make your own pan pipes	Set up simple practical enquiries, comparative and fair tests. Use straightforward scientific evidence to answer questions or to support their findings	Pages 14–15	
Autumn Term: Topic 1 – What's that sound?	4	Recognise that sounds get fainter as the distance from the sound source increases.	1. How far away can you hear it? 2. Measuring sound	Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	Pages 16–18	Activity Resource 1.2 Activity Resource 1.3
Autumn Term: Topic 1 – What's that sound?	5	Recognise that vibrations from sounds travel through a medium to the ear.	3. Sound travelling through different materials 4. My own questions	Ask relevant questions and use different types of scientific enquiries to answer them. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Identify differences, similarities or changes related to simple scientific ideas and processes. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 18–19	Activity Resource 1.4 Activity Resource 1.5

Autumn Term: Topic 1 – What's that sound?	6	Recognise that vibrations from sounds travel through a medium to the ear.	5. Muffle that sound	Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Page 20	Activity Resource 1.6
Assessment		Recognise that vibrations from sounds travel through a medium to the ear.	6. Ear gongs	Set up simple practical enquiries, comparative and fair tests. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Page 21	

Switched on Science Second Edition: Year 4 Topic 2: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 2 – Living things	1	Recognise that living things can be grouped in a variety of ways.	1. Sort me 2. Using classification keys	Ask relevant questions and using different types of scientific enquiries to answer them. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 26–28	Activity Resource 2.1
Autumn Term: Topic 2 – Living things	2	Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	3. Classify the animals 4. Vertebrates and invertebrates 5. Classifying leaves		Pages 28–29	Activity Resource 2.1 Activity Resource 2.2 Activity Resource 2.3 Activity Resource 2.4 Activity Resource 2.5
Autumn Term: Topic 2 – Living things	3	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	1. Identifying and recording living things	Gather, record, classify and present data in a variety of ways to help in answering questions.	Pages 30–31	
Autumn Term: Topic 2 – Living things	4	Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	2. Going on a bug hunt 3. Going on a plant hunt	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	Pages 31–33	
Autumn Term: Topic 2 – Living things	5	Recognise that environments can change and that this can sometimes pose dangers to living things.	1. Bees - friends or foe? 2. The life of a bee		Pages 34–35	

Autumn Term: Topic 2 – Living things	6	Recognise that environments can change and that this can sometimes pose dangers to living things.	3. Bee survey - collecting data 4. Bee fantastic - save our bees 5. Spreading the word	Use straightforward scientific evidence to answer questions or to support their findings. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 35–37	
Assessment			2. Going on a bug hunt 3. Going on a plant hunt 4. Bee fantastic - save our bees		Pages 31, 32 and 36	

Switched on Science Second Edition: Year 4 Topic 3: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 3 – Looking at states	1	Compare and group materials together, according to whether they are solids, liquids or gases.	1. In a state		Pages 42–43	Activity Resource 3.1
Spring Term: Topic 3 – Looking at states	2	Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).	2. Ice hands		Page 44	Activity Resource 3.2
Spring Term: Topic 3 – Looking at states	3	Identify differences, similarities or changes related to simple scientific ideas and processes.	1. It's melting	Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusion.	Pages 45–46	

Spring Term: Topic 3 – Looking at states	4	Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Identify differences, similarities or changes related to simple scientific ideas and processes.	2. Freezing	Set up simple practical enquiries, comparative and fair tests. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	Pages 46–47	Activity Resource 3.3 Activity Resource 3.4
Spring Term: Topic 3 – Looking at states	5	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Identify differences, similarities or changes related to simple scientific ideas and processes.	1. Evaporation	Set up simple practical enquiries, comparative and fair tests. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Pages 48–49	Activity Resource 3.5
Spring Term: Topic 3 – Looking at states	6	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Identify differences, similarities or changes related to simple scientific ideas and processes.	2. The water cycle	Set up simple practical enquiries, comparative and fair tests. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	Page 50	Activity Resource 3.6
Assessment			Evaporation The water cycle		Pages 48 and 50	Activity Resource 3.5 Activity Resource 3.6

Switched on Science Second Edition: Year 4 Topic 4: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 4 – Teeth and eating	1	Identify the different types of teeth in humans and their simple functions.	1. First impressions	Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 55–56	
Spring Term: Topic 4 – Teeth and eating	2	Identify the different types of teeth in humans and their simple functions.	2. My teeth 3. Looking after our teeth	Set up simple practical enquiries, comparative and fair tests. Gather, record, classify and present data in a variety of ways to help answer questions.	Pages 56–58	Activity Resource 4.1 Activity Resource 4.2
Spring Term: Topic 4 – Teeth and eating	3	Describe the simple functions of the basic parts of the digestive system in humans.	1. Food's incredible journey		Page 59	

Spring Term: Topic 4 – Teeth and eating	4	Describe the simple functions of the basic parts of the digestive system in humans.	2. Lets make a digestive system		Pages 60–61	Activity Resource 4.3
Spring Term: Topic 4 – Teeth and eating	5	Construct and interpret a variety of food chains, identifying producers, predators and prey.	1. A chain reaction		Pages 62–63	Activity Resource 4.4
Spring Term: Topic 4 – Teeth and eating	6	Construct and interpret a variety of food chains, identifying producers, predators and prey.	2. Predator and prey		Page 63	Activity Resource 4.4
Assessment			My teeth Let's make a digestive system Predator and prey		Pages 56, 60 and 63	Activity Resource 4.1 Activity Resource 4.2 Activity Resource 4.3 Activity Resource 4.4

Switched on Science Second Edition: Year 4 Topic 5: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 5 – Power it up	1	Identify common appliances that run on electricity.	1. Which source?		Pages 68–69	Activity Resource 5.1 Activity Resource 5.3
Summer Term: Topic 5 – Power it up	2	Pupils should be taught about precautions for working safely with electricity.	2. Using electricity safely		Page 69	
Summer Term: Topic 5 – Power it up	3	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.	1. Simple circuits		Pages 70–71	

Summer Term: Topic 5 – Power it up	4	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.	2. Switches		Pages 71–72	
Summer Term: Topic 5 – Power it up	5	Recognise some common conductors and insulators, and associate metals with being good conductors.	1. Conductors	Use straightforward scientific evidence to answer questions or to support their findings.	Pages 73–74	Activity Resource 5.2
Summer Term: Topic 5 – Power it up	6	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.	2. What can you make using circuits?		Pages 74–75	
Assessment			What can you make using circuits?		Pages 74–75	

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Switched on Science Second Edition: Year 4 Topic 6: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 6 – The big build	1		1. Bridging a stream	Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Use straightforward scientific evidence to answer questions or to support their findings.	Page 79	

Summer Term: Topic 6 – The big build	2		2. Which shape is the strongest for bridge pillars? 3. Terrific triangles	Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Use straightforward scientific evidence to answer questions or to support their findings.	Pages 80–81	
Summer Term: Topic 6 – The big build	3		1. Tallest towers	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Use straightforward scientific evidence to answer questions or to support their findings.	Page 82	
Summer Term: Topic 6 – The big build	4		2. Spaghetti towers	Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Use results to draw simple conclusions, make predictions for new values, suggest improvements. and raise further questions.	Page 83	
Summer Term: Topic 6 – The big build	5		1. Animal homes	Ask relevant questions and use different types of scientific enquiries to answer them. Gather, recording, classifying and presenting data in a variety of ways to help answer questions. Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	Pages 84–85	
Summer Term: Topic 6 – The big build	6		1. Researching big builds 2. Big Build - Newspaper bridge or tower	Ask relevant questions and using different types of scientific enquiries to answer them. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Pages 86–87	
Assessment			Big Build - Newspaper bridge or tower		Pages 86–87	

Switched on Science Second Edition: Year 5 Topic 1: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 1 – Out of this world	1	Describe the movement of the Earth and other planets relative to the Sun in the Solar System. Describe the Sun, Earth and Moon as approximately spherical bodies.	1. The Solar System 2. Modelling the Solar System 3. What is at the centre of the Solar System?	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Pages 10–12	Activity Resource 1.4

Autumn Term: Topic 1 – Out of this world	2	Describe the movement of the Earth and other planets relative to the Sun in the Solar System. Describe the Sun, Earth and Moon as approximately spherical bodies.	1. Copernicus and Galileo	Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 13–14	
Autumn Term: Topic 1 – Out of this world	3	Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.	1. Explaining day and night 2. The apparent movement of the Sun across the sky 3. What is a time zone?	Take measurements, using a range of scientific equipment, with increasing accuracy and precision taking repeat readings when appropriate.	Pages 15–17	Activity Resource 1.5
Autumn Term: Topic 1 – Out of this world	4	Describe the movement of the Moon relative to the Earth.	4. The Moon 5. Biscuit moons	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Pages 17–18	
Autumn Term: Topic 1 – Out of this world	5		6. Moon crater investigations	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests.	Pages 18–19	
Autumn Term: Topic 1 – Out of this world	6	Describe the movement of the Earth and other planets relative to the Sun in the Solar System.	7. Become an expert - research a planet	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Page 20	
Assessment	**Become an expert - research a planet**				**Page 20**	

Switched on Science Second Edition: Year 5 Topic 2: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 2 – Material world	1	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.	1. Sorting materials 2. Why that material?		Pages 24–25	Activity Resource 2.1

Autumn Term: Topic 2 – Material world	2	Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.	3. Testing materials - which material makes the strongest carrier bag?		Pages 25–26	
Autumn Term: Topic 2 – Material world	3	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.	4. Testing materials - what is a thermal conductor? 5. Testing materals - which materials are thermal conductors and which are thermal insulators? 6. Testing testing	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests.	Pages 27–29	Activity Resource 2.2
Autumn Term: Topic 2 – Material world	4	Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.	1. Searching for a solution 2. Dissolving sugar	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use test results to make predictions to set up further comparative and fair tests. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 30–32	Activity Resource 2.3
Autumn Term: Topic 2 – Material world	5	Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.	3. Sieving 4. Filtering	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Use test results to make predictions to set up further comparative and fair tests.	Pages 32–33	
Autumn Term: Topic 2 – Material world	6	Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.	5. Evaporating 6. Sort this out!	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 34–35	
Assessment	**Testing testing Growing crystals**				**Pages 29 and 36**	**Activity Resource 2.4**

Switched on Science Second Edition: Year 5 Topic 3: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources

Spring Term: Topic 3 – Circle of life	1	Describe the life process of reproduction in some plants and animals.	1. Plant reproduction	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 41–42	Activity Resource 3.1
Spring Term: Topic 3 – Circle of life	2	Describe the life process of reproduction in some plants and animals.	2. New plants from old 3. Plants from cuttings		Pages 42–43	
Spring Term: Topic 3 – Circle of life	3	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	1. Bird life cycles 2. Butterfly life cycle 3. Life cycle of a frog	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 44–46	
Spring Term: Topic 3 – Circle of life	4	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.	1. Why do some animals lay so many eggs? 2. Unusual life cycles	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use test results to make predictions to set up further comparative and fair tests.	Pages 47–49	Activity Resource 3.2
Spring Term: Topic 3 – Circle of life	5		3. Endangered animals	Identify scientific evidence that has been used to support or refute ideas or arguments.	Page 49	Activity Resource 3.3
Spring Term: Topic 3 – Circle of life	6		4. For and against zoos 5. Meet the scientists 6. We are conservationist	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 50–52	Activity Resource 3.4
Assessment	**We are conservationists**				**Page 52**	

Switched on Science Second Edition: Year 5 Topic 4: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources

Spring Term: Topic 4 – Let's get moving	1	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	1. Investigating gravity 2. Galileo and Newton 3. Why is gravity important?	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Use test results to make predictions to set up further comparative and fair tests. Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 57–59	Activity Resource 4.1 Activity Resource 4.2
Spring Term: Topic 4 – Let's get moving	2	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.	1. Falling cupcakes case 2. Parachutes	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests.	Pages 60–62	Activity Resource 4.3
Spring Term: Topic 4 – Let's get moving	3	Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.	1. What is friction? 2. The big trainer test 3. Friction search on my bike	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Pages 63–65	
Spring Term: Topic 4 – Let's get moving	4	Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.	1. Force of water	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 66–67	
Spring Term: Topic 4 – Let's get moving	5	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	1. What is a machine? 2. Make a simple see-saw - a lever 3. Coat hanger catapult	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Use test results to make predictions to set up further comparative and fair tests. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Pages 68–70	Activity Resource 4.4
Spring Term: Topic 4 – Let's get moving	6	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	4. Using pulleys 5 Use a pulley to do a job	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Pages 71–72	Activity Resource 4.5

Spring Term: Topic 4 – Let's get moving	7	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	6. Gears 7. Maths in gears	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Bring in objects that have gears such as a bicycle, hand rotary whisk and children's toys so that children can explore the relationship between the cogs and how they move.	Pages 72–73	Activity Resource 4.6
Assessment	**Friction search on my bike** **Design a Rube Goldberg machine**				**Pages 65 and 74**	**Activity Resource 4.7**

Switched on Science Second Edition: Year 5 Topic 5: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 5 – Growing up and growing old	1	Describe the changes as humans develop to old age.	1. Growing up 2. How does a baby develop?		Pages 79–80	
Summer Term: Topic 5 – Growing up and growing old	2	Describe the changes as humans develop to old age.	3. Gestation periods of different animals		Pages 80–81	Activity Resource 5.1
Summer Term: Topic 5 – Growing up and growing old	3	Describe the changes as humans develop to old age.	1. How do we change? 2. When can you do these things?		Pages 82–83	Activity Resource 5.2
Summer Term: Topic 5 – Growing up and growing old	4	Describe the changes as humans develop to old age.	3. Being a teenager		Pages 83–84	
Summer Term: Topic 5 – Growing up and growing old	5	Describe the changes as humans develop to old age.	1. How old is old? 2. How does it feel to get old?	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 85–86	Activity Resource 5.3 Activity Resource 5.4
Summer Term: Topic 5 – Growing up and growing old	6	Describe the changes as humans develop to old age.	3. What do older people think about getting old? 4. Live forever	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 86–87	Activity Resource 5.5
Assessment	**Gestation periods of different animals**				**Pages 80–81**	**Activity Resource 5.1**

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Term	**Week**	**Subject Knowledge Objective**	**Use all or some of the following activities to cover this objective**	**Working scientifically skills developed in the activities**	**Teacher's Guide reference**	**Switched on Science resources**
Summer Term: Topic 6 – Amazing changes	1	Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	1. Elephant's toothpaste	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 91–92	
Summer Term: Topic 6 – Amazing changes	2	Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	2. Inflating a balloon 3. Volcanic eruption	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Use test results to make predictions to set up further comparative and fair tests.	Pages 92–94	Activity Resource 6.1
Summer Term: Topic 6 – Amazing changes	3	Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	4. Making plastic	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Page 95	
Summer Term: Topic 6 – Amazing changes	4	Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	5. Investigating rust	Use test results to make predictions to set up further comparative and fair tests.	Page 96	
Summer Term: Topic 6 – Amazing changes	5	Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	6. Burning 1. Burning fabrics	Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 97–99	Activity Resource 6.2
Summer Term: Topic 6 – Amazing changes	6		2. New materials	Identify scientific evidence that has been used to support or refute ideas or arguments.	Page 99	
Assessment	**Inflating a balloon** **Making plastic** **Burning fabrics**				**Pages 92, 95 and 98**	**Activity Resource 6.1** **Activity Resource 6.2**

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Term	**Week**	**Subject Knowledge Objective**	**Use all or some of the following activities to cover this objective**	**Working scientifically skills developed in the activities**	**Teacher's Guide reference**	**Switched on Science resources**
Autumn Term: Topic 1 – Classifying living things	1	Give reasons for classifying plants and animals based on specific characteristics.	1. Quick classifications		Pages 11–12	Activity Resource 1.1
Autumn Term: Topic 1 – Classifying living things	2	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.	2. Classifying the local environment		Pages 12–13	Activity Resource 1.2 Activity Resource 1.3
Autumn Term: Topic 1 – Classifying living things	3	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.	2. Classifying the local environment		Pages 12–13	Activity Resource 1.2 Activity Resource 1.3
Autumn Term: Topic 1 – Classifying living things	4	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.	1. Carl Linnaeus	Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 14–15	Activity Resource 1.4
Autumn Term: Topic 1 – Classifying living things	5	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.	2. Bacteria		Pages 15–16	
Autumn Term: Topic 1 – Classifying living things	6	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals.	3. Fabulous fungi	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 16–17	
Assessment	**Classifying the local environment**				**Pages 12–13**	**Activity Resource 1.2 Activity Resource 1.3**

Switched on Science Second Edition: Year 6 Topic 2: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Autumn Term: Topic 2 – Healthy bodies	1	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.	1. What do you want to know? 2. What do you know?	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 22–23	
Autumn Term: Topic 2 – Healthy bodies	2	Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	1. Changes in heart and breathing rate	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use test results to make predictions to set up further comparative and fair tests. Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 24–25	Activity Resource 2.2
Autumn Term: Topic 2 – Healthy bodies	3		2. Lung capacity	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.	Page 26	
Autumn Term: Topic 2 – Healthy bodies	4	Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	1. Diet 2. What is a drug?		Pages 27–28	Activity Resource 2.4
Autumn Term: Topic 2 – Healthy bodies	5	Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	3. Cigarettes and alcohol		Page 29	Activity Resource 2.5 Activity Resource 2.6
Autumn Term: Topic 2 – Healthy bodies	6	Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	4. Meet the scientists		Page 30	Activity Resource 2.7 Activity Resource 2.8
Assessment	**Changes in heart and breathing rate** **Cigarettes and alcohol**				**Pages 24 and 29**	**Activity Resource 2.2** **Activity Resource 2.5** **Activity Resource 2.6**

Switched on Science Second Edition: Year 6 Topic 3: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 3 – Evolution and inheritance	1	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	1. Life on Earth Timeline		Pages 35–36	
Spring Term: Topic 3 – Evolution and inheritance	2	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	2. Fossils and Mary Anning		Page 37	
Spring Term: Topic 3 – Evolution and inheritance	3	Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.	1. Guess who? 2. Designer dogs		Pages 38–39	
Spring Term: Topic 3 – Evolution and inheritance	4	Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	3. Adaptation	Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 39–40	Activity Resource 3.1 Activity Resource 3.2 Activity Resource 3.3
Spring Term: Topic 3 – Evolution and inheritance	5	Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	1. How have they changed?	Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 41–42	Activity Resource 3.4 Activity Resource 3.5
Spring Term: Topic 3 – Evolution and inheritance	6	Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	2. Natural Selection	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 42–43	Activity Resource 3.4 Activity Resource 3.5
Assessment	**Designer dogs** **Natural selection**				**Pages 39 and 42**	**Activity Resource 3.4** **Activity Resource 3.5**

Switched on Science Second Edition: Year 6 Topic 4: Lesson Planning

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Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Spring Term: Topic 4 – Light	1	Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	1. How does light travel? 2. Introduction to puppets	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	Pages 47–48	
Spring Term: Topic 4 – Light	2	Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	3. Pattern seeking from shadows	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	Page 49	Activity Resource 4.1
Spring Term: Topic 4 – Light	3	Recognise that light appears to travel in straight lines.	1. Mirror image		Pages 50–51	Activity Resource 4.2 Activity Resource 4.3
Spring Term: Topic 4 – Light	4	Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.	2. Seeing is believing		Pages 51–52	
Spring Term: Topic 4 – Light	5	Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.	1. Observing the unexpected	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 53–54	Activity Resource 4.4 Activity Resource 4.5 Activity Resource 4.6 Activity Resource 4.7
Spring Term: Topic 4 – Light	6		2. Rainbows	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 54–55	
Assessment	**How does light travel?** **Seeing is believing**				**Pages 47 and 51**	

Switched on Science Second Edition: Year 6 Topic 5: Lesson Planning

The following is a suggested plan for teaching the Year 6 Science programme of study using Switched on Science Second Edition Year 6. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 5 – Electricity	1	Use recognised symbols when representing a simple circuit in a diagram.	1. Liquorice allsorts circuit diagram		Page 59	Activity Resource 5.1
Summer Term: Topic 5 – Electricity	2	Use recognised symbols when representing a simple circuit in a diagram.	2. It's faulty		Page 60	Activity Resource 5.2
Summer Term: Topic 5 – Electricity	3	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.	1. How bright?	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Page 61	
Summer Term: Topic 5 – Electricity	4	Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.	2. Changing light, sound and movement	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Page 62	
Summer Term: Topic 5 – Electricity	5	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.	1. Games galore		Page 63	

Summer Term: Topic 5 – Electricity	6		3. Answering our questions	Ask simple questions and recognise that they can be answered in different ways.	Page 64	
Assessment	**Games galore**				**Page 63**	

Switched on Science Second Edition: Year 6 Topic 6: Lesson Planning

The following is a suggested plan for teaching the Year 6 Science programme of study using Switched on Science Second Edition Year 6. This planning is entirely editable. Activity-focussed assessment criteria can be seen next to each activity in the Teacher's Guide. The sixth session in each term is a suggested independent assessment task and short written assessment task. The sixth topic is a further development of working scientifically skills within a practical context. This is planned here to take place in the final Summer half term.

Term	Week	Subject Knowledge Objective	Use all or some of the following activities to cover this objective	Working scientifically skills developed in the activities	Teacher's Guide reference	Switched on Science resources
Summer Term: Topic 6 – *The Titanic*	1		1. Floating and sinking 2. Water as a force 3. Boat building	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 68–71	
Summer Term: Topic 6 – *The Titanic*	2		1. Sinking *The Titanic*	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Page 72	
Summer Term: Topic 6 – *The Titanic*	3		2. Icebergs	Take measurements, use a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Page 73	
Summer Term: Topic 6 – *The Titanic*	4		1. Beating hypothermia	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 74–75	
Summer Term: Topic 6 – *The Titanic*	5		2. Design and make a *Titanic* life jacket	Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.	Pages 75–76	

Summer Term: Topic 6 – *The Titanic*	6		3. Raising *The Titanic*	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.	Pages 76–77	
Assessment	**Beating hypothermia** **Raising *The Titanic***				**Pages 74 and 76**	