

Year 1 Science Curriculum

The National Curriculum for science intends that children's understanding of the nature, processes and methods of science is developed through different types of science enquiries that help them to answer scientific questions about the world around them. Within each year group, substantive (knowledge) content should be taught through practical opportunities that enable children to develop a range of 'Working Scientifically' skills. These skills, from the National Curriculum, are provided below and are then exemplified in relation to each science unit.

Year 1/2 Working Scientifically Skills			
Plan	Do	Record	Review
<ul style="list-style-type: none"> • Ask simple questions and recognising that they can be answered in different ways. • Make a simple prediction when appropriate. • <i>Pupils in years 1 and 2 should explore the world around them and raise their own questions.</i> • <i>They should experience different types of scientific enquiries, including practical activities, and begin to recognise ways in which they might answer scientific questions. They should use simple features to compare objects, materials and living things and, with help, decide how to sort and group them, observe changes over time, and, with guidance, they should begin to notice patterns and relationships. They should ask people questions and use simple secondary sources to find answers.</i> 	<ul style="list-style-type: none"> • Observe closely, using simple equipment • Perform simple tests • Identify and classify • <i>They should use simple measurements and equipment (for example, hand lenses, egg timers) to gather data, carry out simple tests, record simple data, and talk about what they have found out and how they found it out.</i> 	<ul style="list-style-type: none"> • Gather and record data to help in answering questions. • Pupils may record in the following ways: <ul style="list-style-type: none"> ○ Simple drawings/pictures ○ Simple sentences and descriptions ○ Photos ○ Pictograms ○ Simple charts and tables, e.g. tally charts ○ Sort circles or Venn diagrams ○ Practical block graphs ○ Drawn block graphs ○ Make models 	<ul style="list-style-type: none"> • Use their observations and ideas to suggest answers to questions • <i>With help, they should record and communicate their findings in a range of ways and begin to use simple scientific language.</i> <p><i>Non-statutory guidance from the National Curriculum in italics.</i></p>

Statutory content is specified below and is supported by reference to non-statutory guidance. Non-statutory guidance is shown in *italics*. The six main types of enquiries are highlighted within each unit to ensure appropriate coverage across each year group:

Observing over time	Pattern Seeking	Identifying, Classifying and Grouping	Comparative and Fair testing	Researching using secondary sources	Exploring
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Unit and Vocabulary	Intent - statutory and non-statutory (<i>in italics</i>) content – Substantive (knowledge)	Intent –statutory and relevant non-statutory (<i>in italics</i>) content-Disciplinary (skills)
<p>Plants</p> <p>Wild plants, garden plants evergreen trees, deciduous trees, common flowering plants, flowers, vegetables, leaf/leaves, flower, blossom petal, stem, trunk, branch root, seed, bulb, bud, growth grow, habitat, local, environment, leaf fall, water light, temperature healthy growth, survive, soil germinate, stages of growth</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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. • <i>Pupils should use the local environment throughout the year to explore and answer questions about plants growing in their habitat. Where possible, they should observe the growth of flowers and vegetables that they have planted.</i> • <i>They should become familiar with common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).</i> 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • ask simple questions and recognise that they can be answered in different ways. • observe closely, using simple equipment. • identify and classify. • Pupils may record in the following ways: <ul style="list-style-type: none"> ○ Simple drawings/pictures ○ Simple sentences and descriptions ○ Photos ○ Sorting circles or Venn diagrams ○ Make models • Use their observations and ideas to suggest answers to questions

Implementation-activity examples and cultural capital opportunities

***This topic should be closely linked to Year 1 Seasonal Change.**

***This topic should be taught throughout the academic year.**

Observing over time

- Observe how different plants in the school grounds or local area change over the course of a year (including wild/garden plants and deciduous/evergreen trees).
- Use photographs to talk about how plants change over time.

Key questions

- **How does a daffodil bulb change over the year?**
- **How does my sunflower change each week?**
- **How does the oak tree change over the year?**

Pattern Seeking

- Explore where different types of plant grow within the school grounds or local area and identify simple patterns.
- Observe when different trees lose their leaves and see if there are any simple patterns.

Key questions

- **Do trees with bigger leaves lose their leaves first in autumn?**
- **Is there a pattern in where we find moss growing in the school grounds?**

Identifying and Classifying

- Use simple charts/ID guides etc. to identify plants. See 'Tree Tools for Schools' for high-quality/freely available guides, <https://www.treetoolsforschools.org.uk/categorymenu/?cat=outdoor&name=Outdoor%20learning&col=0F7CB6>
- Sort and group parts of plants using similarities and differences.
- Make close observations of leaves, seeds, flowers etc.
- Compare two leaves, seeds, flowers etc.
- Classify leaves, seeds, flowers etc. using a range of characteristics.
- Identify plants by matching them to named images.
- Identify deciduous/evergreen trees

Key questions

- **How are these leaves, seeds, flowers the same/different?**
- **Which trees lose their leaves in Autumn?**
- **Which trees keep their leaves all year round?**
- **Which trees in the school grounds are deciduous/evergreen?**

Comparative and Fair Testing

- Compare different trees/plants and identify similarities/differences.

Key questions

- **Which tree has the biggest leaves?**

Researching using secondary sources

- Research common British plants and where they grow.

Key questions

- **What are the most common British plants and where can we find them?**
- **How did Beatrix Potter help our understanding of mushrooms and toadstools?**

Exploring and Problem Solving

- While away from the school grounds/local area (e.g. on a school trip) can pupils identify common plants that they are familiar with.

Key question

- **Are there any plants/trees here that we also find back at school**

Cultural capital opportunities:

Sustainable Development Goals: Number 13 Climate Action, Number 14 Life below water, Number 15 Life on land

Climate change links: Pupils can begin to learn about the impact that climate change is having on plants.

Visits/trips: Visit a local park, botanic garden or accessible wood.

Visitors: Biologists, horticulturalists, gardeners (amateur or professional). See STEM Ambassadors, <https://www.stem.org.uk/stem-ambassadors> for support with finding visitors.

Scientists: Beatrix Potter

(Author & Botanist)

Chris Packham (naturalist)

***Make sure pupils are exposed to a diverse range of scientists including scientists who are working today. See,**

- **The PSTT** <https://pstt.org.uk/resources/curriculum-materials/ASJLM> & <https://pstt.org.uk/resources/curriculum-materials/Science-at-Work>
- **The Ogden Trust** <https://www.ogdentrust.com/resources/research-cards-women-in-physics>
- **STEM Sisters** <http://www.hmdt.org.uk/hmdtmusic/stemsisters/the-stem-sisters-2/>
- **Oxford Sparks** <https://www.oxfordsparks.ox.ac.uk/justaddimagination> **for resources to support this,**
- **Enrichment experiences:** Visiting glasshouses to see exotic and unusual plants.

Subject Links

English

- Write simple science themed poems about plants.
- Describe a variety of plants both verbally and in writing

Related texts

- Tree: Seasons Come, Seasons Go (Patricia Hegarty and Britta Teckentrup)
- A Little Guide to Wild Flowers (Charlotte Voake)
- The Things That I LOVE about TREES (Chris Butterworth)
- Harry's Hazelnut (Ruth Parsons)

Maths

- Measure the width of leaves using non-standards units of measure.
- Measure the circumference of trees using non-standard units of measure.
- Collect natural objects (e.g. conkers, pine cones, acorns etc) and use them to represent the cardinal aspect of number
- Use natural objects for different counting games e.g. how many conkers does it take to fill a jar or make a circle? For more ideas see The Woodland Trust, Conker Maths activities, https://www.treetoolsforschools.org.uk/activities/pdfs/pdf_conker_maths.pdf
- Estimate the height of different trees within the school grounds/local area and identify the tallest and shortest tree.
- Estimate the weight of natural objects that they have collected.
- Identify 2d and 3d shapes in the natural world.

DT

- Make 2d and 3d models of plants using plasticine, modelling clay or junk modelling materials.

PSHE

- Learn about the importance of protecting natural flowers and not picking them.

Geography

- Learn about what types of plants grow in different parts of the UK/world.

Art

- Draw/paint plants and trees.
- Use leaves and other natural objects to make collages.
- Use leaves to make 'leaf animals'.

Tree tools for schools has some excellent suggestions for nature themed art projects,

- https://www.treetoolsforschools.org.uk/activitymenu/?cat=outdoor_makes

Unit and Vocabulary:	Intent - statutory and non-statutory (<i>in italics</i>) content – Substantive (knowledge)	Intent –statutory and relevant non-statutory (<i>in italics</i>) content-Disciplinary (skills)
<p>Animals including humans</p> <ul style="list-style-type: none"> • Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves • Names of animals experienced first-hand from each vertebrate group • Parts of the body including those linked to PSHE teaching (see joint document produced by the ASE and PSHE Association) • Senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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. • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. • <i>Pupils should use the local environment throughout the year to explore and answer questions about animals in their habitat. They should understand how to take care of animals taken from their local environment and the need to return them safely after study. Pupils should become familiar with the common names of some fish, amphibians, reptiles, birds and mammals, including those that are kept as pets.</i> • <i>Pupils should have plenty of opportunities to learn the names of the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes.</i> 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • ask simple questions and recognise that they can be answered in different ways. • perform simple tests • identify and classify • gather and record data to help in answering questions. • Pupils may record in the following ways: <ul style="list-style-type: none"> ○ Simple drawings/pictures ○ Simple sentences and descriptions ○ Simple charts and tables, e.g. tally charts ○ Sorting circles or Venn diagrams • use their observations and ideas to suggest answers to questions

Implementation-activity examples and cultural capital opportunities

Observing over time

- Measure the height of pupils at the start of the academic year. Repeat throughout the year.

Key questions

- **How does my height change over the year?**

Pattern Seeking

- Investigate the senses of children/adults and identify simple patterns e.g., play a quiet sound and see who is better at hearing it; release a strong scent and see at what distance children/adults can smell it from.

Key questions

- **Do you get better at smelling as you get older?**
- **Do you get better at hearing as you get older?**

Identifying and Classifying

- Make first-hand, close observations of animals from each of the groups.
- Compare two animals from the same or different groups.
- Classify animals using a range of features.
- Sort and group animals using similarities and differences.
- Use simple charts etc. to identify unknown animals
- Identify animals by matching them to named images.
- Classify animals according to what they eat.
- Make first-hand close observations of parts of the body e.g. hands, eyes.
- Label parts of the body on pictures and diagrams
- Pupils could make models of different animals using tinfoil or playdough and then sort them based on their observable features or what they eat. They could create a Zoo or farm of tinfoil/playdough animals. For more guidance about how to do animal tinfoil modelling see the PSTT tinfoil Science for One activity, <https://pstt.org.uk/resources/curriculum-materials/Science-for-One>

Key questions

- **How can we organise all the zoo animals?**
- **What are the names for all the parts of our bodies?**
- **How are these animals the same/different?**
- **How can we group these animals based on what they eat?**

Comparative and Fair Testing

- Compare two people.
- Take measurements of parts of their body.
- Compare parts of their own body.
- Investigate human senses e.g. Which part of my body is good for feeling, which is not? Which food/flavours can I identify by taste? Which smells can I match?
- Set-up a 'senses safari' for pupils to explore e.g. feely/mystery bags, different things to smell, instruments/objects that make different sounds. For lots of great ideas for sensory/mystery bags see Explorify, <https://explorify.uk/en/activities>

Key questions

- **Is our sense of smell better when we can't see?**
- **Who has the longest legs/arms?**

Researching using secondary sources

- Research what animals eat, including talking to experts e.g. pet owners, zookeepers etc.

Key questions

- **Do all animals have the same senses as humans?**

Exploring and Problem Solving

- Create a drawing of an imaginary animal labelling its key features
- Explore carnivores, herbivores and omnivores using drama. Some pupils could play a carnivore (e.g. lions) while others play waiters who serve them some inappropriate food (e.g. some carrots) which they indignantly send back, explaining that they only eat meat. Repeat for different animals e.g. pupils playing rabbits being served meat. Use pictures of food or play food

Key question

- **Can you create an imaginary animal? What features will it have? What group would it belong to?**

Cultural capital opportunities:

Sustainable Development Goals: Number 13 Climate Action, Number 14 Life below water, Number 15 Life on land

Climate change links: Begin to learn about the impact that climate change will have on different animals.

Visits/trips: A zoo, farm, pet shop, animal sanctuary or local wildlife centre.

Visitors: A zoologist, farmer, vet or veterinary nurse. See STEM Ambassadors, <https://www.stem.org.uk/stem-ambassadors> for support with finding visitors.

Scientists: Chris Packham
(Animal Conservationist)

Enrichment experiences:

Arrange for Zoolab, <https://www.zoolabuk.com/> or a similar provider to visit. Local animal sanctuaries may bring animals for free or a small donation.

Subject Links

English

- Write a What am I? riddle about an animal. Write poems about different animals or the human body.
- Describe a variety of animals both verbally and in writing.

Related texts

- One Year with Kipper (Mick Inkpen)
- Snail Trail (Ruth Brown)
- Superworm (Julia Donaldson & Axel Scheffler)
- Giraffes Can't Dance (Giles Adrae)
 - **How do different animals move? How does this help them catch food/avoid predators?**
- The Gruffalo (Julia Donaldson)
 - How could we classify the animals in the story? How could we classify the Gruffalo?
- Poo in the Zoo (Steve Smallman)
- Bird Count (Susan Edwards Richmond)
- Do You Love Bugs? (Matt Robertson)

Maths

Pupils measure different parts of their bodies using:

- Non-standard and standard units of measures. Make comparisons between the length of different parts of their bodies.

DT

- Make models of different types of animals.

PSHE

Learn about how to take care of animals taken from their local environment and the need to return them safely after study. Learn about how to look after other animals like pets. See the RSPCA for resources to support this,

<https://education.rspca.org.uk/education/teachers/primary/lessonplans>

Geography

- Begin to learn about where different animals live in the UK and around the world.

Music

- Learn simple songs about the human body/animals.

Art

- Draw/paint different animals/the human body.

PE

- As part of warm-ups pupils could pretend to be different animals. Play 'Simon Says' e.g. pretend to be a cat.

Unit and Vocabulary	Intent - statutory and non-statutory (<i>in italics</i>) content – Substantive (knowledge)	Intent –statutory and relevant non-statutory (<i>in italics</i>) content-Disciplinary (skills)
<p>Everyday materials</p> <p>Wood, paper, plastic, metal, Glass, water, rock, brick, stone, Fabric, material, foil, elastic, dough, rubber, card, cardboard Clay</p> <p><u>Object:</u> Make/made, hard/soft, shiny/dull, stretchy/stiff rough/smooth, bendy/not bendy, waterproof/not waterproof, transparent/opaque, absorbent/not absorbent, squash, twist, bend, stretch</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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. 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 physical properties. <i>Pupils should explore, name, discuss and raise and answer questions about everyday materials so that they become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent.</i> <i>Pupils should explore and experiment with a wide variety of materials, not only those listed in the programme of study, but including for example: brick, paper, fabrics, elastic, foil.</i> 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ask simple questions and recognise that they can be answered in different ways. make a simple prediction when appropriate. observe closely, using simple equipment. perform simple tests. identify and classify. gather and record data to help in answering questions. Pupils may record in the following ways: <ul style="list-style-type: none"> Simple drawings/pictures Simple sentences and descriptions Photos Simple charts and tables, e.g. tally charts Sorting circles or Venn diagrams Practical block graphs Drawn block graphs use their observations and ideas to suggest answers to questions

Implementation-activity
examples and cultural
capital opportunities

Observing over time

- Explore antiques and observe how the material that they are made from has changed over time.

Key questions

- **What happens to materials over time if we bury them in the ground?**
- **What happens to shaving foam over time?**
- **How do old objects change over time? How does the material they're made from change?**

Pattern Seeking

Explore materials in the classroom/school/ playground and identify simple patterns.

Key questions

- **Is there a pattern in the types of materials that are used to make objects in a school?**
- **What materials are used to make windows, chairs, tables, doors etc? Why?**

Identifying and Classifying

- Sort objects and materials using a range of properties
- Label a picture or diagram of an object made from different materials.
- Classify objects made of one material in different ways e.g. a group of objects made of metal.
- Classify in different ways one type of object made from a range of materials e.g. a collection of spoons made of different materials.
- Squirt shaving foam/gel into cups and observe how it changes over time.
- Look at materials around the school grounds and beyond and look at how they have aged/changed e.g. bricks in a wall, metal or wooden fences.

Key question

- **We need to choose a material to make an umbrella. Which materials are waterproof?**

Comparative and Fair Testing

- Devise simple experiments to test the properties of objects e.g. absorbency of cloths, strength of party hats made of different papers, stiffness of paper plates, waterproofness of shelters.

Key questions

- **Which materials are the most flexible?**
- **Which materials are the most absorbent?**

Which material should we use to make a pair of curtains for the bear cave? Why? See The Ogden Trust for more information, <https://www.ogdentrust.com/resources/phizzi-practical-bear-cave>

Researching using secondary sources

- Research how different materials are made.
- Research which materials can/cannot be recycled.

Key questions

- **How are bricks made?**
- **How is glass made?**
- **Which materials can be recycled?**

Exploring and Problem Solving

- Challenge pupils to use different materials to make a structure to protect an egg when dropped.
- Challenge pupils to identify which materials they would make a superhero costume out of.
- Challenge pupils to identify which material the three little pigs should make their house out of.

Key questions

- **How can you stop the egg from breaking when I drop it?**
- **Which material should the three little pigs build their house from to protect them from the Big Bad Wolf? Why?**
- **Which material should we use to make a superhero costume? Why?**

Cultural capital opportunities:

Sustainable Development Goals - number 12 responsible consumption and production

Climate change links - pupils can begin to learn about the impact that climate change will have on the materials that we use to build our houses/schools.

Visits/trips: A local science centre. A builder's merchant or DIY store to explore different materials used in the construction industry. A factory where materials are made e.g., a brick factory.

Visitors - people who use materials in their jobs e.g., a builder, engineer, designer, artist, architect. See STEM Ambassadors, <https://www.stem.org.uk/stem-ambassadors> for support with finding visitors.

Scientists: William Addis (Toothbrush Inventor), Charles Mackintosh (Waterproof coat), John McAdam (roads)

Enrichment experiences

- Use different materials to construct towers and whole cities. Lots of empty cardboard boxes are a great starting point for this.
- Pupils can begin to explore unusual materials like hydrophobic sand.

Subject Links

English

- Write simple science themed poems about different types of material.
- Describe different types of material both verbally and in writing.

Related texts

- The Great Paper Caper (Oliver Jeffers)
- Who Sank the Boat (Pamela Allen)
- The Story of Cinderella (Walt Disney)

Maths

- Collect objects to represent different numbers (the cardinal aspect of number).
- When investigating whether materials are waterproof/absorbent pupils can begin to learn about capacity, litres and millilitres.
- Pupils could investigate the strength/stretchiness of materials by placing or hanging weights on them. This provides an opportunity for beginning to learn about weight, Kg and g.

DT

- Based on simple comparative tests pupils design purposeful, functional, appealing products for themselves and other users using a range of materials e.g., a hat, umbrella etc.
- Pupils could use natural materials (that they've collected) to make wind chimes, twig rafts, leaf mobiles etc. See Tree Tools for Schools for ideas, https://www.treetoolsforschools.org.uk/activitymenu/?cat=outdoor_makes

PSHE

- Learn about the importance of reducing our use of everyday materials and reusing/recycling what we do use.

Geography

- Begin to learn about where everyday materials come from.

History

- Begin to learn about how different materials were invented/developed over time.

Music

- Pupils make simple musical instruments using different materials.

Art

- Use a range of materials (that they have investigated in science lessons) creatively to design and make products.

PE

- Explore the different materials that PE equipment is made out of.

Unit and Vocabulary	Intent - statutory and non-statutory (<i>in italics</i>) content – Substantive (knowledge)	Intent –statutory and relevant non-statutory (<i>in italics</i>) content-Disciplinary (skills)
<p>Seasonal changes</p> <p>Spring, Summer, Autumn, Winter</p> <p><u>Weather</u> Sun, sunshine, rain, snow, sleet ice, frost, fog, cloud, hot, cold, storm, sky, earth, night, day</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • observe changes across the four seasons. • observe and describe weather associated with the seasons and how day length varies. • <i>Pupils should observe and talk about changes in the weather and the seasons. Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.</i> 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • ask simple questions and recognise that they can be answered in different ways. • make a simple prediction when appropriate. • observe closely, using simple equipment. • perform simple tests. • identify and classify. • gather and record data to help in answering questions. • Pupils may record in the following ways: <ul style="list-style-type: none"> ○ Simple drawings/pictures ○ Simple sentences and descriptions ○ Photos ○ Pictograms ○ Simple charts and tables, e.g., tally charts ○ Sorting circles or Venn diagrams ○ Practical block graphs ○ Drawn block graphs ○ Making models • use their observations and ideas to suggest answers to questions

Implementation-activity examples and cultural capital opportunities

- *This topic should be closely linked to Year 1 Plants.**
- *This topic should be taught throughout the academic year.**

Observing over time

- Collect information about the weather regularly throughout the year including:
 - Weekly rainfall using simple rain gauges.
 - A weekly temperature reading.
 - A weekly wind speed reading. Pupils could make simple anemometers.
 - Keeping weekly weather diaries using simple symbols or drawings.
- Collect information, regularly throughout the year, of features that change with the seasons e.g. plants, animals, humans.
- Gather data about day length regularly throughout the year and present this to compare the seasons.
- Observe how the clothes that people wear changes with the seasons and think about why that might be.
- Watch the 'Seasons' video on Explorify and discuss the changes that take place, <https://explorify.uk/en/activities/whats-going-on/seasons> Pupils could also watch 'Falling Leaves', <https://explorify.uk/en/activities/whats-going-on/falling-in-to-place>

Key questions

- **How does the temperature, wind speed, amount of rainfall change over the course of the year?**
- **How does the weather change over a course of the year?**
- **How does the clothes that we wear change with the seasons?**

Pattern Seeking

- Identify simple patterns in how the seasons/weather changes.

Key questions

- **Does the wind always blow the same way?**
- **Is there a pattern in how the temperature changes over the course of the year?**

Identifying and Classifying

- Sort photographs taken during the different seasons e.g. autumnal trees, ice skaters on a frozen lake etc.
- Identify changes that take place during the different seasons. Tree tools for schools has excellent seasonal spotter guides/scavenger hunts, <https://www.treetoolsforschools.org.uk/categorymenu/?cat=outdoor&name=Outdoor%20learning&col=0F7CB6>

Key questions

- **How would you group these things based on which season you are most likely to see them in?**

Comparative and Fair Testing

- Carry out simple tests to identify differences between the seasons. See 'Observing over time' above.

Key questions

- **In which season does it rain the most?**

Researching using secondary sources

- Research plants that flower at different times of the year.

Key questions

- **Are there plants that are in flower in every season? What are they?**

Exploring and Problem Solving

- Explore/discuss the question, 'what if there was only one season?'. See Explorify for more information, <https://explorify.uk/en/activities/the-big-question/what-if-there-was-only-one-season>

Key question

- **What if there was only one season?**

Cultural capital opportunities:

Sustainable Development Goals: Number 13 Climate Action, Number 14 Life below water, Number 15 Life on land

Climate change links: Begin to learn about how climate change is effecting/changing the seasons.

Visits/trips: A local arable farm, park or garden at different times during the year. A planetarium for an age appropriate show.

Visitors: Meteorologists, gardeners (professional or amateur), people who work outside throughout the year.

Scientists: Dr Steve Lyons

(Extreme Weather)

Holly Green (Meteorologist)

Enrichment experiences: Go on a night walk during different seasons.

Subject Links

English

- Write simple poems about the weather.
- Describe different types of weather both verbally and in writing. Pupils could pretend to be weather forecasters.

Related texts

- Tree: Seasons Come, Seasons Go (Patricia Hegarty and Britta Teckentrup)
- One Year with Kipper (Mick Inkpen)
- After the Storm (Nick Butterworth)

Maths

- Measure rainfall using simple rain gauges and either standard or non-standard units of measure.
- Begin to learn about number lines in the context of an outdoor thermometer.
- Reading numbers from rain gauges/thermometers provides an opportunity to learn about place value.

DT

- Make simple rain gauges and anemometers.
- Make wind chimes.
- Make 'homes' to help different types of animals at different times of the year e.g. a hedgehog house. See Tree Tools for Schools for more information, https://www.treetoolsforschools.org.uk/activitymenu/?cat=outdoor_makes

PSHE

- Learn about the importance of protecting ourselves from the Sun on sunny days.

Geography

- Learn about how seasons are different in other parts of the world.

Music

- Create simple pieces of music to represent the different seasons.

Art

- Produce artwork to represent the different seasons e.g. drawings, paintings, collages etc.

<p>Criteria to assess readiness for next year group</p>	<p>Working at the expected standard</p> <p>Working scientifically</p> <p>The pupil can, using appropriate scientific language from the national curriculum:</p> <ul style="list-style-type: none"> • ask their own questions about what they notice • use different types of scientific enquiry to gather and record data, using simple equipment where appropriate, to answer questions: <ul style="list-style-type: none"> ○ observing changes over time ○ noticing patterns ○ grouping and classifying things ○ carrying out simple comparative tests ○ finding things out using secondary sources of information ○ communicate their ideas, what they do and what they find out in a variety of ways <p>Science content</p> <p>The pupil can:</p> <ul style="list-style-type: none"> • name and locate parts of the human body, including those related to the senses [year 1] • describe and compare the observable features of animals from a range of groups [year 1] • group animals according to what they eat [year 1], • describe seasonal changes [year 1] • distinguish objects from materials, describe their properties, identify and group everyday materials [year 1]
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