

Question: Is every plant in our school garden the same and do they all grow the same?

National Curriculum Link

KS1 Science: Y2 Plants

KS1 Science Working Scientifically

IB Learner Profile Links

Inquirers – Nurture skills for research and curiosity

Knowledgeable – Develop conceptual understanding and engage with issues and ideas

Principled – think and act with integrity and honesty

Reflective – Consider the wider world and our own ideas and experience

Prior Skills – Y1

- Identify and name the petals, stem, leaf, bulb, flower, seed, stem and root of a plant
- Describe the basic structure of a plant (roots, stem, leaves, flowers/blossom)
- Identify and name a variety of common, wild and green plants, including deciduous and evergreen trees;
- Recognise deciduous and evergreen trees and name the trunk, branches and root of a tree
- Sort plants by size
- Identify and name a variety of common animals, including fish, amphibians, reptiles, **birds** and mammals;
- Ask simple questions
- Observe closely, using simple equipment
- Compare observable and behavioural features of living things
- Answer scientific questions
- Draw diagrams from observations to record findings
- Compare and contrast familiar plants; describing how they were able to identify and group them
- Explore, using the senses (see, touch,

New Skills – Y2

- Identify what plants need to survive
- Observe and describe how seeds and bulbs grow into mature plants
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
- Ask simple questions to find answers
- Plan a fair test with support
- Make simple predictions and make links to prior learning or something they have observed before
- Recognise when a test is unfair
- Observe closely using simple equipment provided
- Use measuring equipment and measure using simple standard units such as ml, cm
- Use a table to record results and make a block graph to show data
- Describe their observations and use them to draw conclusions and answer questions
Draw pictures, diagrams and take photographs to show results

Future Skills – Y3

- Identify and describe the functions of different parts of flowering plants (roots, stem, leaves and flowers)
- Explore and identify what a plants needs for life and growth (air, light, water, nutrients from soil, and room to grow)
- Describe the ways in which nutrients, water and oxygen are transported within plants
- Investigate the way in which water is transported within plants
- Explain how the needs and functions of plant parts vary from plant to plant e.g. insect and wind pollinated plants
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
- Ask relevant questions and use different types of scientific enquiries to answer them
- Plan and set up a simple fair test to find answers
- Plan a fair test and isolate variables and explain why it was fair and explain which variables have been isolated
- Suggest improvements and predictions linked to questions
- Decide which information needs to be collected and decide which is the best way for collecting it
- Use their findings to draw a simple conclusion

<p>smell, hear or taste)</p> <ul style="list-style-type: none"> Record observations and results to a test using drawings and in simple tables Use their observations and ideas to suggest answers to questions Gather and record data to help in answering questions. 		
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Knowledge, Skills and Understanding for topic area

- Identify what plants need to survive
- Observe and describe how seeds and bulbs grow into mature plants
- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy

Knowledge, Skills and Understanding for Working Scientifically

- Ask simple questions to find answers
- Plan a fair test with support
- Make simple predictions and make links to prior learning or something they have observed before
- Recognise when a test is unfair
- Observe closely using simple equipment provided
- Use measuring equipment and measure using simple standard units such as ml, cm
- Use a table to record results and make a block graph to show data
- Describe their observations and use them to draw conclusions and answer questions
- Draw pictures, diagrams and take photographs to show results

Challenge

- Can they explain that plants grow and reproduce in different ways?
- Can they describe what plants need to survive and link it to where they are found?

Website/Apps

Plant study an trail – linked to treasure box in science store with resources and link to book.

<http://www.greatplanthunt.org/index.html>

Seed to plant life cycle – video to watch

<http://www.mhschool.com/science/2008/student/na/scienceinmotion/Grade1/Chapter2-LifeCycleOfABeanPlant/BaseAnimation.swf>

Plants – teaching resources www.SAPs.org.uk/primary

Planting day ideas: <http://www.woodlandtrust.org.uk/learn/help-and-support/plant-trees/your-tree-pack/>

Explore activities on

http://www.bbc.co.uk/schools/scienceclips/ages/5_6/growing_plants.shtml

Extended Writing Opportunities

Grow a bean plant and create a how-to-guide on how to look after it.

A recount of what they found in the school grounds and discovered using scientific names for plants and observations.

Keep a plant growth diary – on going booklet

Numeracy Skills

Draw a block graph scale 1:1 or a pictogram to show results from plant investigations. Use a ruler to measure height of plants to find plant growth. Measure amounts of water for plants using measuring equipment. And reading scale accurately to the nearest labelled division.

Wow starter/experience

Walk around the school grounds looking with the microscopes at the different plants we have growing.

A visit from a school gardener or someone from a garden centre to talk to the children about plants and bring clippings of plants and plant growth at different stages for them to observe.

Resources

- pictures of plants in flower and with fruits and seeds e.g. *apple trees, tomato plants, horse chestnut trees, dandelions, peas, beans*
- soil, compost, sand, absorbent paper
- transparent containers for growing seed without soil
- hand lenses and microscopes
- grow bags/ pots for planting seeds in
- seed pods and fruits eg *sunflower, pepper (capsicum), tomato, horse chestnut, apple*
- secondary sources eg *video, CD-ROM* showing adults and young in a range of plants

Suggested Quality Texts

Non fiction: Following in Darwin's Footsteps by Aileen O'Riordan and Pat Triggs links to Plant Hunt website

<http://www.greatplanthunt.org/index.html>

Cross Curricular Links/ enquiry time activities:

Geography: Children will carry out research to find out which fruits grow where and set these out on a map.

Art: Children re-create the style of work made famous by Arcimboldo and use fruits and vegetables to create their own montage. Make close observational drawings and paintings of mini-beasts at different stages of their development using a variety of media including pastels, charcoal, inks and coloured pencils pens.

Art/Numeracy: Investigate the patterns of mini-beasts e.g. spirals, spots, stripes, patches and delicate wing patterns. Make printing blocks of these patterns with card and string or polystyrene 'press prints'. Make camouflage pictures of the creatures against their backgrounds.

ICT/Literacy: Make up a TV advert to convince children to eat more fruit.

Video record or photograph the planting day and keep a diary of plant growth using photographs, text, labelled diagrams, scientific vocabulary and captions.

