Question: How do the fruits we eat start their journey in the world?

National Curriculum Link
KS2 Science (Y3 Plants) – (May or June)
KS2 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 – Y2	New Skills – Y3	Future Skills – Y4
• 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	• 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	• 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 (plants, vertebrates, invertebrates) • Compare the classification of common plants and animals to living things found in other places (under the sea, prehistoric) • Explain, giving reasons for how they have classified animals and plants, using their characteristics and how they are suited to their environment • Recognise that environments can change and that this can sometimes pose dangers to living things. • Explain their findings in different ways (display, presentation, writing) • Find any patterns in their evidence or measurements • Make a prediction based on something they have found out • Record and present what they have found using scientific

	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	language, drawings, labeled diagrams, bar charts and tables

Knowledge, Skills and Understanding for topic area

- 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.

Knowledge, Skills and Understanding for Working Scientifically

- 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

Challenge

- Classify a range of common plants according to many criteria (environment found, size, climate required, etc.)

Resources

- video/secondary sources showing plants grown for food
- black polythene (bin bags)
- suitable apparatus for measuring the height of plants *eg metre stick, tape measure*
- pot-bound pot plant
- two similar plants *eg geranium plants*
- celery, carnation flowers
- germinated beans
- hand lenses
- water with food colouring, ink or other dye
- plant pots with holes in the bottom
- grow bags
- cress seeds which have germinated in shallow containers

Suggested Quality Texts

Non-fiction: selection in school library

Fiction: James and the Giant Peach by Roald Dahl

Website/Apps

Plant growth
www.urbanext.uiuc.edu/gpe/case1/c1facts3a.html
Gardeners' World website: www.bbc.co.uk/gardening/
The Great Plant Hunt
http://www.greatplanthunt.org/
Primary Upd8 – great website for ideas
http://www.primaryupd8.org.uk

Extended Writing Opportunities

Information texts on a range of aspects such as, pollination, seed dispersal, the life cycle of an apple, etc.
Information leaflet giving advice on how to look after plants kept in the classroom or home.
Explanation writing 'Growing seeds' watch link
http://www.bbc.co.uk/learningzone/clips/explanation-growing-seeds/12116.html

Numeracy Skills

Standard units; m, cm, mm, minutes, seconds.
Accurately use a ruler to measure the heights of plants to nearest ½ cm at regular intervals. Read scales to nearest division labelled and unlabelled. Bar charts 1:1, 1:2, 1:5 & 1:10 scale. Frequency table.

Wow starter/experience

Start by making a fruit salad and discuss the fruit used. Visit or ask a visitor from E.g. Tesco visit Fruit and vegetables department to discuss fruits formation etc. Junior chefs academy.

Cross Curricular Links/ enquiry time activities:

ICT: Choose one of these areas and perform a powerpoint presentation to the rest of the class: Why are bees important to us? Where did that apple come from? What is seed dispersal?
Use a camera/camcorder or time-lapse microscope such as the Intel Play QX3 Computer Microscope could be used to record how plants grow. Take digital photographs of growing plants (with a ruler alongside) to provide a visual record for comparison with data.

Art: Children to use water colours to create paintings of different blossom working from first-hand experience.
Leaf printing to create symmetrical patterns.
Observational drawings or paintings of seed heads, grasses, dandelions, etc. (White crayon on black, or white wax with a dark wash *is particularly effective.*

Philosophy: Pictures of different plants/ fruits to discuss and make links between. Could we grow any fruit in this country? If not why not?

DT: Children to create their own fruit salads or fruit smoothies, taking account of food hygiene and design procedures.