

Upton Infant School's Science Curriculum Rationale

- Brilliant scientists...
- Develop their scientific knowledge to help them greater understand the world
 - Understand that science has changed, and will change, our world
 - Are excited and curious about the world
 - Can predict what might happen in an investigation
 - Can make observations about what is happening in an investigation
 - Can explain what has happened in an investigation

Science Curriculum – Plants
Reception
Year One
Year Two
Intent

Brilliant scientists in Reception are curious and can talk about their immediate environment and some of the plants found within it; how they are similar and different and can change over time

Brilliant scientists in Year One are curious and excited to explore their local environment to identify a variety of plants and explore their structures. They will work scientifically by observing and recording the growth of a variety of plants.

Brilliant scientists in Year Two are curious and excited to explore and investigate plants in their local environment. They understand how to plan and carry out a fair test, making predictions and observations and can explain what has happened. They know what plants need to grow and survive.

Planning considerations for teachers

- Are children curious about their environment and plants?
- Can children talk about similarities and differences?

- Are children curious about their local environment and given opportunities to explore it?
- Can they identify a variety of plants?
- Can they identify the structures of plants?
- Are the children given opportunities to observe a variety of plants?

- Are children curious and excited to investigate plants in their local environment?
- Do children understand what a fair test is (investigating one variable only)?
- Do children have the opportunity to plan and carry out a fair test, making predictions and draw conclusions?
- Do children know what plants need to grow and survive?

Knowledge and Skills

- Brilliant scientists...
- know what an environment is
 - know that some things are living
 - know what similar and different mean
 - know what change means
 - know the basic features of a plant (leaves, stalk, roots)
 - know that plants grow
 - know that plants change over time
 - know that plants come from seeds

- Brilliant scientists...
- 1 • know a variety of common wild and garden plants
 - 2 • know the basic structure of flowering plants
 - 3 • know the basic structure of trees
 - 4 • know a variety of deciduous and evergreen trees
 - 5 • know a variety of common wild and garden plants, vegetable and fruit plants, deciduous and evergreen trees

- Brilliant scientists...
- 1 • know that there are different types of seeds and bulbs
 - 2 • know that seeds need the right temperature, oxygen and water to germinate
 - 3 • learn to observe how plants grow into mature plants
 - 4 • know that plants need water, light and a suitable temperature to grow well

- Next steps:
- Children will be taught to:
 - identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
 - explore requirements of plants for life & growth and how they vary
 - investigate the way in which water is transported within plants
 - explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

Working Scientifically

- Brilliant scientists...
- talk about their immediate environment
 - observe plants' similarities and differences
 - observe changes in plants

- Brilliant scientists...
- 6 • observe closely using magnifying glasses

- Brilliant scientists...
- 5 • ask simple questions e.g. "What do plants need to grow well?"
 - 6 • observe closely, making measurements
 - 7 • carry out tests to investigate what plants need to grow well
 - 8 • identify and classify objects after investigating them

Our promise to make science learning brilliant (*cultural capital*)

- To use the mud kitchen
- To grow plants from seeds
- To explore the environment around our school

- To grow plants and vegetables from seed using the school greenhouse and vegetable plots

- To grow plants and vegetables from seed using the school greenhouse and vegetable plots

Meet some brilliant scientists

David Bellamy

Jane Colden

