

Explanation of Provocation

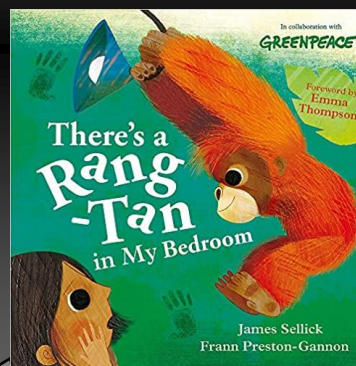
Our environment is one of the most important things in our lives. The definition of an environment is, “the surroundings or conditions in which a person, animal, or plant lives or operates”. Our environment is responsible for plants, animals, food chains, the water and much more, which is why it is very important that we look after it. If we don't look after it today, who will look after it tomorrow? This project will focus on teaching children about the importance of looking after the animals within our environment; to ensure that over time they do not become extinct.

Through learning about 'Orangutans' the children will build on their knowledge of animals and their habitats from Year 2 and learn about Classification (including plants), changing environments and food chains. This will particularly focus on the need for Biodiversity in our environment and the importance of looking after habitats in which animals and plants live in.

This will follow on with a more localised part of the project where the children will look at the importance of the biodiversity of birds and in Design and Technology make bird feeders to help them survive.

We are Scientists

Provocation



School Values

Compassion

For a world to live in harmony together, people need to be able to show compassion towards each other and the animals and plants that live in our world. As well as understanding the importance of biodiversity and how each living organism link to each other, they must also be able to empathise and understand the reasons for people's actions; showing an understanding of everyone's needs and how they affect each other.

Koinonia

Protecting our environment can not be done by one person or a small group of people, it needs everyone to be on board and to work together to change the world we live in. It is important for the children to understand that they are a piece of the jigsaw as they are the next generation that will affect the world we live in through their actions and that if everyone works together to do this, things can change.

Sequence

- Where does the Orangutan live? (Revision of Habitats from Year 2. Link to Geography)
- What is an Orangutan? Do any other animals and plants live in this environment? (Classification of animals and plants)
- What is Biodiversity? Does it matter if the Orangutan becomes extinct? (Food chains)
- Are the trees important? (Parts of a plant and conditions for growth)
- Why are the trees being cut down? What damage will this cause? (Changing Environments)
- How can we improve this situation? Are things improving? What are companies doing to improve this? (Changing environments Sustainable Palm Oil)
- Exploration of an Endangered species – individual study of a chosen species.
- Exploration of Biodiversity in birds and how we can help them to survive during the year. (Leading into Design and Technology – bird feeders)

Scientific knowledge

- 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
- Recognise that environments can change and that this can sometimes pose dangers to living things.
- Construct and interpret a variety of food chains, identifying producers, predators and prey.
- Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- Explore 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
- 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.

Design and Technology skills

- Investigate similar products to the one to be made to give starting points for a design (design criteria)
- Draw/sketch products to help analyse and understand how products are made
- Think ahead about the order of their work and decide upon tools and materials
- Plan a sequence of actions to make a product
- Record the plan by drawing (labelled sketches) or writing
- Develop more than one design or adaptation of an initial design
- Propose realistic suggestions as to how they can achieve their design ideas
- Add notes to drawings to help explanations
- Identify the strengths and weaknesses of their design ideas
- Consider and explain how the finished product could be improved
- Discuss how well the finished product meets the design criteria and how well it meets the needs of the user

Scientific enquiry

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using straightforward scientific evidence to answer questions or to support their findings

Geography knowledge

- Name and locate the main country of the project, its continent and identify their main physical and human characteristics; including hills, mountains, cities, rivers, key topographical features and land-use patterns; and understand how some of these aspects have changed over time.
- Name and locate the Equator, Northern and Southern Hemisphere, the Tropics of Cancer and Capricorn, the Arctic and Antarctic circles and date time zones.
- Describe and understand key aspects of physical geography, including climate zones, **biomes** and vegetation belts, rivers and the water cycle.

Design and Technology knowledge

Materials

How to cut slots

Cut internal shapes

Construction

Create shell or frame structures, strengthen frames with diagonal struts

Make structures more stable by giving them a wide base

Understand the safety rules for using a glue gun

Lines of enquiry

It is important we understand 'how' we learn about Science.



Observing over time – Scrutin – eyes



Comparative and fair testing – Fair Flo



Identifying, classifying and grouping - Commander Classify



Pattern Seeking – Pattern Man



Research using secondary sources – Roger Research