

STEM Days

Autumn term – MATERIALS FOCUS

Links to:

Science work on materials, floating and sinking
Design Technology on structures and stiffening and strengthening materials
Design technology and science: circuits and materials which conduct electricity
Computing inputs and outputs

4 challenges to be done in houses through the day

- **Egg drop challenge** – Can children design a something to protect an egg from a fall so that it doesn't break? Exploring materials to protect / designing suitable product for a given purpose
- **Strong structure challenge** –Can children design and build a structure using paper and card which can hold up the heaviest weight? (inspired by the Tokyo tower)
- **How to keep a teddy dry** – Children to explore different materials to build a little boat and a waterproof covering for teddy to get across the water tank in the rain?
- **What can we use to play the makey makey piano?** Children to explore different materials as inputs for the makey makey computer piano

Spring term – ANIMALS and HABITATS FOCUS

Links to:

Science work on materials, animals, adaptation, habitats
Design Technology on designing structures for a purpose
RE link to Creation

3 events / challenges

All together:

- **Visit from birds of prey and animals centre** to see different kinds of birds, insects and animals and explore what they are like and how they live.

In houses (2 at a time)

- **Insulation challenge** – Can children stop the ice from melting using different insulating materials including feathers and fur-like materials as well as fabrics, bubble wrap etc.
- **Habitats challenge** – Create a 'small world' habitat and design a creature that has adapted to live there.

Summer term – OUTDOORS BEACH FOCUS

Links to:

Science work on plants, animals, habitats and caring for the environment / pollution and fossils
Art link to drawing from life / keeping field notebooks
Geography link to beaches and coastal areas
RE / Collective Worship link to Creation and stewardship

3 events / challenges done all together on Holy Island:

- **Beach clean** – Children to help clean an area of beauty on the beach thinking about the harm plastics can do to the environment.
- **Investigate the variety of plants and animals that live on the beach** and their habitats to be found there (including seaweed, rock pools etc). Use field notebooks to record what we find. Also look for fossils
- **Fossils challenge** – Investigate different types of fossil and make our own for a 'beach museum'