

Let's Go Fly a Kite

Objective

To explore the shape of a kite and examine how the physical characteristics of a kite shape has been adopted by animals to aid their movement.

Experiences and Outcomes

MTH 2-19a

I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns.

Background Information

The origins of kite flying date back nearly 3,000 years to China where kites were used for sending messages. They feature in the history of many different countries and cultures. In some parts of the world, such as Asia and the Middle East kite flying is a popular pastime and includes activities such as kite festivals and kite fighting. Kites have also been used in military operations such as sending messages and taking photographs. They are also used in the study of weather and space and these kites can be are large and can be highly technical. The Moray Firth has lots of open sandy beaches perfect for flying a kite.

A kite is a quadrilateral shape. It has four sides with two sides next to each other that are of equal length but none of the sides are parallel. The diagonals intersect at right angles and a kite has two equilateral triangles and two isosceles triangles.

The shape of a kite allows air to flow over the top, the effect of this causes a lower pressure under the kite and then causes 'lift' resulting in a kite rising into the air. The kite will rise and move in the direction of the wind. Birds in flight have a similar shape to kites which aids flying, however the same principles of lift apply in a water environment, and many aquatic animals are shaped to use 'lift' in water in the same way that birds use lift in the air, this includes rays and flatfish.

Sails act in similar way to kites, the wind pushes against a large area of fabric causing it to move. Humans have used the wind to move boats in this way for hundreds of years.

Equipment

A2 size coloured paper
2 x doweling or garden sticks per kite (60cm length, 3mm width)
Garden secateurs (for teacher's use)
Garden twine
Pencil
Sticky tape
Measuring stick/ruler
Scissors
Decorations

Kites may be made on a smaller scale using A3 paper and sticks 42 cm in length.

→ Let's go Fly a Kite

Activity

Put the A2 paper on the table with the short end facing towards you (portrait direction).
Measure the width and height of the paper.

Measure the mid point along the top and bottom of the paper and mark with a pencil. Measure the width of the paper and cut one of the sticks of doweling to the same size (for A2 paper this should be 42cm).

Create a 'cross' shape with the sticks. The short stick should be approximately 1/3 away from the top of the paper.

Tie the sticks together using the garden twine by square lashing and then tie off using a reef knot with the two ends.

Stick the doweling to the paper securely using the sticky tape.

Use 3 – 4 metres of garden twine and tie one end to the point of the square lashing. Decorate and add a tail if desired but remember that heavy objects will weigh the kite down.

Go fly your kite!

Activity Worksheet

Use the Activity Worksheet and circle the animals that are a similar shape to a kite. Which animals in the Moray Firth use 'lift' to aid their movement through the air or water.

Safety Note

Take care when tying the sticks together; ensure there is plenty of space between the children to avoid any accidents such as sticks in the eyes.
Kites should not be taken outside in strong winds or rain.
Do not use near overhead power lines.

Discussion Points and Follow-on Activities

Follow on this activity by looking at weather patterns and conditions.
Discuss weather conditions.

