

MATHS learning springboards



Pattern symmetry

This is a physically active task, as well as a mathematical one

Aim: Identify and recreate different types of symmetry.

- In groups of 3-5, collect a wide variety of leaves, stones, twigs and other natural materials found in the grounds or neighbourhood.
- Mark out two parallel lines on the playground – or use the markings on a sports court.
- Each group sets up a base, made of a PE hoop, along one of the lines and stores their natural resources in this base location.
- Along the other parallel line, arrange a matching set of larger hoops or rope circles in which to create the symmetrical patterns.
- Chalk a line of symmetry within the pattern 'base' or use a straight stick. Chalk two lines or use two sticks for rotational symmetry.
- Team members then take turns running to the pattern's base to start to create the symmetrical pattern. Then next person runs to the base, take a moment to look at it, running back to the resources store, choosing a new element, and running back to add this new element to maintain a symmetrical pattern.
- They then stay at the pattern base to see the following pupils add their pieces until all pupils have added to the pattern. The group then discuss and edit the pattern to get the best symmetrical outcome.
- Review each group's patterns.

Key vocabulary:

symmetry; rotational; pattern

Success Criteria

- ✓ Students identify and describe the different types of symmetry.
- ✓ Students correctly represent different types of symmetry using found materials.

Resources:

Hula hoops or lengths of rope;
sticks and found natural materials

Team Patterns in hoops or similar
Children stay here after they have added their piece to the pattern

Team resources (twigs, leaves stones etc) in hoops, or similar. Children gather here at start

1st child picks up a resource (leaf twig etc) from base runs to pattern and starts off the pattern. 1st child stays at the pattern base.

2nd child runs to then pattern to see it, runs back to the resources and selects a new piece to add, runs back to pattern and adds it. 2nd child stays at pattern.

