

## School grounds focus:

- Where are we now?
- Where do we want to be?
- How can we get there?
- Making the changes
- Using your grounds

## Curriculum focus:

- Science
- Geography
- Environmental studies

## Purpose of this activity:

- To investigate the components of the water cycle
- To understand how rivers erode, transport and deposit materials to produce particular landscape features
- To explore the characteristics of a river system

## Equipment/material needed:

- Tarpaulin
- Clay
- Sand
- Stones
- Small twigs
- Paper
- A large tray
- Plastic bags and litter
- Guttering, plastic tubing, watering cans

## Preparation:

- Set up your water butts to collect rain water (they can also be used for your growing projects, or other outdoor learning that needs water).
- Talk about the water cycle, introducing words such as mouth, spring, source, evaporation, river, stream, reservoir, rainfall, tributary etc.

## What to do:

- Find an area in your school grounds where there is a slight slope down hill (preferably to a curb).
- Lay out your tarpaulin and organise small groups to construct a channel on top of the tarpaulin using the sand to build river banks. Position a large tray at the end of the channel (where the water runs off the kerb) to collect the water.
- Test the channel by running water (collected in watering cans or transported from the water butts using guttering or plastic tubing) down the channel. Check that the majority of the water runs down hill and collects in your tray at the end of the channel – adjust your design as needed – so you can recycle it.
- Using clay, twigs, sand, stones, litter etc allow groups of children to explore and experiment through play how they can change the flow, speed and direction of the water.
- Play 'True or false' (see over page) to help encourage an understanding of the language of rivers and how they work.

## Extensions:

- Get the children to draw field sketches and/or take digital photos of their river which they can use to label and show key features of a river.
- Visit a local river and carry out flow analysis, field sketches etc.

# True or false?

Get the children to make a list of true and false statements about rivers (for examples see below). Divide the class into pairs. Give each pair a 'true' and 'false' flag (these can be made from coloured paper, and stuck on to sticks). Position two large pots of sand labelled true and false at a suitable distance for the children to run to and from. Designate one pair of children as 'callers'. Get the callers to call out randomly the statements below. One child from each pair, taking it in turns, then runs to put the correct flag in the correct flower pot.

- 'Rivers start from a spring'
- 'Rivers start from the sea'
- 'The mouth of a river is at the spring'

- 'The mouth of a river is at the sea'
- 'A reservoir is formed by damming water'
- 'A reservoir is formed by putting a boat on the river'
- 'Stones in a river only move if the flow of the river is fast'
- 'Stones in a river only move if the flow of the river is slow'
- 'Sand in a river moves less than stones'
- 'Stones in a river move more than sand'

