Project Kingfisher: At Home

Rainwater and Flooding

Learning Objective: To discover how different types of flooding can happen

Recap – What have we learned so far?

1. Water in the landscape is useful for animals
2. Water in the landscape is useful for plants
3. Green spaces like gardens help capture water and store it so it can be used by plants and animals

What happens to rainwater when we build over our green spaces?

In a green space most rainwater soaks into the ground.

In built up areas the water can’t soak in. It becomes runoff.

All the rainwater that lands on roofs, runs off into downpipes and into underground pipes called the sewer.

The rain that lands on paved surfaces runs into drains and into the sewer.

As more buildings are constructed, more roads and car parks are built, more rainwater becomes runoff - it goes straight into the sewer.

What a waste!
Introduction
As more green space is built over, more runoff enters our sewers. This can cause two types of flooding. River flooding occurs when a river bursts its banks. Surface water flooding occurs when the sewer becomes overwhelmed. In this activity, you will have a go at causing both types of flooding.

You will need:
- A funnel - or make your own using the instructions below
- A cup
- A jug or bottle

To make a funnel

Use a sandwich bag or plastic wallet.
Cut out a large triangle that includes the bottom corner. Snip off the very tip of the corner to make a tiny hole. Feed the triangle into a toilet tube. Secure it with a rubber band.

TASK 1 - River Flooding
Fill the water bottle or jug. Pour this runoff into the funnel (sewer) so it drains into the cup (the river). The aim is to fill the cup and make it overflow without letting any of the water spill over the top of the funnel.

TASK 2 - Surface Water Flooding
Empty the cup and repeat Task 1, only this time see if you can overwhelm the sewer. Pour the water so that it fills the funnel and spills out over the top.

Which type of flooding was easier to cause? Complete these statements with a type of flooding:
When too much rainwater rushes to the drains all at once it causes ________________
When runoff continues to enter the river for a long time it causes ____________________
In real life, both types of flooding can happen at once. How could we reduce the amount of runoff entering the sewer so that there is less risk of flooding? Complete the next activity to find out!