



Amazing Builders

explore how beaver dams are built and their impacts

Beavers are amazing builders. They are capable of building their own dams and lodges using resources in their habitats. Although these structures benefit beavers and some plants and animals, they can also disrupt and impact the environment in negative ways. They destroy forests, drain rivers and streams, and can create floods from storing too much water.





What you need:

- a large aluminum tray
- rocks
- leaves
- twigs
- sticks
- water
- modelling clay

What to do:



CAUTION!
Remember to
clean your hands
after building the
dam.

- 1 Make a row of rocks in the middle of the tray.
- 2 Place twigs and sticks on top of the rocks to build a dam. Fill up any holes with leaves and modelling clay.
- 3 Pour water on one side of the dam and observe.
- 4 Make adjustments to your design, such as using more twigs and interweaving the leaves and twigs, to find out what works best to keep the water on one side of your dam.



Through this experiment, you experienced the construction work that beavers do to build dams out of natural materials. The natural materials that you put on the tray modelled a beaver dam. Much of the water stayed on one side of the dam, just like how a beaver dam blocks and diverts the water flowing down from a stream to create a pond on the other side of the dam. The slow-flowing water in the pond creates the perfect environment for beavers to build their lodge. The lodge gives them shelter, warmth, protection, eating areas, as well as storage for food.

Beavers are natural engineers and they know where and how to build their homes using their unique physical features. Our smart engineers replicate beaver dams and build dams for reservoirs and hydroelectric plants. Think about the amazing structure of the beaver dam. Perhaps you can come up with more brilliant ideas of using them in your innovative design.



Hydroelectric Dams

Like beavers, humans have also learned to build dams. These hydroelectric dams wall off water to create reservoirs, which can then be used to generate electricity. In Canada, hydroelectric dams are used to generate 60% of our electricity. The largest hydroelectric dam in Canada is located in James Bay, Quebec.

