

# GO WITH THE FLOW



STUDENT WORKBOOK



# STOPPING THE FLOW

Have you ever tried to keep water from flowing? Maybe you were at the beach and used a pile of sand to stop a small wave. Maybe you used your hand to keep water from coming out of a hose. What was that like? Now, imagine you had to stop an entire river or a big wave on a beach. What would that be like?

## I BEFORE AND AFTER DAMS

### Forming Figures

Before you begin to learn about how humans and animals stop the flow of water, you will make models of two organisms that stop water. A **model** is a smaller version of an object that can be used to help people understand the object.

#### WHAT YOU NEED: FROM THE KIT:

- 2 modeling dough

**SAFETY:** WARNING! DO NOT EAT OR DRINK anything in this kit.



#### WHAT TO DO:

**STEP 1** Use one color of modeling dough to make models of three beavers.

**STEP 2** Use the second color of modeling dough to make models of three people.

**STEP 3** In each of the sets of images, you'll decide if a beaver or a person caused the change.



## REFLECT

1. How were the dams the same and different? Use your data table to help you. \_\_\_\_\_
2. Why do you think some dams worked better than others? \_\_\_\_\_

## WE USE DAMS TOO!

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### Types of Dams

Humans build four types of dams. They are:



Gravity  
Dams



Arch  
Dams



Buttress  
Dams

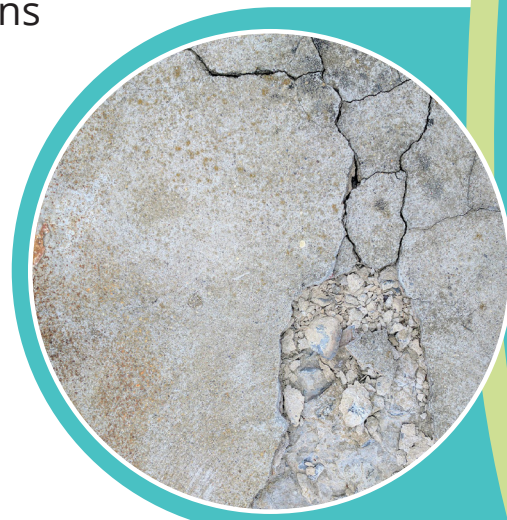


Embankment  
Dams

The four types of dams are built differently and used for different reasons.

Gravity dams are heavy and large. **Gravity** means the pull of two objects towards each other. One example of gravity, is the Earth and people pulling towards each other. This is why humans do not fly off the side of the planet.

Gravity dams are made of **concrete** and used to hold back large amounts of water. Concrete is a building material that is made of a hardened mixture of calcium-rich rocks and water. This type of dam can cost a lot of money because concrete can cost a lot.





## 4 ANIMAL BUILDERS

Beavers are not the only **organisms** that build or make things. An organism is any living thing.



### THINK ABOUT IT!

? Can you think of another organism that builds? What does it build?

Many organisms make their own homes.



Birds build nests.



Foxes dig dens.



Ants build hills.

These are all animal homes, or habitats.

### Bird Nests

Birds build nests out of many things. Some birds, like the stork in the picture above, build their nests from sticks and branches. Smaller birds, like sparrows, build nests out of twigs, feathers, and fur. Penguins build their nests from rocks.





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Kit	SU-GOFLOW
Instructions	N-GOFLOWO
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