

Take the "Great Beaver Dam Build Off" Challenge!

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Next Generation Science Standards: Grade K-3: Life Science & Engineering Design, Grade 3: Physical Science.

Now, it's <u>YOUR</u> turn! Try designing, building, and testing your construction skills by making your own tabletop beaver dam using materials you can find around your home.





What to Use?

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Beavers use mud, rocks, and sticks to construct their dams. What items can you find around your home that would be good substitutes for these materials? They should be waterproof (won't fall apart when they get wet) and small enough to build with.

FOR THE PROJECT, YOU WILL NEED:

- One shallow, rectangular container that can hold water. (A glass or metal baking pan works well.)
- Small bucket/pan of water and a cup for dipping.
- Bucket to catch water overflow.
- Wide, flat box, book, or brick to put under one end of pan.

DAM-BUILDING MATERIALS:

- Use marbles, plastic building bricks, small bouncy balls, or checkers in place of **rocks.**
- Use old crayons (remove paper wrappers first), pencils, or cut-up plastic straws in place of **sticks**.
- Use nondrying modeling clay in place of **mud**.

Don't forget to watch the Build-Off Activity video for construction tips!







Ready...Set...BUILD!

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Using all your materials, build a dam that goes across the pan and a little up the sides. As you do so think about how the beavers build. Do they make piles of rocks, sticks, and mud. Or do they mix these materials together to form their dam?

Once your dam is complete, it's time to test! Pond or No Pond?

Place a book or box under one end of the pan so that it is higher than the other end. If you are using a table, move the pan to the table's edge and place your bucket underneath to catch any water that might spill.

Using your cup slowly pour water into the higher "upstream" side of the pan. Watch to see how much water makes it through your dam to the lower "downstream" side of the dish. Try to keep water from overflowing the pan if you can.

- How well did your dam hold water?
- How could you make it better?
- What materials could be more useful?
- How do you think beavers learn to build so well?

Follow-up

- Try using different materials in different combinations to rebuild and test your dam. Do you think using more "mud" will help? What about more "rocks" or "sticks?"
- Try adding water faster or slower to the dam and see what happens. How do you think times of heavy rain or less rain might affect the beaver's habitat?