

Building in the Heat

Ages 3 – 10 Test how well different materials absorb heat.

Activity Time: 10 minutes (30 minutes inactive time)

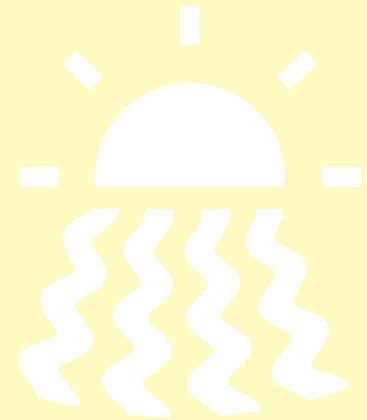
Materials:

Use whatever you can find around your home.

Suggested materials include:

- colored paper
- fabric
- ceramic
- plastic
- stone
- metal coins

- 1** Help your child identify and select a few materials from around your house to test. Try to find a few different types of materials (e.g. paper, fabric, ceramic) and materials that come in a few different colors (e.g. white and black construction paper). Touch the materials together. Do you notice any differences in how warm or cool they feel?
- 2** Help your child place the materials in a sunny location outside for 30 minutes.
- 3** After the materials have been in the sun, ask your child to try touching each item one at a time. Do some materials get warmer than others? Does the color of the material make a difference in how hot it gets? Work with your child to order the materials from coolest to warmest.



SAFETY FIRST!

- Some materials can get very hot when exposed to direct sunlight for long periods. Uncoated metals, and some plastics and rubbers could get hot enough to burn if you touch them. Make sure to monitor which objects your child is touching, and lightly tap each that you are testing before your child touches it, to ensure that it is not too hot.



Family STEM Activity

Building in the Heat

BACKGROUND FOR GROWN-UPS

On a hot day, what location do you think would be cooler—a grassy park or an outdoor basketball court? When light from the Sun hits different materials (such as grass or asphalt), it gets absorbed and transformed into heat. Some materials absorb more light than others, and thus will get warmer. In a community, some areas may get hotter than others due to the building materials that are used in a particular location. These are often referred to as urban heat islands.

- Think about your house or your neighborhood. How many building materials can you identify?
- Imagine you are an engineer designing a neighborhood. What building materials would you use to keep your design cool? Are there any materials you would avoid?



This home activity is part of the new virtual Museum of Science, **MuseumatHome**.

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