

# handout

# Hot Water



Exploring your world,  
one mission at a time  
[pbskids.org/plumlanding](http://pbskids.org/plumlanding)

## What Is This Activity?

**What happens when heat meets water?** You will explore how heat causes water to dry up faster, a process that makes animals, including humans, cool down.

**Big Science Idea:** When water dries up, or evaporates, it carries away hot air, making things cooler. Heat speeds up that process.



### Activity Time

15 minutes

### Materials

- Pencil or pen
- Plastic or paper cup full of water
- Paintbrush
- Optional: Digital thermometer

## Sun vs. Shade on Pavement

**Touch or measure the temperature of the two pavement areas.**

Which is warmer? \_\_\_\_\_ Is the difference big or small? \_\_\_\_\_

Predict: Where will water on pavement dry up faster? Sun or Shade (circle one)

**Make identical water drawings on sunny and on shaded pavement.**

Draw your initials or a simple design with the brush and water. You will check them later.

## Sun vs. Shade on Grass

**Touch or measure the temperature of the two grass areas.**

Which is warmer? \_\_\_\_\_ Is the difference big or small? \_\_\_\_\_

## Human-made vs. Natural Surfaces

Touch human-made and natural materials that are in the sun. List them in order from hottest to coolest, on the back of this paper.

### Human-made materials:

Concrete or metal streetlight  
Chain link fence  
Metal playground slide  
Plastic swing seat

### Natural materials:

Tree trunk  
Hedges or bushes  
Wood chips  
Wooden bench

# Explore Some More

## Clay Pot Cooler

People in remote dry areas use two clay pots and some sand to create a refrigerator that cools without electricity. Search online for “pot-in-pot refrigerator,” “clay pot cooler,” or “zeer pot” to see how this simple device works. Hint: Evaporation is what keeps food cool.

If you live in a dry area, you can build a clay pot cooler using inexpensive materials and plans on the internet. The cooler doesn’t work in humid areas because water doesn’t evaporate fast enough.

## Outdoor Family Fun with Plum App

This app gets families outdoors exploring the world. Every day, the app offers five outdoor missions to get everyone thinking and talking about nature and the science that’s all around us.

Find the app and more fun resources on [pbskids.org/plumlanding](http://pbskids.org/plumlanding).



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