

What is conduction?

Brief summary:

You will conduct an experiment that demonstrates conduction, one of the three ways that heat can be transferred (the other ways are convection and radiation). In this experiment you will hold a paper cup full of water over a flame until the water boils. Amazingly, the paper cup **WON'T** catch on fire!

WARNING: this activity uses both a candle and boiling water - ask for adult help before starting!

You will need:

- Help from an adult
- Lighter
- Candle
- Paper cup
- Water
- Tongs

What to do:

Step 1. Fill the cup about 2/3 full with water.

Step 2. Light the candle then use the tongs to hold the cup close to the candle without letting it touch. Don't worry, your cup won't set on fire unless you put it right into the candle!

Step 3. Continue to hold the cup over the flame until the water starts to boil (this could take up to 5 minutes). The water will begin to produce steam and the cup will **NOT** catch on fire! This is because The temperature at which water boils is lower than the temperature at which paper catches on fire or ignites!

Take it further:

Have a look at our **CONVECTION** experiment!

Big questions:

- How does **CONDUCTION** affect weather?
- How does **CONVECTION** affect weather?

