

Franklin and Electricity

Activity One: Identifying conductors and insulators



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Look at the pictures of everyday household objects.

Circle **conductors** in **red**

Circle **insulators** in **blue**



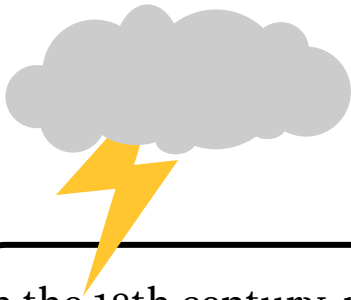
A **conductor** is a material that allows electricity to flow through it easily.
An **insulator** is a material that does not allow electricity to flow through it easily.

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Activity Two: Franklin's Kite and Key experiment



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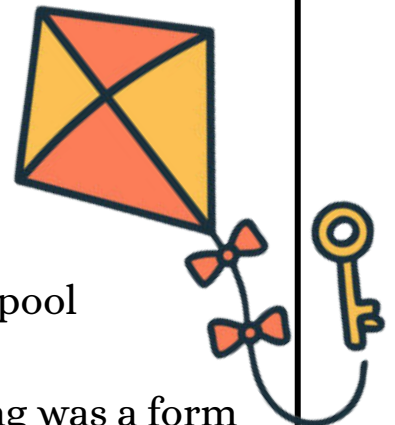
Read the story below.

In the 18th century, many people believed that lightning was a very hot liquid. Benjamin Franklin however, had a theory that lightning was a form of electricity. He had done many electrical experiments and knew about how it worked. He identified how some materials conduct electricity and others do not.

His theory came from his experiments. He noticed lightning and electricity had many similarities.

He noticed that lightning and electricity:

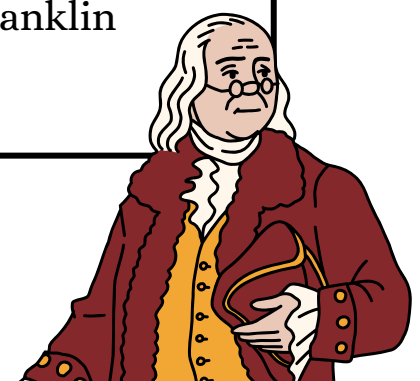
- I. Look the same – the colour and shape of the sparks
- II. Sound the same – crack, pop, zap!
- III. Smell the same – similar to the smell of a swimming pool



In 1752, Franklin wanted to prove his theory that lightning was a form of electricity. He believed that one way to prove something was electric was to feel a small shock from it.

Franklin flew a kite into a thunderstorm and tied a metal key at the bottom of the string. During the storm Franklin would touch the key to see if his experiment produced an electric shock.

When Franklin touched the key, he felt a small shock. This proved that lightning was electrical in nature! The key shocked Franklin because it was made of metal. Metal is a **conductor**.



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Create a comic strip of Franklin’s experiment.



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Activity Three: The Lightning Rod



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Lightning is very dangerous. It can start fires and damage buildings. Benjamin Franklin discovered that lightning is made of electricity. Because of this, he invented something called a lightning rod. A lightning rod is a metal rod placed on top of a building. If lightning strikes, the rod attracts the electricity and carries it safely down a metal wire into the ground. This keeps the building safe and helps stop damage or fires.

Draw a house with a lightning rod



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Activity Four: Test your knowledge!



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Answer the following questions

1. Name as many items that are **powered by electricity** in your home



2. Name as many **sources of electricity** that can be found in your home

3. Franklin identified lightning as a natural source of electricity. Can you think of any other ways we can **make electricity using nature**?