



Sequencing

Practice

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**Sequencing** is putting things in order, *from first to last*.  
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Read about lightning and thunder, paying attention to the **sequence** of events, from *first to last*.

Lightning and Thunder

Long ago, people made up myths and legends to explain what causes lightning and thunder. Having an explanation for something can make it less frightening. Lightning and thunder can be very frightening especially because they often happen just before a big rainstorm.

We now know what causes lightning and thunder. Have you ever noticed that you often hear thunder just a few seconds after you see lightning? This is because it is lightning that causes thunder. If the storm is far away from you, there are a few seconds between the lightning and the thunder. If the storm is close to you, you hear the thunder almost at the same time that you see the lightning.

Lightning is caused by electricity building up inside a cloud. When a large mass of warm air and a large mass of cold air come together high above the earth, it causes a lot of movement in the air. The cold air moves down while the warm air moves up, which creates something like friction. An electric charge builds up in the clouds. The charge gets stronger and stronger until it explodes—and the LIGHTNING flashes.

When the lightning flashes, the air around it becomes unbelievably hot—five times hotter than the surface of the sun!

The heated air expands into the cooler air around it, causing the shockwave that we call thunder.

Even though we usually see lightning before we hear the thunder that it causes, the two events happen just a fraction of a second apart. In addition, both light and sound travel through the air in waves. However, light waves travel faster than sound waves, so the light waves from the explosion get to us first.

A tiny version of an event similar to lightning and thunder can happen when you brush your feet along a carpet and then touch a doorknob. You can sometimes hear the little sizzle of mini-thunder, and see the flash of mini-lightning.

1. Write the numbers 1 through 6 in the boxes beside the events to show the sequence of what happens to cause lightning and thunder, from *first* to *last*.

1-6?

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| Friction created by air movement creates an electric charge inside a cloud. | |
| A large mass of warm air and a large mass of cold air come together high above the earth | |
| We hear a crash of thunder. | |
| The cold air moving down and the warm air moving up creates something like friction. | |
| We see a flash of lightning. | |
| An electric charge inside a cloud grows stronger and stronger. | |

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2. What is something else that can cause a flash of electricity?

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