

Astronomy for Kids - Meteor Showers

A Fireworks Show in the Sky

The very first thing we will discuss is the difference between a meteor and a meteorite. The real answer is that basically there really isn't any. Both are small objects that crash into Earth's atmosphere at a speed of several thousand miles per hour.

A meteorite is an object that is large enough that it doesn't burn up completely before it hits the ground. A meteor is smaller and does burn up completely before it hits the ground. What makes up the annual meteor showers, like the Persids and Leonids, though, is pretty special. What causes these two famous annual events is the Earth passing through the very long tails of two comets!

Regular Visitors from Outer Space

The annual Perseid and Leonid meteor showers are made possible because of two comets that make regular visits to our solar system. The Leonids are caused when Earth passes through the tail of Comet Temple-Tuttle, which sweeps through our solar system once every 33.2 years. The Persids are caused by Comet Swift-Tuttle, which visits our solar system every 130 years.

When these two comets visit our solar system, they leave behind trails that are thousands miles long made up of very small particles of dust and ice. As Earth makes its annual journey around the Sun, it passes through the tails of these two comets. As our planet goes through these two trails of dust, the particles burn up in our atmosphere, which results in the meteor showers that we see in the sky.

Watching a Meteor Shower

The Perseid meteor shower occurs during August every year and the Leonids occur during the last part of November. You can check the [Sky Maps](#) section here at Astronomy for Kids during those months to see when the best times are for seeing these two annual events. We will also tell you where in the sky to look for the meteors.

Meteor showers are usually best viewed during the very early hours of the morning. You will get the best results if you go out of the city to an area where the skies are truly dark. Give your eyes at least half an hour to get used to the darkness and then lay on the ground and just look up. Using a telescope or binoculars doesn't help much, as you need to watch the whole sky to make sure you don't miss anything.

After watching the dark sky for a while, which is usually interesting in itself, you should start seeing bright streaks of light as the meteors race across the sky. How many you will see can vary from as few as three or four an hour to as many as several hundred an hour. In either case, it's quite a sight to see.