

The Sun

The sun is a middle-sized yellow star like many others in the universe, but it is the closest star to Earth. Comprised of mostly hydrogen, the sun was created about five billion years ago when swirling dust and gas warmed to one million degrees and began the process of nuclear fusion. The sun creates its own light, heat, and energy.

Essential Vocabulary

eclipse – the act of being covered by another body; a solar eclipse is the moon moving in between the sun and the earth, causing a halo effect around the blocked sun

energy – usable power

solar – relating to the sun

star – a massive sphere of plasma held together by its own gravity

Lesson Starters

Create a Sundial

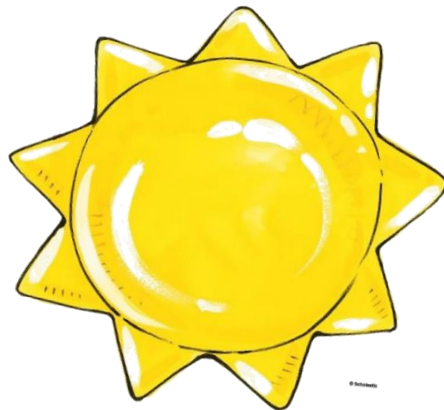
Explore the past by using a tool common long ago. Stick a ruler in a tin can filled with wet sand and set the can in the sun. Trace the shadow the ruler makes on the ground with chalk every hour or two. Have students investigate the way the shadows move and how far apart they are. Continue the lesson in technological advances by viewing analog, digital, and solar powered clocks. This idea is excerpted from [500+ Fabulous Month-by-Month Teaching Ideas](#).

Shadows and Shapes

The sun provides many fun opportunities to explore shadows. After teaching students about 3-D shapes, explore how 3-D becomes 2-D when using shadows. Hold a shape block up to the sun and look at the shadow it creates. Have students describe the shadows. If you can locate a projector, put the 3-D shape on the projector and flip to show all sides. Challenge students to identify the 3-D shape with the given information. Younger students can use chalk to trace shadows made by various objects held up in the sunlight.

Distance to the Sun

Find the distance of different planets to the sun. Then figure out a scaled size. Use adding machine tape to roll out the relative distances of each planet to the sun and put them in order. Challenge older students to create their own scaled measurements and let younger students count off distances in non-standard ways, such as kid footsteps.



Sun Protection

Teach students about the power of the sun's rays. After reading about the sun, make a chart of positive and negative effects of the sun's rays. To illustrate the effects, place dark construction paper directly in the sun. Have students hypothesize what will happen and then see how the paper fades in the sun. Determine ways to protect against harmful rays and try some out with the paper, such as covering part of the paper with cloth. Wrap up by having students create posters or PSAs that instruct how to stay safe in the sun. Get [more sun safety ideas](#) from *Early Childhood Today*.

Puddle Puzzlers

Introduce the water cycle through the power of the sun. Create a puddle or wait until after it rains. Then, use yarn to measure the perimeter of two different puddles. Visit the puddles throughout the day and continue measuring until the puddles are gone. Which puddle disappears faster? Use your measurement yarn to see the shrinking perimeters. Even very young children can identify the warmth of the sun helping to dry the puddles. This idea is excerpted from [500+ Fabulous Month-by-Month Teaching Ideas](#).

Resource Connection

[Sun-Sational Science](#)

Lessons, book ideas, activities, and crafts to help teach about the sun.

[Everything You Need: Solar System](#)

Lessons, activities, and resources galore all about the Solar System and our sun.

[StudyJams!: A Day on Earth](#)

An interactive video and quiz, perfect for the whiteboard, which explains how orbit and rotation create day and night on Earth.

[Interactive Book Printable](#) Create a book about the sun and weather with this ready-to-make printable and teaching ideas.