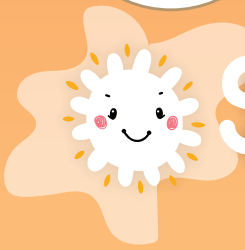


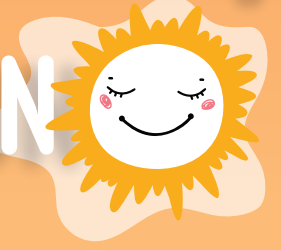


STEM FAMILY ACTIVITIES

for independent learning



SHADOWS AND THE SUN



You can use the back of this paper as your STEM journal to record each of the activities

Activity:

1. For this exploration, you will need a blank piece of paper, a crayon or pencil, a few small toys, and a sunny day.
In the morning, place two or three toys along the edge of the paper, making sure that your toys' shadows are on the paper. Trace the shadows. Don't move anything! Come back a few hours later and trace the toys' shadows again, this time using a different color. Do this one more time later in the afternoon.

2. Do another exploration by using sidewalk chalk and your body. Stand in a sunny spot and have an adult trace your shadow with chalk. Come back a few hours later and trace your shadow again. This time notice where the sun is located in the sky each time you trace your shadow.

3. What did you notice was similar between your toys' shadow and your shadow during these activities? What questions do you have? Why do you think the shadows change size and direction during the day?

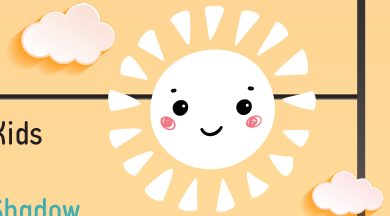
4. Play Shadow Tag – Whoever is "IT" must tag others by touching their shadow. If your shadow is tagged, you sit down. Play until everyone's shadow has been touched. The last person tagged is now "IT"

Optional Technology Connections:

Set up a phone to take a time lapse video of your toys' shadows for 1 hour or longer.



Create a Shadow Scavenger Hunt!
Take pictures of different shadows you find in your yard or neighborhood. Share these pictures with a family member and see if they can find what made each shadow.



Watch this Crash Course Kids Video: Following the Sun.
tinyurl.com/CrashCourseShadow

Create a sundial, a tool that uses the sun to tell time.
www.wikihow.com/Make-a-Sundial



Optional: Go to this link to print a "STEM journal" to record your observations and questions.
tinyurl.com/STEMjournal4



fresno county
superintendent of schools

For more resources or support, contact
Jon Dueck, FCSS STEM Direction – jdueck@fcoe.org
or visit our website: stem.fcoe.org