

Shadow Tracing

AN OUTDOOR EDUCATION ACTIVITY

DESCRIPTION

This activity helps students understand the changing angle of sunlight throughout the day due to the tilt of the Earth's axis. It provides a hands-on way to observe this natural process without requiring complex materials or procedures.

MATERIALS NEEDED

- Large sheet of paper (or chalk if using the ground)
- Pencil or marker
- Stick or dowel
- Sunny day

INSTRUCTIONS

- On a sunny day, place the large sheet of paper on a flat outdoor surface where it will receive direct sunlight throughout the day.
- Choose a stick or dowel and firmly plant it vertically in the center of the paper.
- Throughout the day, trace the outline of the stick's shadow every hour or so, starting from early morning until late afternoon.
- Label each tracing with the time it was made.
- After several tracings, observe how the length and direction of the shadow changes throughout the day.
- Discuss with participants how the changing angle of sunlight affects the length and direction of the shadow, relating it to the tilt of the Earth's axis.
- Emphasize how this phenomenon contributes to the changing seasons and the occurrence of events like the Spring and Fall Equinox.