

Teacher Information:

Teaching is an art and there really is no one way to teach and reach all students. It takes your unique and creative approach, this packet will enhance and augment your implementation of Earth's Place in the Universe. Hence,—**this is not a 'no prep' type resource**. Many of the activities included will be suitable for small group, whole group and center based learning. There are many inquiry opportunities within the activities included. Many of the printables can also be glued into student interactive books.

Earth's Place in the Universe focuses on the Big Ideas of:

For teaching purposes, the main topics for this set of activities are:

- The Solar System
- The Most Important Star—Sun
- The Planets
- Movement patterns—tilt, rotations, orbit, revolutions
- Moon phases
- Gravity

A science journal is recommended—at the end of each learning concept, have students write:

"I was surprised to learn that...."

"I am still wondering about..."

"What I noticed, What I am thinking about, What I wonder...."

Motion concepts are key and usually create the most misconceptions:

Rotations, Tilt and Revolutions (*Orbit is the path of travel*) should be shown with flashlights and balls and/or using students as the sun, earth, moon. Have students work in triads—one student is the sun with a flashlight, one student is the earth and one student is the moon. The sun student shines the light. The earth student rotates as she/he revolves around the sun. The moon student rotates and revolves around earth as earth is rotating and revolving. Students should take turns so that each student is the moon, sun and earth. This will help clarify the concept of rotating on the axis and revolving around the sun simultaneously. (*Best if done in the gym— this dual movement of earth and the moon is key.*)

The Solar System and Art Suggestions:

- Paint washable neon constellations on the windows
- Use black paper and glow in the dark paint to have students make fine dots to show constellations or use bright colored paints to make a solar system
- Make paper mache' planets
- Design a spaceship / rocket
- Make 3-D models of the solar system, constellations, seasons or day and night