Conceptual Sequence for *Earth in Space*

(to be published early 2003)

Thinking About Earth as a Planet
Module Pre-Assessment

Part I
Sun-Earth-Moon System

Tracking Shadows
(Earth's rotation)
Shadows reveal relationships to time of day, year, and the relative positions of the Sun and Earth.

Seasons
(Earth's revolution)
The apparent path of the Sun across the sky and the length of daylight hours change throughout the year. Seasons are due to the tilted Earth's revolution around the Sun.

Investigating Lunar Phases
(Moon's revolution)
The Moon goes through a predictable cycle of changes in its apparent shape, called "phases."

Solar and Lunar Eclipses
(Earth and Moon's revolution)
The stage for an eclipse is set when the Sun, Earth, and Moon align as the Moon's orbital plane crosses the plane of the ecliptic.

The Sun as an Energy Source
The Sun is the major source of energy for phenomena on Earth's surface.

Changes in the Sun's Energy: Sunspots and Space Weather
(Sun's rotation)
Sunspots follow predictable cycles. Space weather resulting from sunspots affects conditions on Earth.

Sun-Earth-Moon System Assessment

Part II
Solar System

Introducing the Anchor Activity
The space program has contributed to our knowledge of the solar system.

Looking at Scale Models
(Comparing the planets)
A scale model is one way of working with large distances and sizes.

Impact Craters
(Surface features)
Impact craters are a dominant feature on terrestrial planets.

Planetary Processes
(Surface features)
Wind erosion, water erosion, tectonics, and volcanism have shaped the terrestrial planets and moons.

Gravity and Weight
(Surface gravity)
Weight is the measure of the force of gravity pulling on a body. Surface gravity varies from planet to planet.

Gravity and Orbital Motion
(Gravity in the Solar System)
Gravity governs motion in the solar system. It keeps moons in orbit around planets and planets in orbit around the Sun.

Gravity and Tides
Gravity within the Sun-Earth-Moon system causes tides.

Part III
Earth's History as a Planet

Asteroids, Comets, Meteors
Earth's history is influenced by occasional catastrophes, such as asteroid impact.

Fossils: Earth's History in Rocks
Fossils provide important evidence of how life and environmental conditions have changed on Earth over time.

Earth as a Unique Planet
Earth, in its state of equilibrium, is able to support life.

Space Technology
The space program has contributed to technological advances on Earth.

Solar System Assessment

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