

# Journey Through the Solar System

## Grades 3-8

Live interactive program

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### OHIO Standards

Earth & Space Sciences (unless otherwise marked)

Rating Scale	Grade Level	Benchmark	Indicator
1 (main topic)	5	A	2. Explain that the Earth is one of several planets to orbit the Sun, and that the Moon orbits Earth.
2 (covered in detail)	2	A	1. Recognize that there are more stars in the night sky than anyone can easily count.
2 (covered in detail)	2	A	2. Observe and describe how the Sun, Moon, & Stars all appear to move slowly across the sky.
2 (covered in detail)	5	A	3. Describe the characteristics of Earth and its orbit about the Sun (e.g., $\frac{3}{4}$ of Earth's surface is covered by water [some of it frozen], etc.).
2 (covered in detail)	5	A	4. Explain that stars are like the Sun, some being smaller and some larger, but so far away that they look like points of light.
2 (covered in detail)	8	A	4. Describe the effect that asteroids or meteoroids have when moving through space and sometimes entering planetary atmospheres (e.g. shooting stars).
3 (briefly discussed)	2	A	3. Observe and describe how the Moon appears a little different every day, but looks nearly the same again about every four weeks.
3 (briefly discussed)	5	A	1. Describe how night and day are caused by the Earth's rotation.

3 (briefly discussed)	8	A	3. Compare the orbits and composition of comets and asteroids with that of the Earth.
3 (briefly discussed)	8	B	5. Explain that the universe consists of billions of galaxies that are classified by shape.
3 (briefly discussed)	9	A	1. Describe that stars produce energy from nuclear reactions, and that processes in stars have led to the formation of all elements beyond hydrogen & helium.

**K-2**

**Benchmark A:** Observe constant and changing patterns of objects in the day and night sky.

**3-5**

**Benchmark A:** Explain the characteristics, cycles, and patterns involving the Earth and its place in the Solar System.

**6-8**

**Benchmark A:** Describe how the positions and motions of the objects in the universe cause predictable and cyclic events.

**Benchmark B:** Explain that the universe is composed of vast amounts of matter, most of which is at incomprehensible distances and held together by a gravitational force. Describe how the universe is studied by the use of equipment such as telescopes, probes, satellites, and spacecraft.

**9-10**

**Benchmark A:** Explain how evidence from stars and other celestial objects provide information about the processes that cause changes in the composition and scale of the physical universe.

**MICHIGAN Standards**

**Standard V.4 Solar System, Galaxy, and Universe (ES)**

Rating Scale	S.C.# (Strand)	S.C.# Grade Level	Indicator
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1 (main topic)	1	Elementary	1. Compare and contrast the characteristics of the Sun, Moon, and Earth.
1 (main topic)	2	Middle School	3. Describe and explain common observations of the night sky.
2 (covered in detail)	1	High School	1. Compare our Sun to other stars.
2 (covered in detail)	1	Middle School	1. Compare the Earth to other planets and moons in terms of supporting life.
3 (briefly discussed)	2	Elementary	2. Describe the motion of the Earth around the Sun, and the Moon around the Earth.

**Standard component #1: All Students will compare and contrast our planet and Sun to other planets and star systems.**

**Standard component #2: All students will describe and explain how objects in our Solar System move.**

## **TOLEDO DIOCESE Guidelines**

**Earth & Space Sciences (unless otherwise marked)**

<b>Rating Scale</b>	<b>L.O.</b>	<b>Grade Level</b>	<b>Indicator</b>
1 (main topic)	1	5	Know that the Solar System is composed of the Sun, planets, Moon, asteroids, comets, and meteors.
2 (covered in detail)	1	5	Know & investigate the phases of the Moon.
2 (covered in detail)	1	5	Investigate and observe constellations, and explore legends associated with them.
3 (briefly discussed)	1	2	Know that the Sun supplies heat & light to the Earth.

**Grade 2**

**Learning Objective 1: Understands atmospheric processes.**

**Grade 5**

**Learning Objective 1: Understands the composition and structure of the universe and the Earth's place in it.**