Jovian Worlds

Grades 4-12

Live interactive program

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)	8	A	4. Describe the effect that asteroids or meteoroids have when moving through space and sometimes entering planetary atmospheres (e.g. shooting stars).
2 (covered in detail)	5	A	1. Describe how night and day are caused by the Earth's rotation.
3 (briefly discussed)	5	A	4. Explain that stars are like the Sun, some being smaller and some larger but so far away they look like points of light.
3 (briefly discussed)	8	A	2. Explain that gravitational force is the dominant force determining motions in the Solar System, and in particular, keeps the planets in orbit around the Sun.
3 (briefly discussed)	8	A	3. Compare the orbits and composition of comets and asteroids with that of Earth.
3 (briefly discussed)	8	B	5. Explain that the universe consists of billions of galaxies that are classified by shape.
3	9	A	3. Explain that gravitational forces

(briefly discussed)			**govern the characteristics and movement patterns of the planets, comets, and asteroids in the Solar System.**

3-5
Benchmark A: Explain the characteristics, cycles, and pattersn involving 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
1 (main topic)	**1**	**Middle School**	**1. Compare the Earth to other planets and moons in terms of supporting life.**
1 (main topic)	**2**	**Middle School**	**2. Describe, compare, and explain the motions of Solar System objects.**
2 (covered in detail)	**2**	**High School**	**2. Describe the position and motion of our Solar System in our galaxy, and the overall scale, structure, and age of the universe.**
3	**2**	**Middle**	**3. Describe and explain common**

(briefly discussed)		School	observations of the night sky.
3 (briefly discussed)	1	High School	1. Compare our Sun to other stars.

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

Standard component #1: All students will describe and explain how objects in our Solar System move.

TOLEDO DIOCESE Guidelines

Earth & Space Sciences (unless otherwise marked)

Rating Scale	L.O.	Grade Level	Indicator
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	Investigate and observe constellations, and explore legends associated with them.
3 (briefly discussed)	1	5	Examine the Earth's rotation and revolution.

Grade 5
Learning Objective 1: Understands the composition and structure of the universe, and the Earth's place in it.