

# So...You Want to Be an Astronomer?

## Grades 3-8

Taped program with interactive live component

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### OHIO Standards

Earth & Space Sciences (unless otherwise marked)

Rating Scale	Grade Level	Benchmark	Indicator
1 (main topic)	5	A	1. Describe how night and day are caused by the Earth's rotation.
1 (main topic)	8	A	1. Describe how objects in the Solar System are in regular and predictable motions that explain such phenomena as days, years, seasons, eclipses, etc.
1 (main topic)	8	B	8. Name and describe tools used to study the universe (e.g. telescopes, probes, satellites, and spacecraft).
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, and stars all appear to move slowly across the sky.
2 (covered in detail)	5	A	3. Describe the characteristics of the Earth and it's orbit about the Sun (e.g. elliptical orbit, tilted axis, and spherical planet).
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.

**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 it's 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 gravitational force. Describe how the universe is studied by the use of equipment such as telescopes, probes, satellites, and spacecraft.

## MICHIGAN Standards

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

Rating Scale	S.C.# (Strand)	S.C.# Grade Level	Indicator
1 (main topic)	2	Elementary	2. Describe the motion of the Earth around the Sun, and the Moon around the year.
1 (main topic)	2	Middle School	2. Describe, compare, and explain the motions of Solar System objects. (Changes in length of day and height of Sun in sky.
2 (covered in detail)	2	Middle School	3. Describe and explain common observations of the night sky.
3 (briefly discussed)			

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

Rating Scale	L.O.	Grade Level	Indicator
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<b>1</b> <b>(main topic)</b>	<b>1</b>	<b>5</b>	<b>Investigate and observe constellations, and explore legends associated with them.</b>
<b>2</b> <b>(covered in detail)</b>	<b>1</b>	<b>5</b>	<b>Examine the Earth's rotation and revolution.</b>
<b>2</b> <b>(covered in detail)</b>	<b>1</b>	<b>8</b>	<b>Examine the origin, evolution, composition, and relationship of celestial bodies.</b>
<b>3</b> <b>(briefly discussed)</b>	<b>1</b>	<b>5</b>	<b>Know and investigate the phases of the Moon.</b>

#### **Grade 5**

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

#### **Grade 8**

**Learning Objective 1:** Understands structure and composition of the universe and the Earth's place through a study of space exploration and the universe.