

**Katharine Otolski**  
**EDPS 345 Test Design**

**OVERVIEW:**

This test is for my 6th grade science class, it is scheduled for the 3rd week of March. For this lesson we have been learning about Earth and Space Science—we have been learning all about the planets (the position, the makeup, and the size), we have learned about the sun, the elements in the atmosphere, the moon (its makeup, and the phases of the moon), other things we have found in space such as meteors, meteoroids, comets, and, much more. We have spent two weeks on this lesson, we have just scratched the surface of this lesson—in the next few weeks though we will go even deeper into this lesson—this includes a field trip to the planetarium. These are the standards that I have used to create this test:

**Standards: Earth and Space Science—6th Grade**

- 6.2.1 Describe and model how the position, size and relative motions of the earth, moon and sun cause day and night, solar and lunar eclipses, and phases of the moon.
- 6.2.2 Recognize that gravity is a force that keeps celestial bodies in regular and predictable motion, holds objects to earth's surface and is responsible for tides.
- 6.2.3 Understand that the sun, an average star where nuclear reactions occur, is the central and largest body in the solar system.
- 6.2.4 With regard to their size, composition, distance from sun, surface features and ability to support life, compare and contrast the planets of the solar system with one another and with asteroids and comets.
- 6.2.5 Demonstrate that the seasons in both hemispheres are the result of the inclination of the earth on its axis, which causes changes in sunlight intensity and length of day.

**Earth Space Science Test Grade 6**

- 1.) Which of the following is in the correct order from smallest to largest?
  - a.) **Solar System, Milky Way Galaxy, Universe.**
  - b.) Milky Way Galaxy, Solar System, Universe
  - c.) Universe, Milky Way Galaxy, Solar System
  - d.) Solar System, Universe, Milky Way Galaxy
- 2.) What are Comets mostly composed of?
  - a.) **Frozen Gases and Ice**
  - b.) Just Ice
  - c.) Space Rocks
  - d.) Water and Rocks
- 3.) In 3 sentences compare and contrast meteors and meteoroids

ANSWER: Small pieces of space debris that are on a collision course with the Earth are called meteoroids. When meteoroids enter the Earth's atmosphere they are called meteors. However, this is where the similarity comes in because even when the meteoroid hits the atmosphere and becomes a meteor, it does not change composition—it is still extraterrestrial iron and nickel

4.) Give the definition of both Jovian and Terrestrial planets. Please include the planets that fall under both of these. Jovian has 4 of planets, and Terrestrial also has 4 of the planets.

a.) Jovian Planets: **known as gas giants the outer most planets**

i.) **The 4 Planets:** Jupiter, Saturn, Uranus, and Neptune

b.) Terrestrial Planets: **Earth like—made up of rocks or metals with a hard surface, they are also the inner planets.**

i.) **The 4 Planets:** Mercury, Venus, Earth, and Mars

5.) The surface temperature of the Sun is **5,778 K**

TRUE

6.) Why is Pluto no longer considered a planet?

a.) it's size and location in space.

7.) Write down the Planets in the correct order, along with the acronym we have been using in class.

a.) Planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune

b.) Acronym: My Very Eager Mother Just Served Us Nachos.

8.) What were atmospheres first elements?

a.) **Nitrogen, Hydrogen, and Carbon Oxygen**

b.) Oxygen, Hydrogen, and Iron

c.) Water, Hydrogen, and Carbon

d.) Carbon, Helium, and Oxygen

9.) True or False: The Earth is split into the Southern and Northern Hemispheres?

TRUE

10.) Identify the phases of the moon



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### Test Design Peer Review

Added clear directions, point values, and I also Added the picture (seen in question 10 of test draft 1), and a more specific overview (seen in test draft 1).

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- 6.2.3 Understand that the sun, an average star where nuclear reactions occur, is the central and largest body in the solar system.
- 6.2.4 With regard to their size, composition, distance from sun, surface features and ability to support life, compare and contrast the planets of the solar system with one another and with asteroids and comets.
- 6.2.5 Demonstrate that the seasons in both hemispheres are the result of the inclination of the earth on its axis, which causes changes in sunlight intensity and length of day.

### Earth Space Science Test Grade 6

1.) Circle the correct answer: Which of the following is in the correct order from smallest to largest? (2 points)

- a.) **Solar System, Milky Way Galaxy, Universe.**
- b.) Milky Way Galaxy, Solar System, Universe
- c.) Universe, Milky Way Galaxy, Solar System
- d.) Solar System, Universe, Milky Way Galaxy

2.) Circle the correct answer: What are Comets mostly composed of? (2 points)

- a.) **Frozen Gases and Ice**
- b.) Just Ice
- c.) Space Rocks
- d.) Water and Rocks

3.) In 3 sentences compare and contrast meteors and meteoroids. (1 point per sentence= 3 points total)

ANSWER: Small pieces of space debris that are on a collision course with the Earth are called meteoroids. When meteoroids enter the Earth's atmosphere they are called meteors. However, this is where the similarity comes in because even when the meteoroid hits the atmosphere and becomes a meteor, it does not change composition—it is still extraterrestrial iron and nickel

4.) Give the definition of both Jovian and Terrestrial planets. Please include the planets that fall under both of these. Jovian has 4 of planets, and Terrestrial also has 4 of the planets. (2 point per definition= 4 total, and .5 point for every correct planet= 4 points)

- a.) Jovian Planets: **known as gas giants the outer most planets**
  - i.) **The 4 Planets:** Jupiter, Saturn, Uranus, and Neptune

- b.) Terrestrial Planets: **Earth like—made up of rocks or metals with a hard surface, they are also the inner planets.**
  - i.) **The 4 Planets:** Mercury, Venus, Earth, and Mars

5.) True or False: The surface temperature of the Sun is **5,778 K**. (1 point)  
TRUE

6.) On the line below please list the two reasons why is Pluto no longer considered a planet? (2 points)

a.) Its size and its location in space.

7.) In the blanks write down the Planets in the correct order, on the second line write down the acronym we have been using in class to remember the planets. (4 points total for correct order, + 2 points for acronym)

a.) Planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune

b.) Acronym: My Very Eager Mother Just Served Us Nachos.

8.) Circle the correct answer: What were atmospheres first elements? (2 points)

a.) **Nitrogen, Hydrogen, and Carbon Oxygen**

b.) Oxygen, Hydrogen, and Iron

c.) Water, Hydrogen, and Carbon

d.) Carbon, Helium, and Oxygen

9.) True or False: The Earth is split into the Southern and Northern Hemispheres? (1 point)

TRUE

10.) Identify the phases of the moon on the blanks below the picture or off to the side of each picture since the background is black! (.5 point for correct answer, .5 point for spelling, Total of 10 points)



The Actual Test:

## Earth Space Science Test Grade 6

1.) Circle the correct answer: Which of the following is in the correct order from smallest to largest? (2 points)

- a.) Solar System, Milky Way Galaxy, Universe.
- b.) Milky Way Galaxy, Solar System, Universe
- c.) Universe, Milky Way Galaxy, Solar System
- d.) Solar System, Universe, Milky Way Galaxy

2.) Circle the correct answer: What are Comets mostly composed of? (2 points)

- a.) Just Ice
- b.) Frozen Gases and Ice
- c.) Space Rocks
- d.) Water and Rocks

3.) In 3 sentences compare and contrast meteors and meteoroids. (1 point per sentence= 3 points total)

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a.) Jovian Planets: \_\_\_\_\_

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i.) **The 4 Planets:** \_\_\_\_\_

b.) Terrestrial Planets: \_\_\_\_\_

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i.) **The 4 Planets:** \_\_\_\_\_

5.) Circle True or False: The surface temperature of the Sun is **5,778 K**. (1 point)

TRUE                  FALSE

6.) On the lines below please list the two reasons why is Pluto no longer considered a planet? (2 points)

a.) \_\_\_\_\_

7.) In the blanks write down the Planets in the correct order, on the second line write down the acronym we have been using in class to remember the planets. (4 points total for correct order, + 2 points for acronym)

a.) Planets: \_\_\_\_\_  
\_\_\_\_\_

b.) Acronym: \_\_\_\_\_  
\_\_\_\_\_

8.) Circle the correct answer: What were atmospheres first elements? (2 points)

- a.) Water, Hydrogen, and Carbon
- b.) Oxygen, Hydrogen, and Iron
- c.) Nitrogen, Hydrogen, and Carbon Oxygen
- d.) Carbon, Helium, and Oxygen

9.) Circle True or False: The Earth is split into the Southern and Northern Hemispheres? (1 point)  
FALSE    TRUE

10.) Identify the phases of the moon on the blanks below the picture or off to the side of each picture since the background is black! (.5 point for correct answer, .5 point for spelling, Total of 10 points)

