LESSON WORKSHEET · GRADE 6 · MS-ESS1-1-MS-ESS1-3

Gravity & the Earth-Sun-Moon System

Fill in each part when its number appears on the slide.

Name: _____ **Date:** _____

PART 1 · TARGET

I can use a model of the Earth-Sun-Moon system to explain phases, eclipses, tides, and seasons, and explain how gravity keeps objects in orbit.

PART 2 · WARM-UP

1. What force makes a dropped ball fall to the ground?

_____

2. How long does it take the Moon to go through all of its phases?

_____

3. Have you ever seen the ocean or a big lake with high and low water? What do you think causes tides?

_____

PART 3 · PREDICTION

On April 8, 2024, the sky over Indiana went dark at midday. What lined up?

Circle one: [ ] Sun - Moon - Earth [ ] Sun - Earth - Moon [ ] Earth - Sun - Moon

PART 4 · VOCABULARY

Word	Meaning
Gravity	
Orbit	
Solar eclipse	
Lunar eclipse	

PART 5 · GRAVITY AND ORBITS

_____ pulls objects toward each other. An _____ is forward motion plus gravity pulling inward.

Check: What keeps the Moon in orbit around Earth?

Circle one: (A) Earth's gravity and the Moon's forward motion (B) Magnetism (C) The Sun's light (D) Air pushing on it

PART 6 · MOON PHASES

When we see more of the lit half each night, the Moon is _____. When we see less, it is _____.

Check: Tonight is a full moon. What phase comes next?

Circle one: (A) Waxing gibbous (B) New moon (C) First quarter (D) Waning gibbous

PART 7 · ECLIPSES

A _____ eclipse happens at new moon. A _____ eclipse happens at full moon.

Check: During a lunar eclipse, whose shadow covers the Moon?

Circle one: (A) Earth's (B) The Sun's (C) Jupiter's (D) The Moon's own

PART 8 · TIDES

The Moon's _____ makes two ocean bulges, so most coasts get _____ high tides each day.

Check: How many high tides do most coasts get each day?

Circle one: (A) Two (B) One (C) Four (D) None

PART 9 · WORKED EXAMPLE

Final answer from the example: _____

PART 10 · WE DO

Tonight is a first quarter moon. What phase will you see in about one week? What about two weeks?

Answer: _____

PART 11 · YOU DO

During a solar eclipse, what is the order of the objects?

Circle one: (A) Moon - Sun - Earth (B) Sun - Moon - Earth (C) Sun - Earth - Moon (D) Earth - Sun - Moon

PART 12 · WORK TIME: GRAVITY STATION ESCAPE

Write each code piece as you earn it: Lock 1: ____ Lock 2: ____ Lock 3: ____ Lock 4: ____ Lock 5: ____

Final code: _____

PART 13 · WRAP-UP

Was your prediction in Part 3 right? One thing I learned today:

_____

_____