LESSON WORKSHEET · GRADE 5 · 5-ESS1-1 · 5-ESS1-2

Earth, Sun, Moon & the Solar System

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

Name: _____ **Date:** _____

PART 1 · TARGET

I can use a model to explain patterns caused by Earth's rotation and orbit and describe the scale of the solar system.

PART 2 · WARM-UP

1. Where does the Sun rise, and where does it set?

   _____

2. What is the difference between a day and a year on Earth?

   _____

3. Draw your shadow at noon and at 5 p.m. Which is longer? Why do you think so?

   _____

PART 3 · PREDICTION

This morning the Sun was in the east. At dismissal it will be in the west. What moved?

Circle one: [ ] The Sun moved [ ] Earth spun [ ] Both moved

PART 4 · VOCABULARY

Word	Meaning
Rotation	
Revolution / orbit	
Axis	
Moon phase	

PART 5 · ROTATION MAKES DAY AND NIGHT

Earth _____ on its axis once every _____ hours. This causes _____.

Check: Why does the Sun seem to move across the sky?

Circle one: (A) Clouds push the Sun (B) Earth rotates (C) The Sun orbits Earth (D) Earth revolves once a day

PART 6 · SHADOWS CHANGE DURING THE DAY

Shadows are _____ in the morning and evening and _____ near noon, when the Sun is _____.

Check: At 8 a.m. the Sun is in the east. Which way does a flagpole's shadow point?

Circle one: (A) North only at night (B) West (C) East (D) Straight down

PART 7 · TILT CAUSES SEASONS

Seasons are caused by Earth's _____ axis. When Indiana tilts _____ the Sun, it is summer.

Check: What causes summer in Indiana?

Circle one: (A) Northern Hemisphere tilts toward the Sun (B) Earth is closest to the Sun (C) The Sun gets hotter (D) The Moon blocks cold air

PART 8 · THE MOON REFLECTS SUNLIGHT

The Moon _____ sunlight. One full cycle of phases takes about _____ days.

Check: Why do we see Moon phases?

Circle one: (A) We see different parts of the lit half as it orbits (B) Earth's shadow covers it (C) The Moon changes shape (D) Clouds cover part of it

PART 9 · WORKED EXAMPLE

Final answer from the example: _____

PART 10 · WE DO

At 7:00 a.m. a tree's shadow is long and points west. Predict its length and direction at 6:00 p.m.

Answer: _____

PART 11 · YOU DO

Which pattern is caused by Earth's REVOLUTION around the Sun, not its rotation?

Circle one: (A) Day turns into night (B) The seasons change over a year (C) The Sun rises every morning (D) Shadows change during one day

PART 12 · WORK TIME: GRAND TOUR OF THE SOLAR SYSTEM

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

Final code: _____

PART 13 · WRAP-UP

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

_____

_____