Solar System

Name: _____ Date: _____ Grade: Grade 5

Part A: Multiple Choice

Circle the best answer for each question.

1. In June the Northern Hemisphere is tilted toward the Sun. Why does this cause summer in the Northern Hemisphere?

- A) Earth is closest to the Sun during June so it receives more heat energy.
- B) The tilt causes sunlight to hit the Northern Hemisphere more directly, spreading more energy over less area.
- C) The Sun burns hotter during the months of June, July, and August each year.
- D) The Northern Hemisphere spins faster in summer which generates more heat from friction.

2. Solar eclipses do not happen every month even though the Moon orbits Earth monthly. What best explains this?

- A) The Moon is sometimes too far from Earth to block the Sun completely.
- B) The Moon's orbital plane is tilted about five degrees from Earth's so it usually passes above or below the Sun's position.
- C) The Sun moves out of alignment with the Moon for most months of the year.
- D) Earth's atmosphere bends sunlight around the Moon most of the time.

3. During a lunar eclipse the Moon often appears reddish instead of completely dark. What causes this red color?

- A) The Moon's surface contains iron oxide which glows red when heated by the Sun.
- B) Mars reflects red light onto the Moon during a lunar eclipse.
- C) Earth's atmosphere bends red wavelengths of sunlight onto the Moon's surface.
- D) The Moon produces a faint red glow from volcanic activity beneath its crust.

4. A student notices that days are much longer in summer and shorter in winter. Which statement correctly explains this observation?

- A) Earth spins more slowly in winter causing shorter periods of daylight.
- B) The Sun rises and sets at different points on the horizon because of Earth's tilted axis.
- C) Clouds block more sunlight in winter making the days seem shorter.
- D) Earth's orbit is larger in winter so it takes longer for the Sun to appear.

Part B: Fill in the Blank

Write the correct answer on each line.

1. An _____ is a day when daytime and nighttime are nearly equal in length, occurring in spring and fall.

2. The Moon always shows the same _____ to Earth because it rotates once for every orbit it completes.

Part A: Multiple Choice

Circle the best answer for each question.

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4. A student notices that days are much longer in summer and shorter in winter. Which statement correctly explains this observation?

- A) Earth spins more slowly in winter causing shorter periods of daylight.
- **B) The Sun rises and sets at different points on the horizon because of Earth's tilted axis.**
- C) Clouds block more sunlight in winter making the days seem shorter.
- D) Earth's orbit is larger in winter so it takes longer for the Sun to appear.

Part B: Fill in the Blank

Write the correct answer on each line.

1. An **equinox** is a day when daytime and nighttime are nearly equal in length, occurring in spring and fall.

2. The Moon always shows the same **face** to Earth because it rotates once for every orbit it completes.