



SMP PELITA BANGSA

WORKSHEET 1

Semester / Year	: 1 / 2024-2025	Name	: _____
Subject	: Physics	Class	: Sec 3__
Topic	: Space Physics	Day/date	: _____

1. Day and Night

Day and night are caused by the Earth's _____ on its axis. It takes the Earth _____ hours to complete one full rotation. The half of the Earth facing the _____ experiences day, while the other half experiences _____.

2. Rising and Setting of the Sun

The apparent rising and setting of the Sun is due to the Earth's _____. The Sun rises in the _____ and sets in the _____. It rises exactly in the east and sets exactly in the west only during the _____ (around March 20 and September 23).

3. Seasons

Seasons are caused by two factors: the Earth's motion around the _____ and the tilt of the Earth's axis at _____ degrees. When the northern hemisphere is tilted toward the Sun, it experiences _____ and _____, while the southern hemisphere has _____ and _____.

4. Phases of the Moon

The Moon orbits the Earth and is lit by the _____. It takes about _____ days for the Moon to complete one orbit around the Earth. The different appearances of the Moon from Earth are called _____ of the Moon. When the Moon is between the Sun and Earth, we see a _____ Moon.

5. The Solar System

The Solar System consists of one star, the _____, and eight planets moving in _____ orbits around it. The four inner planets are _____, Venus, Earth, and _____. They are small, rocky, and have a _____ density. The four outer planets are Jupiter, Saturn, Uranus, and _____. These planets are much larger and consist mostly of _____.

6. Comets

Comets are sometimes referred to as 'dirty snowballs' because they consist of _____ embedded in ice made from water and _____. Comets travel in highly _____ orbits around the Sun. One famous comet is _____ comet, which returns to the inner Solar System every 76 years.

7. Motion of the Moon

The Moon is a _____ of the Earth and travels around it in a nearly _____ orbit. It always shows the same side to the Earth because it rotates on its axis in the same time it takes to orbit the Earth, which is about _____ days. We see the Moon because it reflects _____ from the Sun.

8. Gravitational Attraction

All objects with mass attract each other due to _____. The strength of this force depends on the _____ of the objects and the distance between them. Larger objects, like planets, exert a _____ gravitational pull. The Sun's gravity keeps the planets in their _____.

9. Daylight Hours

In the northern hemisphere, the longest day of the year occurs around _____ 21, while the shortest day occurs around _____ 21. The time when day and night are equal in length is called the _____, which happens around March 20 and _____ 23.

10. Dwarf Planets and Asteroids

Dwarf planets, such as _____, are smaller than regular planets but have enough mass to pull themselves into a _____ shape. Asteroids are pieces of _____ that mostly orbit the Sun between _____ and Jupiter.

11. Origin of the Solar System

The Solar System is thought to have formed about _____ million years ago from a swirling cloud of gas and dust called a _____. The planets formed from the leftover material after the _____ formed at the center.

12. Comet Behavior Near the Sun

As a comet approaches the Sun, the ice in the comet begins to _____, and radiation pressure from the Sun creates a bright _____ and a long _____ that points away from the Sun.

13. Elliptical Orbits

The planets move around the Sun in _____ orbits, which are slightly flattened circles. The outer planets have _____ orbits and take much longer to complete one trip around the _____ compared to the inner planets.

14. Phases of the Moon (Additional)

During the _____ Moon phase, the side of the Moon facing the Earth is completely illuminated. During the _____ Moon phase, we see only half of the Moon's surface. The _____ Moon occurs when the Moon is not visible from Earth.