

Tides

- ◆ Tides occur because of the pull of _____ of the Moon and the Sun on the Earth's _____. Because the Moon is closer to the Earth, it has the greatest effect on our tides. There are approximately _____ high tides and _____ low tides every 24 hours.
- ◆ Spring tides occur at New Moon and Full Moon when the Sun, the Moon and the Earth are _____ _____. This forms extremely high high-tides and extremely low low-tides. In the space below, draw a diagram showing the position of the sun, moon and earth during a spring tide.



- ◆ Neap tides occur at First and Last _____, when the Sun, the Earth and the Moon are at _____. This forms quite low high-tides and quite high low-tides. In the space below, draw a diagram showing the position of the sun, moon and earth during a neap tide.



Eclipses

- ◆ Eclipses occur when a large _____ travels across the surface of the Earth.
- ◆ Umbra - The Umbra is the _____ part of the shadow.
- ◆ Penumbra - The Penumbra is the _____ part of the shadow.
- ◆ Total Eclipse – Observers on the Earth’s surface who are shadowed by the darker umbra would see a total eclipse.
- ◆ Partial Eclipse – Observers on the Earth’s surface who are shadowed by the lighter penumbra would see a partial eclipse.
- ◆ Solar Eclipses occur sometimes when the Moon passes between the Sun and the _____ at N _____ M _____.
The shadow of the Moon falls on the Earth appearing to block out the Sun.
- ◆ Lunar Eclipses occur sometimes when the Moon passes on the opposite side of the Earth from the Sun at F _____ M _____.
The Moon passes in the Earth’s shadow. It appears dull and can only just be seen.

Day and Night

- ◆ The Earth's _____ on its own axis causes the change of 'day' and 'night'.
- ◆ The Earth rotates on its axis once every _____ hours approximately.
- ◆ The rotation of the Earth is _____ to _____, so the Sun is visible in the eastern sky first.
- ◆ The Sun shines only on _____ of the Earth at any time, so that half the Earth is in daylight and the other half is in _____.
- ◆ The tilt on the Earth's axis causes 'day' and 'night' to be of different lengths in different parts of the world.
- ◆ The autumn and spring _____ occur twice a year when the day and night are of equal length.



Seasons

- ◆ Seasons are caused by the Earth's revolution around the Sun and the unchanging tilt of the Earth's axis.
- ◆ The different distances to the Sun caused by the tilt _____ cause the seasons.
- ◆ The season depends on how much of the Earth's surface is covered by light rays, and at what angle they reach the Earth's surface. Head-on rays on a small area are strong and cause _____ seasons. Slanting rays focusing on a large area are weaker and cause _____ seasons.