Year 5 Earth and Space

The planet names have been jumbled up. Write them out in order, starting with the one closest to the Sun: Saturn, Neptune, Mercury, Uranus, Earth, Mars, Jupiter, Venus

_____

_____

_____

_____

_____

Draw a line from each word to its explanation.

rotate	Earth has a north and south one.
revolve	An imaginary line around which the Earth spins.
axis	A spinning movement.
hemisphere	A turning motion around something.

Explain what happens during a solar eclipse.

_____

_____

_____

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Fill in the missing words.

The Moon is not a source of _____ but reflects light from the _____. The part of the Moon we _____ depends on where it is when orbiting the _____ .

Explain what a spherical body in space is. Use the word 'gravity' in your explanation.

_____

_____

_____

_____

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_____

Circle the examples of spherical bodies in space:

Jupiter	asteroids
Sun	Pluto
human-made satellite	Earth

Which of these does a body in our Solar System need for it to be classed as a planet?
Put a tick next to the correct ones.

- ☐ It orbits the Sun.
- ☐ It has moons.
- ☐ It is not made of gas.
- ☐ It is big enough to have cleared away any debris floating near to it.
- ☐ It is spherical (or nearly spherical).

Draw a line to match each movement to the time it takes.

The Earth rotating once on its axis.	365 days
The Moon orbiting the Earth once.	28 days
The Earth orbiting the Sun once.	24 hours

Here is a diagram of the Sun. Draw the Earth and its moon in relation to the Sun. Draw arrows to show the direction of the orbit of the Earth and of the Moon.

Write true or false next to each statement.

We have seasons because of the Earth's revolution and the tilt of its axis.	
When the northern hemisphere of Earth is tilted away from the Sun, it has summer.	
When the northern hemisphere of Earth is tilted away from the Sun, it has winter.	

If it is 9 a.m. in London (0), what time will it be:

1. In the eastern most part of Asia? _____
2. On the west coast of Canada? _____
3. In the east of Australia? _____
4. In the southern-most part of South America? _____

Answer the questions.

What is it called when there are an equal number of hours daylight and night? _____

How many days are there in a leap year?

_____

How often do we have leap years?

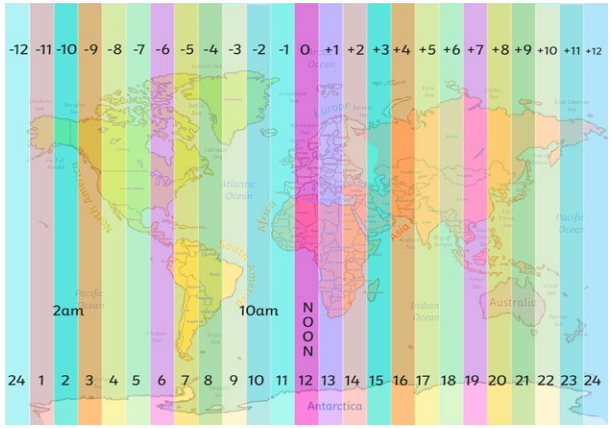
_____

Why do we have leap years?

_____

_____

_____



Fill in the missing letters to work out the terms.

The belief, held for thousands of years, that Earth was at the centre of our Solar System.

____e____i____c____n____r____c

The knowledge that the Sun is at the centre of our Solar System and that Earth and the other planets orbit it.

____e____c____n____r____c

Label the phases of the Moon.

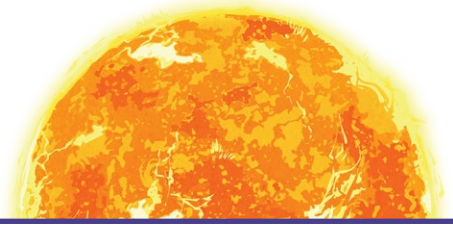
Use the words: waxing, waning, gibbous, crescent, new and full.

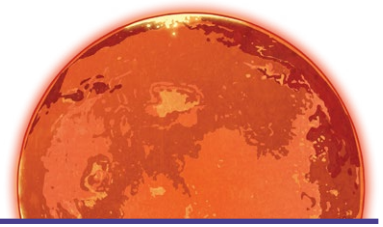
_____ _____ _____ _____

_____ _____ _____ _____

Write true or false next to each statement.

The Sun does not revolve or rotate.	
The Earth rotates once every 365.5 days.	
The sun rises in the west.	
Earth is tilted on its axis.	
The Moon takes 28 days to orbit Earth.	



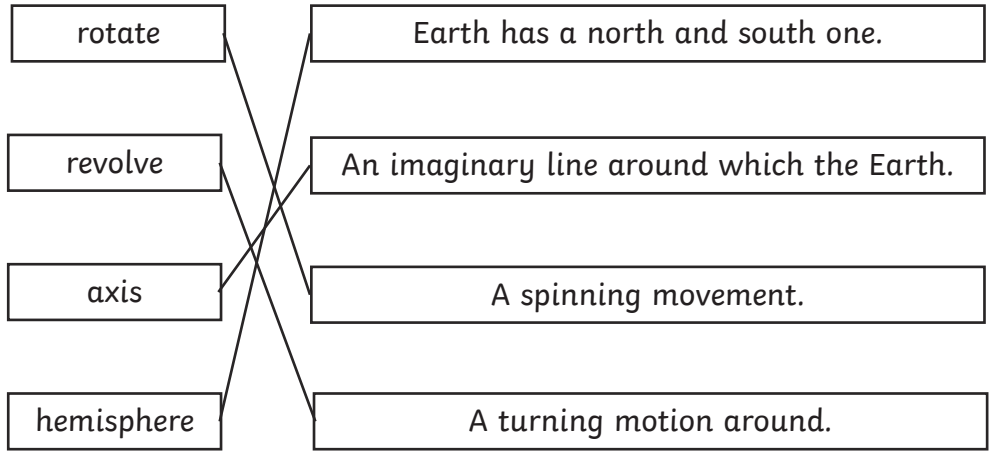


Year 5 Earth and Space - **Answers**

The planet names have been jumbled up. Write them out in order, starting with the one closest to the Sun: Saturn, Neptune, Mercury, Uranus, Earth, Mars, Jupiter, Venus

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune

Draw a line from each word to its explanation.



Explain what happens during a solar eclipse.

Example answer: During a solar eclipse, the Moon's orbit of the Earth causes it to move in front of the Sun and block the Sun's rays.

Fill in the missing words.

The Moon is not a source of **light** but reflects light from the **Sun.** The part of the moon we **see** depends on where it is when orbiting the **Earth**.

Explain what a spherical body in space is. Use the word 'gravity' in your explanation.

A spherical body is something that is big enough to have its own gravity so as to be nearly spherical.

Circle the examples of spherical bodies in space:

Jupiter

asteroids

Sun

Pluto

human-made satellite

Earth

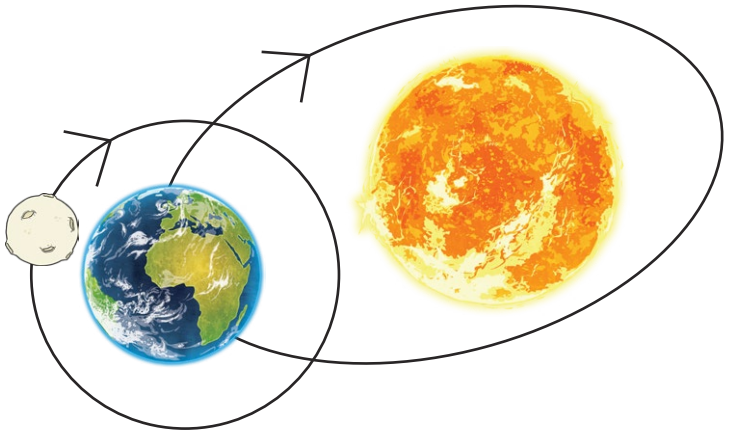
Which of these does a body in our Solar System need for it to be classed as a planet?
Put a tick next to the correct ones.

- [x] It orbits the Sun.
- [ ] It has moons.
- [ ] It is not made of gas.
- [x] It is big enough to have cleared away any debris floating near to it.
- [x] It is spherical (or nearly spherical).

Draw a line to match each movement to the time it takes.

The Earth rotating once on its axis.	365 days
The Moon orbiting the Earth once.	28 days
The Earth orbiting the Sun once.	24 hours

Here is a diagram of the Sun. Draw the Earth and its moon in relation to the Sun. Draw arrows to show the direction of the orbit of the Earth and of the Moon.



Write true or false next to each statement.

We have seasons because of the Earth's revolution and the tilt of its axis.	**True**
When the northern hemisphere of Earth is tilted away from the Sun, it has summer.	**False**
When the northern hemisphere of Earth is tilted away from the Sun, it has winter.	**False**

If it is 9 a.m. in London (0), what time will it be:

1. In the eastern most part of Asia? **9 p.m.**
2. On the west coast of Canada? **10 p.m. the day before**
3. In the east of Australia? **6 p.m.**
4. In the southern-most part of South America? **4 a.m.**

Answer the questions.

What is it called when there are an equal number of hours daylight and night? **equinox**

How many days are there in a leap year?
366

How often do we have leap years?
Once very four years.

Why do we have leap years?
Example answer: We have leap years because the Earth takes around 365 $\frac{1}{4}$ days to orbit the Sun. The extra $\frac{1}{4}$ day is put together once every four years to make one extra day.

Fill in the missing letters to work out the terms.

The belief, held for thousands of years, that Earth was at the centre of our Solar System.

heliocentric

The knowledge that the Sun is at the centre of our Solar System and that Earth and the other planets orbit it.

geocentric

Label the phases of the Moon.

Use the words: waxing, waning, gibbous, crescent, new and full.

full moon

waning gibbous

waning half-moon

waning crescent

new moon

waxing crescent

waxing half-moon

waxing gibbous

Write true or false next to each statement.

The Sun does not revolve or rotate.	True
The Earth rotates once every 365.5 days.	False
The sun rises in the west.	False
Earth is tilted on its axis.	True
The Moon takes 28 days to orbit Earth.	True