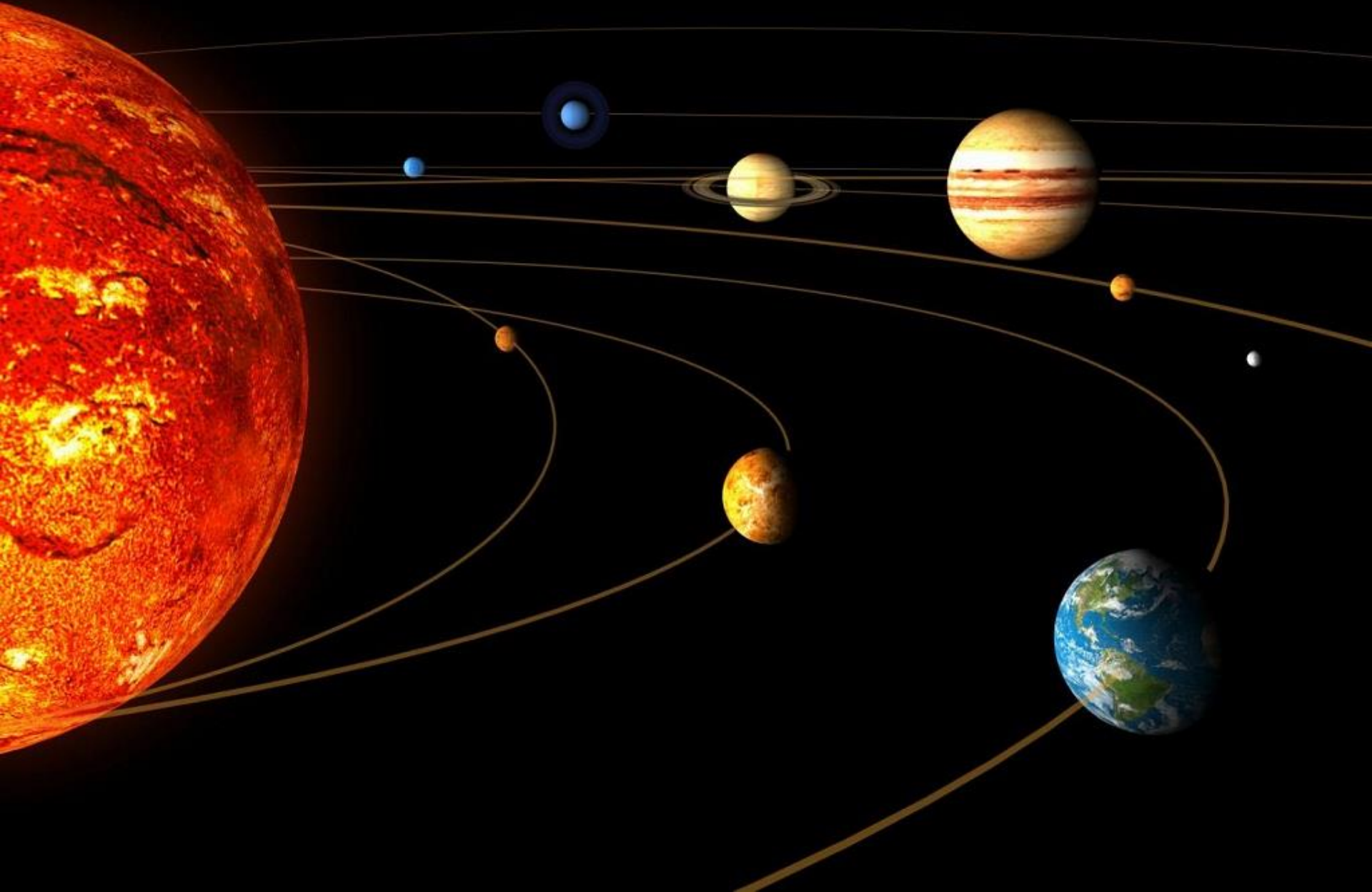


The Solar System



Learning Objective

- We are learning about the different planets which make up our solar system.

Success Criteria

I will be successful if:

- I can name the planets in the solar system.
- I can place the planets in the solar system in the correct order.
- I can describe some features of the planets.

What is at the centre of the solar system?

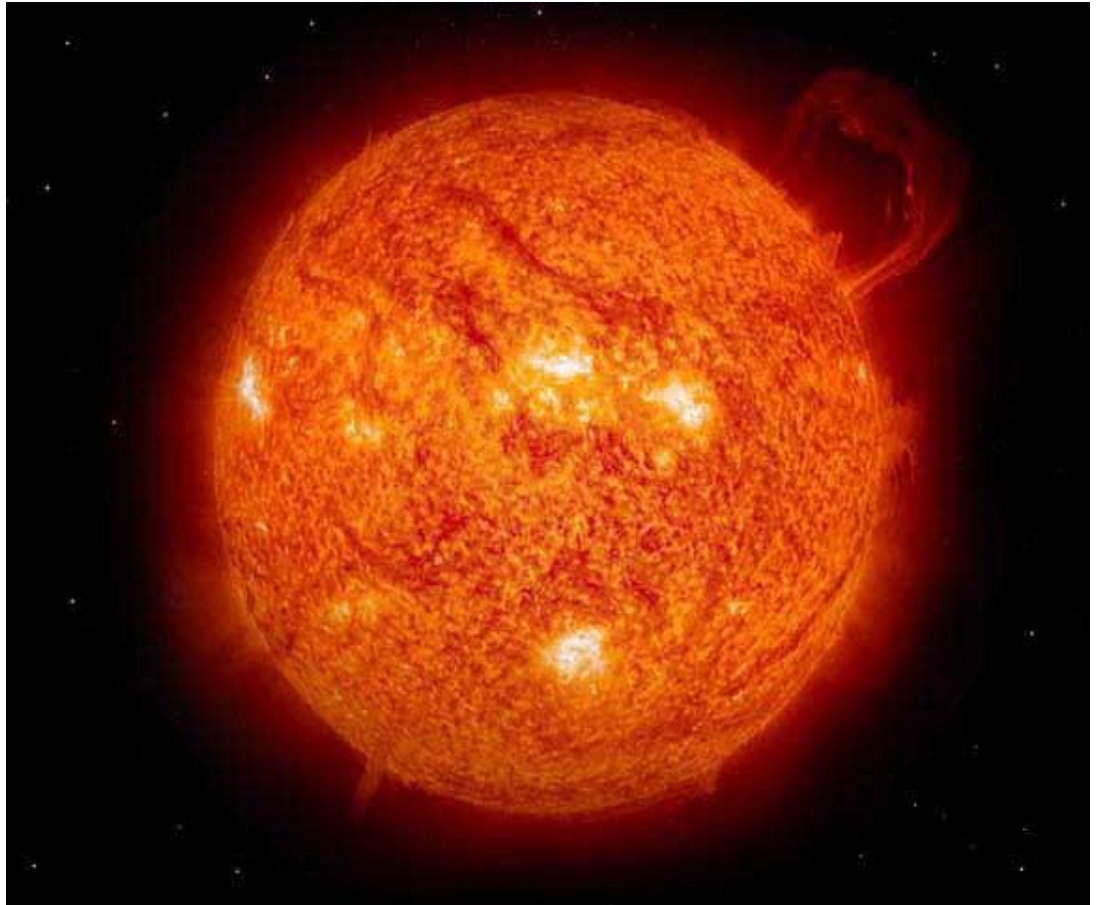
The Sun

Centre of the Solar System

The Solar System sun, like all other suns, is a **star**.

The sun, and other stars, are **luminous objects**

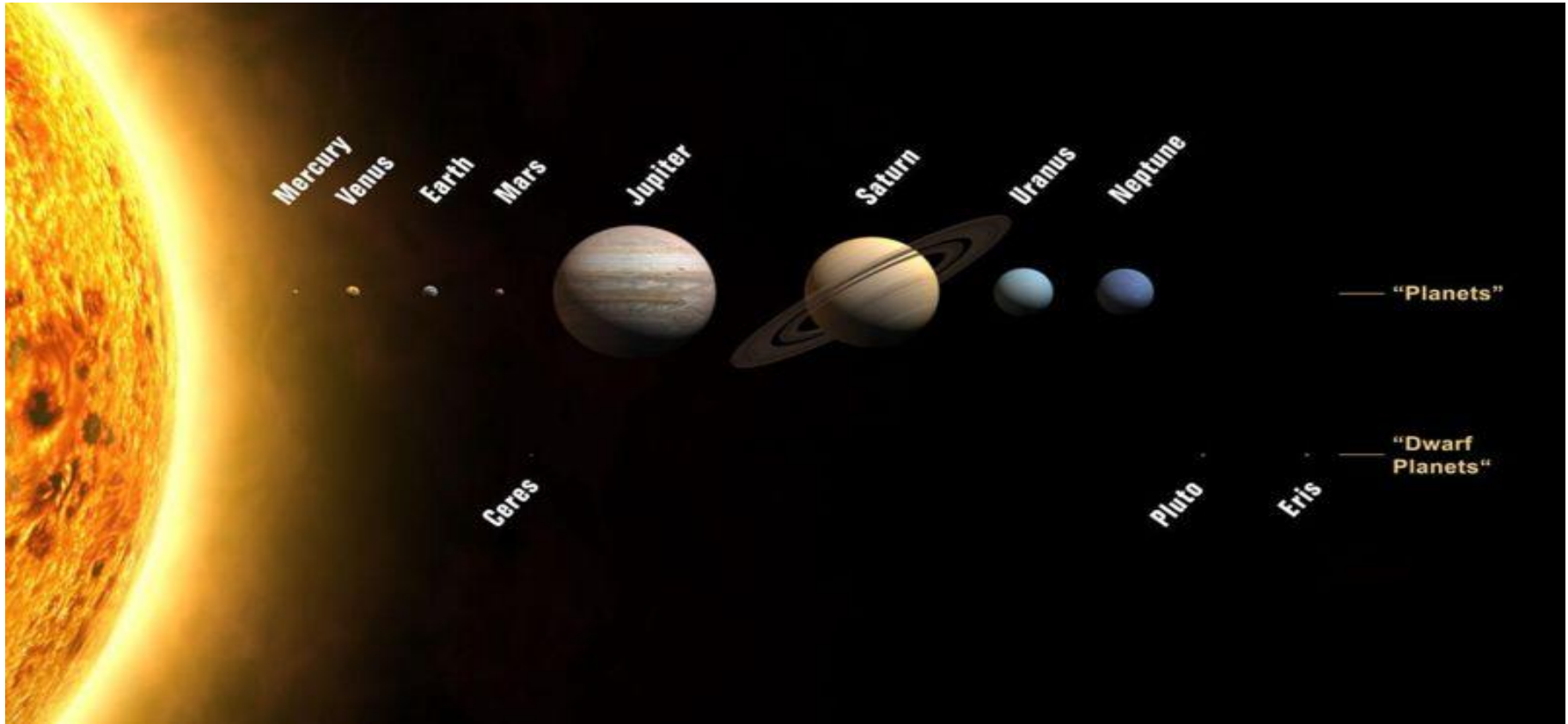
All other objects in the solar system orbit the sun



Can you remember the names of
all the planets?

The Solar System

The **Solar System** is made up of many objects, including; the sun, EIGHT planets, meteors and THREE dwarf planets.



Mercury

- Mercury is the planet nearest to the Sun.
- It is the second smallest of the planets.
- Mercury is dry, hot and virtually airless.
- There is no life on Mercury.
- Mercury has no moons.
- One day on Mercury lasts 58.7 earth days.
- It takes 88 days to orbit the Sun.



NASA/Science Source

Venus

- Venus is the second planet from the Sun.
- Venus is the hottest planet at 482°C
- Venus is covered with pale clouds which makes it difficult to see the surface of the planet.
- No life can exist on Venus.
- Venus has no moons.
- One day on Venus lasts 243 earth days.
- Venus has a tilt of 177° which means that it spins in a clockwise direction
- It takes 225 days to orbit the Sun.



Earth

- The Earth is the third planet from the Sun.
- The atmosphere on Earth protects it from the rays of the Sun.
- It has one moon.
- About three-quarters of the Earth's surface is covered in water.
- One day on Earth lasts 24 hours.
- It takes 365.25 days to orbit the Sun.



Mars

- Mars is the fourth planet from the Sun.
- Mars has very little air.
- It has no surface water.
- It is bitterly cold on Mars.
- Rocks on Mars contain iron which makes the planet look red.
- Mars has 2 moons.
- It has a diameter of 6794Km
- One day on Mars lasts about 24.6 Earth hours.
- It takes 687 Earth days to orbit the Sun.



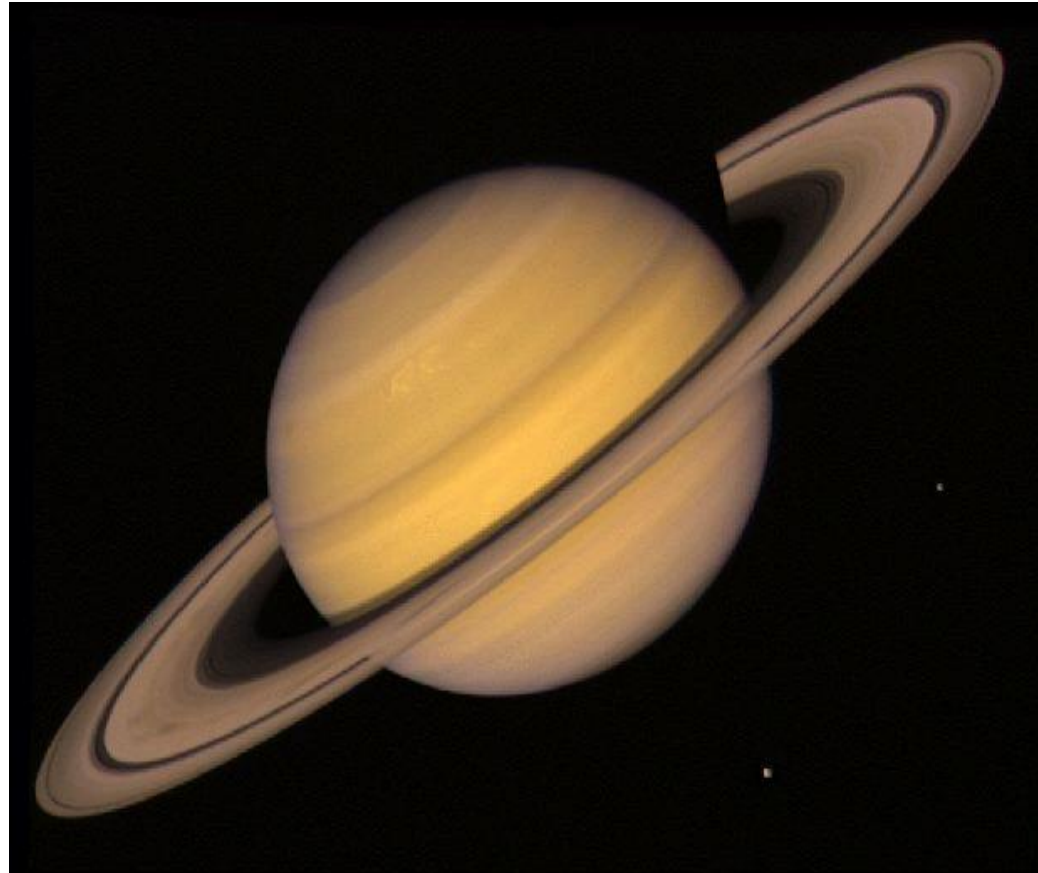
Jupiter

- Jupiter is the fifth planet from the Sun.
- It is the largest planet in the Solar System.
- It has over 18 moons, two of which are huge.
- Only 18 moons are named
- Its largest moon is called Ganymede.
- Jupiter has a small ring system.
- One day on Jupiter lasts nearly 10 Earth hours.
- It takes 11.9 years (4332 Earth day) to orbit the Sun.



Saturn

- Saturn is the sixth planet from the Sun.
- It is 1427 million Km from the sun
- It is surrounded by over 1000 rings made of ice and dust.
- It has at least 18 moons.
- One day on Saturn lasts about 10.2 Hours.
- It takes 29.5 years to orbit the Sun.



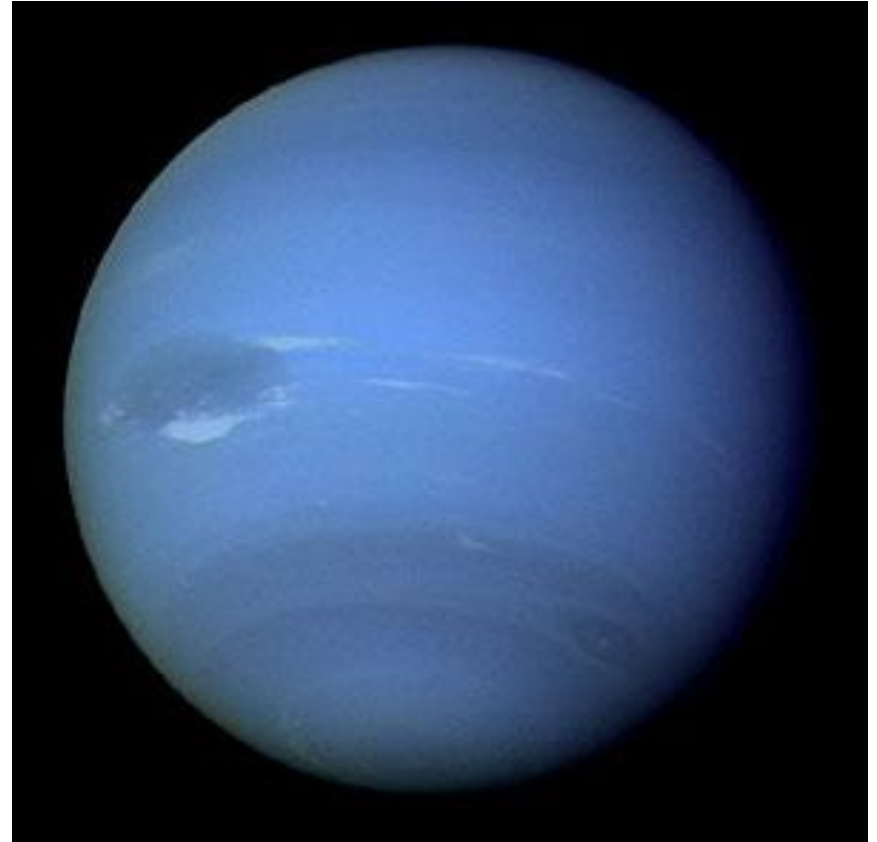
Uranus

- Uranus is the seventh planet from the Sun.
- Methane gas in its atmosphere gives Uranus a blue-green colour.
- It has 15 known moons.
- It has 11 known rings.
- Uranus has a tilt of 98° , which means that it spins on its side.
- One day on Uranus lasts about 18 Earth hours.
- It takes 84 years to orbit the Sun.



Neptune

- Neptune is the eighth , but sometimes it is the ninth planet from the Sun.
- Neptune has 2 moons.
- Its largest moon is called Triton.
- It has two thick and two thin rings around it.
- It is 4497 million Km from the sun
- One day on Neptune lasts 19.1 Earth hours.
- It takes 165 years to orbit the Sun.



What about Pluto?

- Pluto was thought to be the ninth planet from the Sun, but sometimes it is the eighth.
- It has now been reclassified as a "Dwarf Planet".
- It has a diameter of 2324Km
- It has a temperature of -230°C
- It takes 90600 Earth days which is 248.2 Earth years to orbit the sun
- It follows a different orbital path to the planets



Task: Complete the Solar System poster

The Solar System

Our solar system is made up of 8 main planets and a number of smaller dwarf planets. The size of our solar system is vast, and the distance between planets would take many, many years to travel in some cases. The planets all have different surfaces, properties and structures. Earth is the only planet we know of that can support human life.

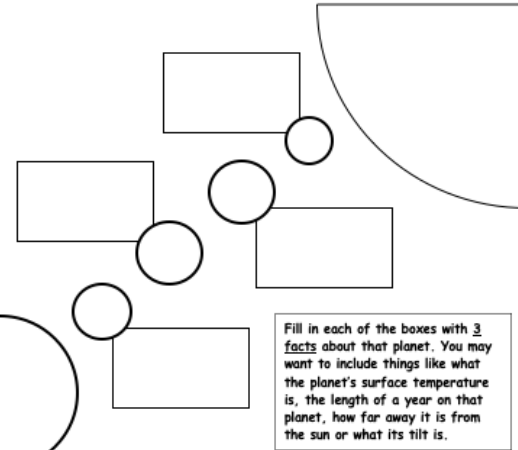
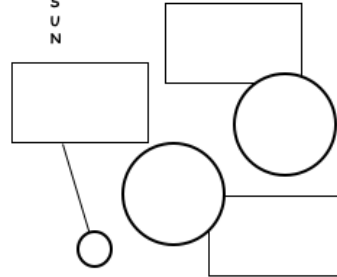
An easy way to remember the order of the planets (including Pluto) is:

M V E M J S U N

Naming Planets.

See if you can come up with a new rhyme to remember the order of the planets (not including Pluto)

M
V
E
M
J
S
U
N



Fill in each of the boxes with **3 facts** about that planet. You may want to include things like what the planet's surface temperature is, the length of a year on that planet, how far away it is from the sun or what its tilt is.

It takes $365 \frac{1}{4}$ days for our planet, Earth to orbit the sun. This is one earth year. It takes 24 hours for our planet to turn once on its own axis - this is one Earth day.

What do you think happens to the length of time it takes the planets to orbit the sun as they get further away? Explain your answer.

What do you think happens to the surface temperature of a planet the further away it is from the sun? Explain your answer.

- Use the information from these slides to fill in each box with 3 facts about the planet. Then colour the planet.
- Alternatively, use the attached fact sheet.

Remember the Planets

Here is a quick way of remembering the names and order of the planets.

M y	V ery	E asy	M ethod	J ust	S peeds	U p	N aming
e	e	a	a	u	a	r	e
r	n	r	r	p	t	a	p
c	u	t	s	i	u	n	t
u	s	h		t	r	u	u
r				e	n	s	n
y				r			e

Make up a mnemonic to remember the order of the planets from the sun

- Mercury
- Venus
- Earth
- Mars
- Jupiter
- Saturn
- Uranus
- Neptune
- Pluto

- My
- Very
- Energetic
- Mum
- Just
- Skipped
- Up
- Nana's
- Patio

Plenary

1. Which planet is the biggest?
2. Which planet has most moons?
3. Which planet has the longest day?
4. Which planet has the shortest year?
5. Which planets have rings?
6. Which is the only planet that spins clockwise?