Year 5 Science Week 3

Space

LI: To define what a year is
I know the different length of years on different planets.
I can present data in a scatter graph
I can interpret data
I can use technical vocabulary, (orbit, rotation, orbital period)

Key Vocabulary:

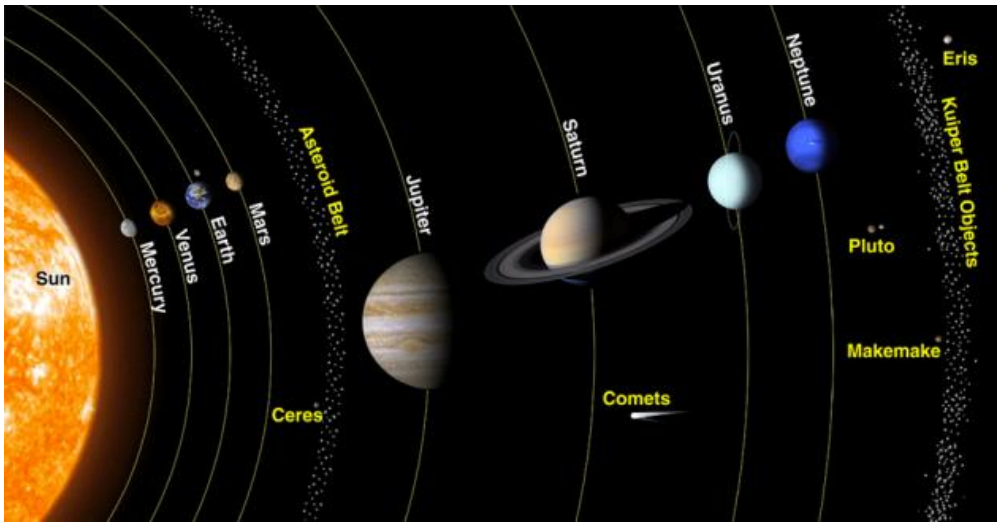
Orbit, Axis, Lunar, Solar, Gravity, gravitational pull, eclipse, phases of the moon (waxing, waning etc.), sun, moon, earth, spherical, shadow, axis, rotates

This week we will be investigating a year in space and how it differs from here on Earth.

First you need to think about:

What is a year?
How many days?
What does it signify?
Why do you think this is significant?

Definition: A year is the orbital period of the Earth moving in its orbit around the Sun



Can you remember the order of the planets from year 4?

Have a look at the diagram of the solar system and planets that orbit the sun and each other.

What do you notice about the distance of the planets?

What do you think that would mean for a year on say Jupiter? Mercury?

Click on the link below and learn about how the length of a year differs on each planet.

Make notes while you research thinking about:

- **Distance from the sun and temperature**
- **Which planets will orbit the sun more quickly(in Earth time)? Why?**
- **Which planets will orbit the sun more slowly (in Earth time)? Why?**

https://spaceplace.nasa.gov/years-on-other-planets/sp/

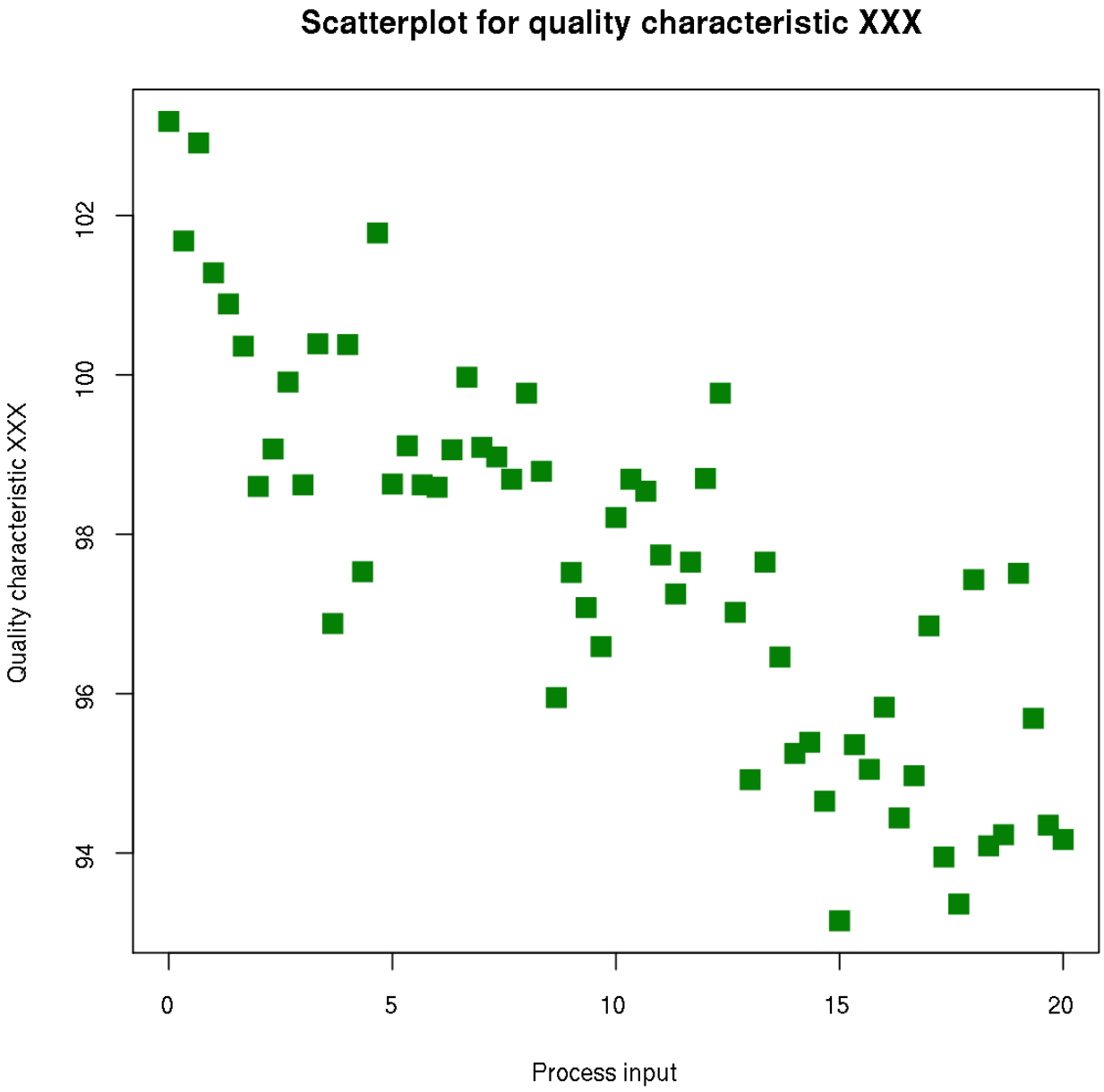
Viridis Schools The Federation of Orchard Primary School Southwold Primary School Hoxton Garden Primary School

Task

Use the information in the table below to plot a scatter graph.

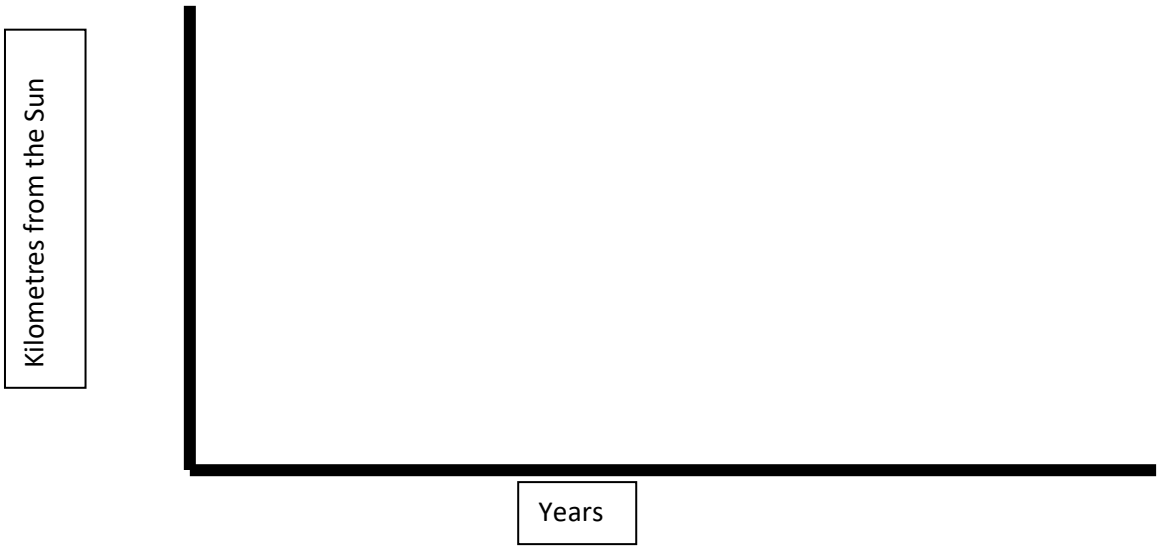
Scatter graphs show the relationship between two variables. By looking at the **diagram** you can see whether there is a link between variables. If there is a link it is called correlation.

Here is an example of what a scatter graph would look like.



In the scatter graph we want to see if there is a relationship (correlation) between the position of the planets and the revolution period (how long they take to orbit the sun).

Planet	Distance from Sun (millions of km)	Orbital Velocity (km per second)	Period of Revolution
Mercury	58	48	88 days
Venus	108	35	225 days
Earth	150	30	1 year
Mars	228	24	2 years
Jupiter	778	13	12 years
Saturn	1 429	10	29 years
Uranus	2 875	7	84 years
Neptune	4 504	6	165 years

Think about what intervals you will need on the x and y axes. See if you notice a pattern in the completed graph.

Distance from the sun Vs Period of revolutions