

Visit Trail



Key Stage 3 & 4

Links with National Curriculum - MA3 Shape, space and measures, Ma2 Numbers and the number system

Links with NNS - Ordering and counting

Planet Maths Trail

Name:

School:

Date:



Go to the **Our Solar System** gallery

Question 1

Complete the table to analyse the planets. Be careful about the 'units'.

Hint: Hours, days or years?

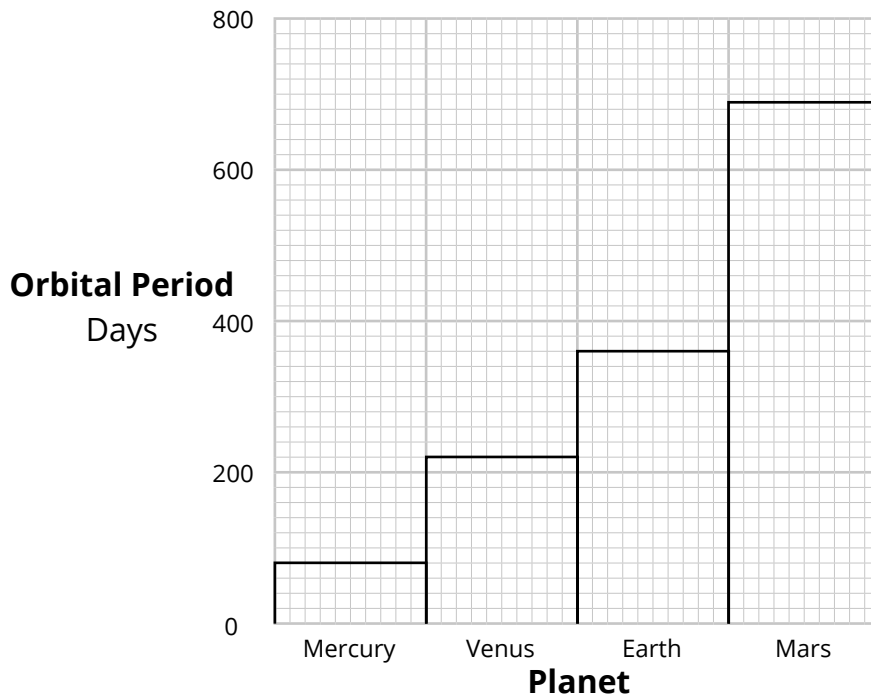
Planet	Diameter km	Distance to Sun 10^6 km	Day Length (in hours)	Orbit Length
Mercury	4,878	58	58.7 days	88 days
Venus	12,102	108	5,832 hours	224 days
Earth	12,756	150	24 hours	365.25 days
Mars	6,787	229	24.37 hours	687 days
Jupiter	142,984	778	9.8 hours	11.86 years
Saturn	120,000	1,427	10.25 hours	29.46 years
Uranus	51,118	2,868	17.2 hours	84 years
Neptune	50,000	4,497	16 hours	164.8 years



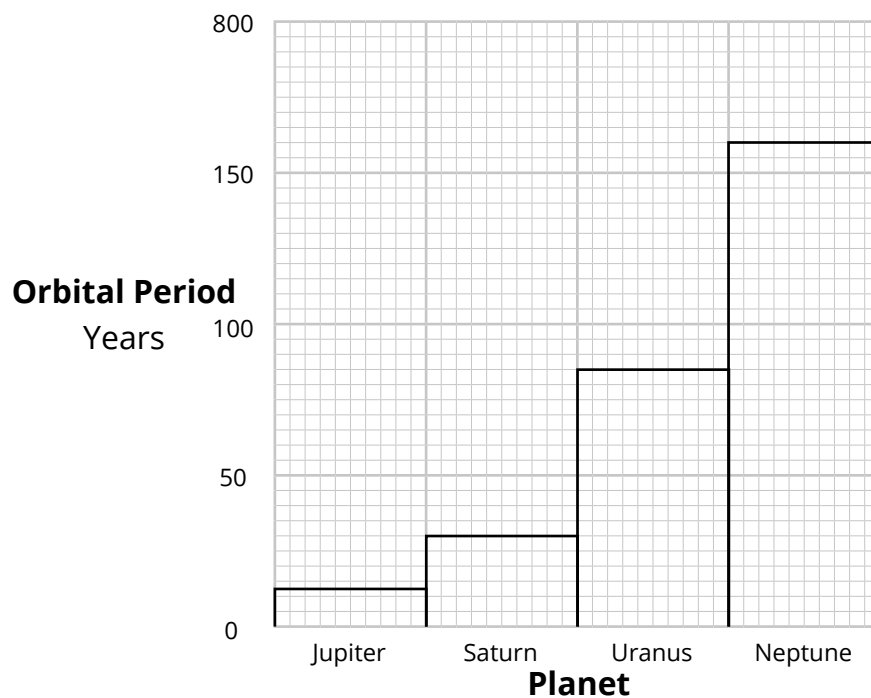
Question 2

Plot the **Orbital Period of the planets**. Decide if you require a bar or line graph. Separate the planets into rocky planets and gas giants.

Rocky Planets



Gas Giants





Question 3

Look at the 'diameter' column on your planets table.
You need to calculate the circumference of each planet using the following equation:

$$C = \pi D$$

C = Circumference
 $\pi = 3.142$
D = Diameter

Using the circumference you have calculated, look at the 'day length' column.
Calculate how fast each planet is spinning in km/h (kilometres per hour).
You need to divide the circumference by the day length.

Planet	Circumference <i>km</i>	Rotational Speed <i>km/h</i>
Mercury	15,325	10.88
Venus	38,020	6.52
Earth	40,074	1,670
Mars	21,325	875
Jupiter	449,197	45,836
Saturn	376,991	36,780
Uranus	160,592	9,337
Neptune	157,080	9,817