## 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

## Plonet Maths Trail

Name: $\square$ School: $\square$

Date: $\square$


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 <br> $10^{6} \mathrm{~km}$ | Day Length <br> (in hours) | Orbit Length |
| :---: | :---: | :---: | :---: | :---: |
| Mercury | 4,878 |  | 58.7 days |  |
|  | 12,102 | 108 |  |  |
| Earth |  |  | 24 hours | 365.25 days |
|  | 6,787 |  |  |  |
| Saturn | 120,000 |  | 10.25 hours |  |
|  |  | 2,868 |  | 84 years |
| Neptune | 50,000 |  |  |  |

## 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



Visit Trail - Planet Maths Trail

## Question 3

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

$$
C=\pi D
$$

$$
\begin{gathered}
\text { c = Circumference } \\
\pi=3.142 \\
\mathrm{D}=\text { Diameter }
\end{gathered}
$$

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 km | Rotational Speed $\mathrm{km} / \mathrm{h}$ |
| :---: | :--- | :--- |
| Mercury |  |  |
| Venus |  |  |
| Earth |  |  |
| Mars |  |  |
| Jupiter |  |  |
| Saturn |  |  |
| Uranus |  |  |
| Neptune |  |  |

