## Life Below the Crust Maze

Help investigate what's under the crust of this icy moon!
Did you know scientists think that the icy moons
Europa (orbiting Jupiter) and Enceladus (orbiting
Saturn) have underground oceans? There might even be life down there!

Try reading more about these two moons.
Which do you think we should explore first and why?
(Example: Closer to Earth? Fresher Ice?)

## Outer Space Word Search

Try and find some names of the planets, moons, and more lost in this word soup!

| $\mathbf{A}$ | $\mathbf{S}$ | $\mathbf{R}$ | $\mathbf{R}$ | $\mathbf{I}$ | $\mathbf{A}$ | $\mathbf{S}$ | $\mathbf{A}$ | $\mathbf{I}$ | $\mathbf{I}$ | $\mathbf{S}$ | $\mathbf{R}$ | $\mathbf{I}$ | $\mathbf{R}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{V}$ | $\mathbf{S}$ | $\mathbf{A}$ | $\mathbf{L}$ | $\mathbf{T}$ | $\mathbf{A}$ | $\mathbf{O}$ | $\mathbf{S}$ | $\mathbf{S}$ | $\mathbf{S}$ | $\mathbf{O}$ | $\mathbf{T}$ | $\mathbf{A}$ | $\mathbf{S}$ |
| $\mathbf{R}$ | $\mathbf{E}$ | $\mathbf{T}$ | $\mathbf{I}$ | $\mathbf{P}$ | $\mathbf{U}$ | $\mathbf{J}$ | $\mathbf{T}$ | $\mathbf{O}$ | $\mathbf{I}$ | $\mathbf{L}$ | $\mathbf{P}$ | $\mathbf{R}$ | $\mathbf{I}$ |
| $\mathbf{S}$ | $\mathbf{R}$ | $\mathbf{E}$ | $\mathbf{U}$ | $\mathbf{S}$ | $\mathbf{R}$ | $\mathbf{I}$ | $\mathbf{A}$ | $\mathbf{L}$ | $\mathbf{I}$ | $\mathbf{I}$ | $\mathbf{N}$ | $\mathbf{E}$ | $\mathbf{C}$ |
| $\mathbf{U}$ | $\mathbf{A}$ | $\mathbf{N}$ | $\mathbf{I}$ | $\mathbf{L}$ | $\mathbf{A}$ | $\mathbf{S}$ | $\mathbf{R}$ | $\mathbf{A}$ | $\mathbf{S}$ | $\mathbf{R}$ | $\mathbf{R}$ | $\mathbf{A}$ | $\mathbf{R}$ |
| $\mathbf{T}$ | $\mathbf{S}$ | $\mathbf{C}$ | $\mathbf{U}$ | $\mathbf{S}$ | $\mathbf{L}$ | $\mathbf{O}$ | $\mathbf{L}$ | $\mathbf{R}$ | $\mathbf{I}$ | $\mathbf{L}$ | $\mathbf{U}$ | $\mathbf{O}$ | $\mathbf{A}$ |
| $\mathbf{O}$ | $\mathbf{R}$ | $\mathbf{E}$ | $\mathbf{A}$ | $\mathbf{E}$ | $\mathbf{C}$ | $\mathbf{N}$ | $\mathbf{I}$ | $\mathbf{S}$ | $\mathbf{M}$ | $\mathbf{A}$ | $\mathbf{T}$ | $\mathbf{A}$ | $\mathbf{U}$ |
| $\mathbf{U}$ | $\mathbf{A}$ | $\mathbf{L}$ | $\mathbf{O}$ | $\mathbf{O}$ | $\mathbf{S}$ | $\mathbf{U}$ | $\mathbf{N}$ | $\mathbf{Y}$ | $\mathbf{E}$ | $\mathbf{I}$ | $\mathbf{A}$ | $\mathbf{A}$ | $\mathbf{E}$ |
| $\mathbf{A}$ | $\mathbf{R}$ | $\mathbf{A}$ | $\mathbf{R}$ | $\mathbf{R}$ | $\mathbf{A}$ | $\mathbf{J}$ | $\mathbf{E}$ | $\mathbf{S}$ | $\mathbf{T}$ | $\mathbf{E}$ | $\mathbf{S}$ | $\mathbf{T}$ | $\mathbf{E}$ |
| $\mathbf{T}$ | $\mathbf{O}$ | $\mathbf{D}$ | $\mathbf{I}$ | $\mathbf{A}$ | $\mathbf{I}$ | $\mathbf{R}$ | $\mathbf{R}$ | $\mathbf{T}$ | $\mathbf{R}$ | $\mathbf{R}$ | $\mathbf{L}$ | $\mathbf{I}$ | $\mathbf{U}$ |
| $\mathbf{M}$ | $\mathbf{R}$ | $\mathbf{U}$ | $\mathbf{O}$ | $\mathbf{A}$ | $\mathbf{U}$ | $\mathbf{T}$ | $\mathbf{O}$ | $\mathbf{E}$ | $\mathbf{A}$ | $\mathbf{A}$ | $\mathbf{A}$ | $\mathbf{S}$ | $\mathbf{R}$ |
| $\mathbf{I}$ | $\mathbf{M}$ | $\mathbf{S}$ | $\mathbf{N}$ | $\mathbf{T}$ | $\mathbf{N}$ | $\mathbf{I}$ | $\mathbf{S}$ | $\mathbf{M}$ | $\mathbf{M}$ | $\mathbf{A}$ | $\mathbf{T}$ | $\mathbf{D}$ | $\mathbf{O}$ |
| $\mathbf{U}$ | $\mathbf{J}$ | $\mathbf{R}$ | $\mathbf{A}$ | $\mathbf{S}$ | $\mathbf{A}$ | $\mathbf{M}$ | $\mathbf{N}$ | $\mathbf{L}$ | $\mathbf{S}$ | $\mathbf{U}$ | $\mathbf{S}$ | $\mathbf{O}$ | $\mathbf{P}$ |
| $\mathbf{A}$ | $\mathbf{P}$ | $\mathbf{I}$ | $\mathbf{T}$ | $\mathbf{P}$ | $\mathbf{A}$ | $\mathbf{P}$ | $\mathbf{H}$ | $\mathbf{O}$ | $\mathbf{N}$ | $\mathbf{O}$ | $\mathbf{S}$ | $\mathbf{A}$ | $\mathbf{A}$ |



## Make an Outdoor Model of the Solar System!

Build a model of the solar system in about 100 steps! It'll only be 92 billion times smaller than the real thing! Planets in our solar system are very far apart. Neptune (furthest proper planet) is around 4.5 trillion meters away from the sun!

Gather and colour 9-10 marks (1 for the sun, 8 for the planets, you can add the dwarf planet, Pluto). Consider rocks or other varied placeables like grains, nuts, and fruits instead of paper.

Find somewhere you can walk 100 steps in a straight line safely. If you are using rocks, make sure that placed rocks won't be a hazard for other people. Please don't leave rocks in fields other people play in.


1. Start by placing the sun.
2. Take one step, drop Mercury.
3. One more step, drop Venus.
4. Now take a $3 / 4$ of a step, and drop Earth.
5. Take 1 leap ( 1.5 steps), then drop Mars.
6.Ten more steps, then drop Jupiter.
6. Twelve steps more, drop Saturn.
7. Walk twenty-five steps plus another big leap! Then drop Uranus.
8. Finally, take thirty steps, plus half a step, drop Neptune.
9. Want to add Pluto? Pluto's orbit varies wildly, at furthest fifty-two more steps forward, or at closest, a step back to the sun from Neptune!

Now look and admire your work. Can you see all planets from where you stand? Once you are satisfied, recover your planets.

Activity Sheet \#6<br>Beyond Our World Created By Surrey Libraries

## Draw a Lander

Scientists use landers to land on and explore other planets and moons. Some are robots and others carry people! See if you can draw one.

Choose from the example parts or make up your own!
Don't forget to draw the background. Pick any moon or planet.

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Rock Drill


Multi-Spectrum Camera


RTG Nuclear Battery


