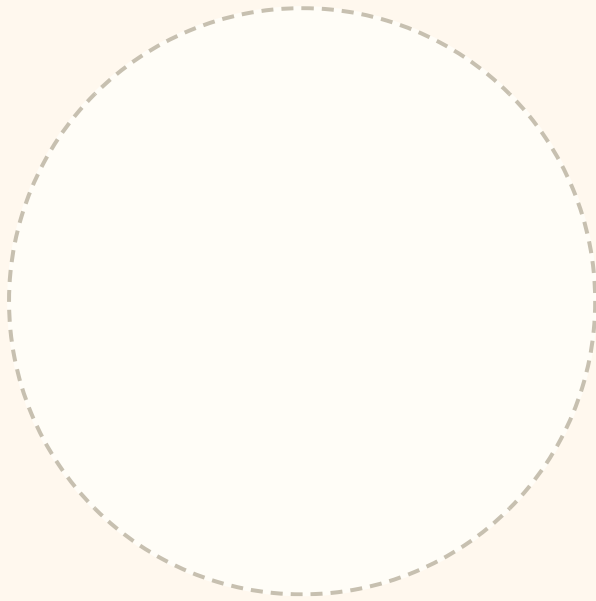


Design a world that could hold life

Invent a planet or moon. Draw it, name it, then show how it supplies the clues scientists look for when they search for life.



The name of my world

The star or planet it orbits

Where its warmth comes from

☐ near its star ☐ farther away ☐ heated inside

Five search clues

The first three are essential for life as we know it. The last two help that life begin and continue.



Liquid water Where is it, and what keeps it from freezing or boiling?



An energy source Sunlight or chemical energy from inside?



Chemical building blocks Carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur



Workable surroundings Suitable conditions and protection from damaging radiation?



Enough time Has the world stayed stable long enough?

Now investigate your world

Choose yes, no or not sure. Scientists often have to mark a question as unknown and look for better evidence.

- 1 Does my world have liquid water somewhere, even under ice? ☐ YES ☐ NO ☐ NOT SURE
- 2 Does it have sunlight or a useful source of chemical energy? ☐ YES ☐ NO ☐ NOT SURE
- 3 Does it contain the chemical building blocks life uses? ☐ YES ☐ NO ☐ NOT SURE
- 4 Are temperature and pressure workable somewhere on the world? ☐ YES ☐ NO ☐ NOT SURE
- 5 Can air, water, ice or rock block damaging radiation? ☐ YES ☐ NO ☐ NOT SURE
- 6 Have useful conditions lasted long enough for life to begin? ☐ YES ☐ NO ☐ NOT SURE

How a scientist would read the clues

All three essentials Promising enough for a closer look. The surroundings decide whether the chemistry can continue.

One essential missing Not a strong candidate for life as we know it. A 'not sure' answer means better measurements are needed.

The surface looks harsh Check underground. Rock or ice can hide water and block radiation.

One clue I would improve or investigate next
