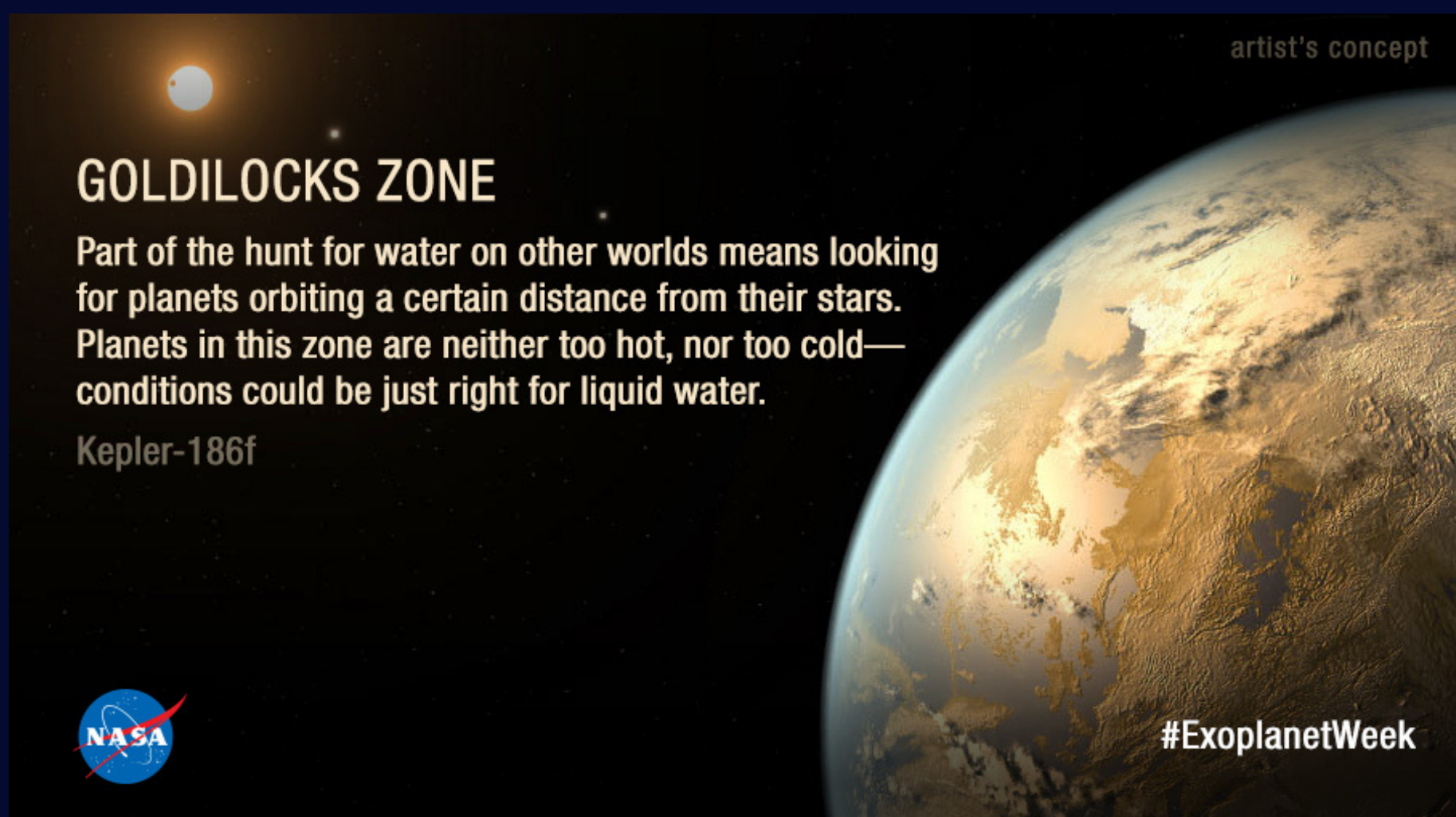


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Exoplanets and The Goldilocks zone

THE GOLDILOCKS ZONE



CONDITIONS WHICH IMPROVE THE CHANCE FOR EXISTING LIFE

A BASIC CHECKLIST:

For **Enzymes**:

- Temperature
- PH level

- Nitrogen level
- Oxygen level
- Radiation levels
- Abundance of carbon
- Type of star that the planet orbits
- Distance from star
- Planet size and mass

With our Galaxy having over **100,000,000 billion planets** in our universe. It can be paradoxically quite hard where to look. So the area in space that we would want an ideal habitable planet to be found is in what we call 'The Goldilocks Zone', **an area that is neither too cold, or too hot for life and has conditions which can sustain life.**

HOW WE DETECT LIFE

- Once calculations regarding planet size and orbit are complete, in order to show an exoplanet to be in the goldilocks zone and the right size, we can test the elements in the atmosphere with spectrography by seeing what colours are absorbed
- If there is a large amount of oxygen in the atmosphere and an abundance of another element that reacts with it, life is almost certain to be there
- Even without this, life is still possible with other atmospheric compositions

EXOPLANET

-A planet outside of our solar system that orbits a star



PROXIMA CENTAURI B

- The closest exoplanet to Earth, Proxima Centauri B is also a viable candidate for life not on this world
- Being only 17% more massive than earth and orbiting in the goldilocks zone, it does look promising
- However as it is tidally locked to its star's orbit, and its star is a flare star that could rip any atmosphere available off, it is highly unlikely that multicellular life would exist

References:
NASA
Adelaide university

