**Chloroflexus aurantiacus**
“Color-changer, green to orange”

**Who am I?**
A Bacterium

**Where do I live?**
Hot springs around the world, including Yellowstone National Park.

**What challenges can I survive?**
Heat, exposure to ultraviolet light, changing levels of light and oxygen

**Special Talents**
Thermophile. I can live in a temperature range of 35–70°C (95–158°F).

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**Deinococcus radiodurans**
“Terrible berry, survives radiation”

**Who am I?**
A Bacterium

**Where do I live?**
Deserts, hot springs, high mountains, polar regions and animal gut.

**What challenges can I survive?**
Dehydration, cold, acidic pH, radiation, oxidative damage.

**Special Talents**
Radioresistant. I can survive short doses of radiation up to 5,000 Gy. I can grow under constant radiation levels of 50 Gy per hour. By comparison, a dose of 5 Gy kills humans.

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**Pyrococcus furiosus**
“Raging fireball”

**Who am I?**
An Archaeon

**Where do I live?**
Hydrothermal vents in ocean floor; first discovered near volcanic islands in Italy.

**What challenges can I survive?**
Heat, pressure, changes in oxygen levels when vent fluids contact sea water.

**Special Talents**
Hyperthermophile. I can live in extremely hot temperatures. I grow best at 100°C (212°F), reproducing once every 37 minutes.
Halobacterium salinarum  
“Pink bug that loves salt”

Who am I?  
An Archaeon

Where do I live?  
Salty lakes around the world, including Great Salt Lake, Utah.

What challenges can I survive?  
Lack of water, temperature extremes, high salt, radiation, toxic chemicals.

Special Talents  
Halophile. I can grow in extremely salty water, 10 times saltier than the ocean.

Psychrobacter arcticus  
“Cold bug from the poles”

Who am I?  
A Bacterium

Where do I live?  
Very cold places, including permanently frozen soil and pockets of salt water trapped in sea ice.

What challenges can I survive?  
Cold, darkness, high salt, starvation, dehydration, limited space.

Special Talents  
Psychrophile. I like to live at extremely cold temperatures, as low as -10°C (14°F).

Picrophilus torridus  
“Burning paint”

Who am I?  
An Archaeon

Where do I live?  
Acidic environments, including hot springs and volcanic steam vents.

What challenges can I survive?  
Acidic pH, high temperature.

Special Talents  
Acidophile. I can grow best in very acidic conditions (pH 0); Water has a pH of 7.
**Thellungiella salsuginea**

*Saltwater cress*

**Who am I?**
A Eukaryote (Plant – Angiosperm)

**Where do I live?**
Salty environments, including salt flats in northern Canada and seashores of eastern China.

**What challenges can I survive?**
High salt, cold temperatures, nutrient-poor soils, drought, flooding, toxic metals, short growing season

**Special Talents**
Halophile and psychrophile. I like to grow and reproduce in extremely salty soil and sub-zero temperatures.

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**Antarctic Ice Fishes**

(25+ species)

**Who am I?**
Eukaryotes (Animal – Chordate)

**Where do I live?**
Southern Ocean surrounding Antarctica.

**What challenges can I survive?**
Cold temperature

**Special Talents**
Psychrophile. We like to live in very cold water, 1.5 to -1.8 °C (28 to 35°F).

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**Tardigrade**

*“Little water bear”*

**Who am I?**
A Eukaryote (Animal)

**Where do I live?**
Wet environments, including hot springs, deep-ocean sediments, glaciers, fresh-water lakes, tropical forests, even the moss in your own backyard.

**What challenges can I survive?**
Dehydration, extremely hot and cold temperatures

**Special Talents**
I can survive more extremes (temperature, pressure, radiation, dehydration) than any other organism. I can even survive outer space.
**Acidithiobacillus thiooxidans**  
“Sulfur-breathing, acid-loving rod”

**Who am I?**  
A Bacterium

**Where do I live?**  
Sulfide-rich, underground cave systems in Mexico, Italy and elsewhere.

**What challenges can I survive?**  
Extreme pH, darkness, limited food resources, low oxygen, toxic gases

**Special Talents**  
Acidophile. I grow best in acidic conditions. Most life lives between pH 5 and 8; water has a pH of 7.

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**Cupriavidus metallidurans**  
“Metal enduring”

**Who am I?**  
A Bacterium

**Where do I live?**  
Soils rich in natural metals or metal waste from mines and processing plants.

**What challenges can I survive?**  
Toxic chemicals

**Special Talents**  
Metallophile. I like to live in places contaminated with toxic heavy metals.

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**Riftia pachyptila**  
“Giant tube worm”

**Who am I?**  
A Eukaryote (Animal – Annelid)

**Where do I live?**  
The deep sea, near geyser-like vents on the ocean floor, miles below the surface.

**What challenges can I survive?**  
Extreme pressure, darkness, low nutrients, toxic chemicals and extreme temperatures (vent water can be over 300°C / 572°F)

**Special Talents**  
Piezophile. I like to live under high pressure miles below the sea surface.