

















Game Cards

<p>Organism Card</p> <p>Acid-loving Bacteria</p>  <p>Little Known Fact: Scientists have found bacteria living at 0.0 pH growing on the walls of caves. Most organisms live within a pH range of 5-8.</p>	<p>Organism Card</p> <p>Acid-loving Bacteria</p>  <p>Little Known Fact: Scientists have found bacteria living at 0.0 pH growing on the walls of caves. Most organisms live within a pH range of 5-8.</p>
<p>Organism Card</p> <p>Salt-Loving Bacteria</p>  <p>Little Known Fact: Scientists have found halophilic bacteria living in water that is 30% salt. By comparison, seawater and human blood are about 3.5% salt.</p>	<p>Organism Card</p> <p>Cold-Loving Bacteria</p>  <p>Little Known Fact: Scientists have found Cryotendolithotrophs living at minus 15 degrees Celsius. Earth's average temperature is 15 degrees Celsius.</p>
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<p>Organism Card</p> <p>Heat-Loving Bacteria</p>  <p>Little Known Fact: Scientists have found <i>Pyrococcus furiosus</i> living in 113°C water.</p>	<p>Organism Card</p> <p>Heat-Loving Bacteria</p>  <p>Little Known Fact: Scientists have found <i>Pyrococcus furiosus</i> living in 113°C water.</p>
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<p>Organism Card</p> <p>Radiation-Tolerant Bacteria</p>  <p>Little Known Fact: Scientists have found <i>Deinococcus radiodurans</i> living after being exposed to radiation levels of five million rads. It can tolerate high levels of both ultraviolet radiation and radioactive decay. The lethal dose for humans is 1000 rads.</p>	<p>Organism Card</p> <p>Radiation-Tolerant Bacteria</p>  <p>Little Known Fact: Scientists have found <i>Deinococcus radiodurans</i> living after being exposed to radiation levels of five million rads. It can tolerate high levels of both ultraviolet radiation and radioactive decay. The lethal dose for humans is 1000 rads.</p>

<p align="center">Organism Card</p> <p align="center">Radiation-Tolerant Bacteria</p>  <p>Little Known Fact: Scientists have found <i>Deinococcus radiodurans</i> living after being exposed to radiation levels of five million rads. It can tolerate high levels of both ultraviolet radiation and radioactive decay. The lethal dose for humans is 1000 rads.</p>	<p align="center">Organism Card</p> <p align="center">Cold-Loving Bacteria</p>  <p>Little Known Fact: Scientists have found <i>Cryotendolithotrophs</i> living at minus 15 degrees Celsius. Earth's average temperature is 15 degrees Celsius.</p>
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<p align="center">Earth Habitat Card</p> <p>Hot springs occur when groundwater is heated and rises to the surface.</p> 	<p align="center">Earth Habitat Card</p> <p>Processes in Earth's crust produce extremely hot groundwater.</p> 
<p align="center">Earth Habitat Card</p> <p>Contact between volcanic magma and underground water produces pockets of hot water</p> 	<p align="center">Earth Habitat Card</p> <p>The Arctic tundra has a layer of permafrost beneath it. Permafrost is soil locked in water ice.</p> 
<p align="center">Earth Habitat Card</p> <p>Natural deposits of uranium can produce high levels of radiation.</p> 	<p align="center">Earth Habitat Card</p> <p>When our atmosphere's ozone layer gets thin, Earth's surface can receive dangerous levels of harmful ultraviolet radiation.</p> 
<p align="center">Earth Habitat Card</p> <p>Acidic groundwater is found beneath much of Earth's surface.</p> 	<p align="center">Earth Habitat Card</p> <p>Acidic groundwater dissolves certain kinds of rocks, forming caves and producing an acidic environment for life.</p> 

<p align="center">Earth Habitat Card</p> <p>Salt occurs in Earth's ocean water. The amount of salt in seawater is about four percent.</p> 	<p align="center">Earth Habitat Card</p> <p>Radiation in Earth's crust comes from the decay of radioactive elements such as uranium.</p> 
<p align="center">Earth Habitat Card</p> <p>Salt domes and brine (salty water) are often found in association with petroleum deposits.</p> 	<p align="center">Earth Habitat Card</p> <p>The Arctic ice cap is made of water ice.</p> 
<p align="center">Earth Habitat Card</p> <p>Water ice over two kilometers thick covers Antarctica. The coldest temperature on Earth, minus 89 degrees Celsius, was recorded in Antarctica.</p> 	<p align="center">Earth Habitat Card</p> <p>Greenland is covered with a two-kilometer-thick sheet of water ice.</p> 
<p align="center">Earth Habitat Card</p> <p>The evaporation of large bodies of salt water has covered large areas of land with thick layers of salt.</p> 	<p align="center">Earth Habitat Card</p> <p>Volcanic vents occur all along the 17,000 miles of Earth's mid-oceanic ridges. The water injected into the ocean environment is extremely hot.</p> 

<p align="center">Possible Extraterrestrial Habitat Card</p> <p>Just beneath Europa's surface, there may be large pockets of salty brine.</p> 	<p align="center">Possible Extraterrestrial Habitat Card</p> <p>During the first two to three billion years, Mars had water and volcanic activity. This combination would likely produce hot springs and underground pockets of hot water.</p> 
<p align="center">Possible Extraterrestrial Habitat Card</p> <p>Europa's ocean is probably very salty.</p> 	<p align="center">Possible Extraterrestrial Habitat Card</p> <p>The decay of radioactive elements such as uranium in the Martian crust would generate high levels of radiation.</p> 

<p>Possible Extraterrestrial Habitat Card</p> <p>Mars may have a layer of water beneath its surface. On Earth, such groundwater is often acidic.</p> 	<p>Possible Extraterrestrial Habitat Card</p> <p>Acidic groundwater dissolves certain kinds of rocks, forming caves. Mars may have these kinds of rocks, resulting in an acidic environment for life.</p> 
<p>Possible Extraterrestrial Habitat Card</p> <p>Ultraviolet radiation and charged particles from the sun bombard the surface of Mars, which is completely unprotected from these kinds of harmful radiation.</p> 	<p>Possible Extraterrestrial Habitat Card</p> <p>Salt layers form when large bodies of salty water evaporate. Mars may have had large bodies of water that have since evaporated, possibly leaving layers of salt.</p> 
<p>Possible Extraterrestrial Habitat Card</p> <p>Ultraviolet radiation bombards the surface of Europa, which is completely unprotected from this kind of harmful radiation.</p> 	<p>Possible Extraterrestrial Habitat Card</p> <p>Processes in the Martian crust may heat water below the surface, producing pockets of hot groundwater.</p> 
<p>Possible Extraterrestrial Habitat Card</p> <p>The Martian Polar Ice Cap is made of water ice.</p> 	<p>Possible Extraterrestrial Habitat Card</p> <p>The core of the Martian Southern Polar Ice Cap seems to be made of water ice.</p> 
<p>Possible Extraterrestrial Habitat Card</p> <p>Most of the Martian surface has a layer of permafrost beneath it. Permafrost is soil locked in water ice.</p> 	<p>Possible Extraterrestrial Habitat Card</p> <p>Europa is completely covered by a one- to ten-kilometer thick shell of water ice.</p> 
<p>Possible Extraterrestrial Habitat Card</p> <p>Evidence suggests that Europa may have considerable volcanic activity beneath its ocean. This volcanic activity would supply Europa's ocean with large amounts of hot water.</p> 	<p>Possible Extraterrestrial Habitat Card</p> <p>The Martian surface has deposits of a kind of iron oxide called hematite. Hematite is often associated with organisms living in hot springs.</p> 