Hydrothermal Vent

A fissure found on the seafloor near volcanically active places. Temperature can reach as high as 867 F.

Colon

The last part of the digestive tract found inside animals. This is where the remaining materials are broken down with the help of bacteria and archaea before excretion.

Red Sea

A seawater inlet located between Africa and Asia. The Red Sea is one of the saltiest waters in the world, a perfect place for salt-loving creatures.

Septic Water

The kind of water found in sewer where all the wastes accumulate. A perfect home for all sorts of bacteria.

Pond

A body of freshwater within an area brimming with life. Where there are thriving populations of organisms, so too, will there be predators.

Trachea

Known as the windpipe that connects the larynx, and the bronchi of the lungs. Many foreign organisms are disposed of here by the hands of white blood cells. Beware of the wandering macrophages.

Pond

A body of freshwater within an area brimming with life. A perfect place for predatory organisms.

Murky Swamp

A body of freshwater filled with grime. This particular area is filled with toxic bacteria, not ideal for consumption.

Whirlpool

Watch out for this downward spiral into the void. However, with this many organisms being pulled in, it’s sure to be a buffet.

Hazards

Sunlight

Contains the genetic information of the prokaryotic cell. The nucleoid determines how the cell will develop and grow.

Responsible for making proteins. These proteins are what keeps the cell alive by providing energy for movement, repair, and growth.

These are extra DNA molecules that are commonly found in bacteria, and sometimes in other cells. They allow cells to mutate and adapt to an ever-changing environment.

An affinity for extremely hot temperature. These archaeans can thrive in environments near volcanos, hot springs, and acidic soils.

These archaeans release methane as a result of digesting materials such as carbon and hydrogen. They are known to play a role in breaking up materials for other cells to consume.

An affinity for salt. These archaeans can withstand the effects of salt which causes dehydration. They are also known to be resistant to UV radiation, giving them a reddish look.

A single flagellum that favors long distance travel.

Multiple flagella in one polar end of the cell that favors frequent twists and turns.

Multiple flagella around the cell that helps with even more frequent twists and turns.

A prokaryote that metabolizes methane. This particular type is anaerobic, which means it can live with little to no oxygen.

Capable of harnessing energy from sunlight through its chlorophyl component. This energy is then used to produce its own food from inorganic matter.

Eats anything organic that contains carbon and hydrogen, such as glucose.

This particular bacteria feeds from within the host, draining it of all its energy. Once engulfed, it secretes special proteins that will prevent itself from being consumed.

The command center of the cell that contains genetic information. The nucleus controls the cell’s actions such as growth and reproduction.

The factory of the cell that is responsible for synthesis of various materials. There are two types: rough and smooth. The rough one contains ribosomes and synthesizes protein, while the smooth one synthesizes different types of lipids.

The shipment and delivery service of the cell. The golgi apparatus puts proteins and lipids into vesicles to be transported to other parts of the cell.

The powerhouse of the cell. Its primary role is to generate energy in the form of adenosine triphosphate (ATP). Other functions include: heat generation, signaling activities, and mediates cell growth/death.

The storehouse of the cell. Its role is to store materials generated and digested by the cell.

Secretes special fluids that immobilizes smaller organisms on contact. Once immobilized, the organism is digested.

Protrudes sharp needle-like appendage to skewer unsuspecting victims. These appendages also act as a suction that drains the victim of all its vital energy.

Inhales anything small in its path. Unwanted liquid and materials are jetted out from the rear, which also allows this organism to propel itself forward.

A long whip-like structure that allows the cell to maneuver in liquid environment. A single flagellum allows for efficient long-distance travel.

Small hair-like structures around the surface of the cell. This one is used for motility in a liquid environment.