If you’re an animal living in the wild, taking a drink of water can be deadly. First, *herbivores*—animals who eat plants, like cattle or giraffes—might have to walk through dangerous, open areas to visit watering holes. Unfortunately, as they quench their thirst, they become targets for hungry meat-eating predators, like crocodiles.

Whether you’re an herbivore or a predator, another threat awaits—a threat that could make you sick or even kill you: *parasites* and *pathogens*. Parasites are creatures that live in or on other creatures. Parasites take nutrients from others at the other creatures’ expense.

Yeah, like a flea is a parasite on a dog. The flea eats the dog’s blood, which the dog needs to stay healthy. Parasites can be insects like fleas, or they can be much smaller, like the nematode worms that live in animals’ intestines.

That’s right, Miguel! And pathogens are life forms that cause disease. The flu virus is one pathogen that can make you feel very sick.
When animals gather at watering holes, so do their parasites or pathogens. In these gathering spaces, animals can easily become infected with viruses like foot-and-mouth disease. Just as many young people get colds from their classmates each year, sick animals are more likely to pass their illnesses to others if they are gathered in groups.

Ecologists, who study how living beings interact with each other, can learn a lot about how parasites and pathogens spread by watching how animals interact. This information can help epidemiologists, who study how diseases spread in humans.

Let’s get STEAM power, and learn more about parasites and pathogens.