

What do these three animals have in common?



Can anybody tell me what an Indicator Species, Keystone Species, and Sentinel Species are?



They all tell us something about the environment

Organisms can tell us how the ecosystem is functioning as well as the level of contamination in our ecosystems.

Also they can show us just how complex food webs and ecosystems are, and why it is important to protect and manage for ALL species in an ecosystem.

What is an Indicator Species?

Answer: An organism that scientists use to see how an ecosystem is functioning simply by the presence or absence of that species.

Can you think of an example of an Indicator Species?

One example is a frog. Since frogs absorb water directly through their skin, they're especially vulnerable to water contaminants like pesticides and acid rain.



What is a Keystone Species?

Answer: an organism that has a major influence on how an ecosystem works.

If a keystone species is removed, the ecosystem will look very different and other species may not survive.

Can you think of an example of a keystone species?



What is a Sentinel Species?

Answer: a species that can be used to detect risks to humans by providing advanced warning of a danger.

One example is California sea lions because they have long lives and share a common diet with humans (fish). We can detect the presence of coastal contaminants like mercury by looking at sea lion health.



Can you think of another Sentinel species?