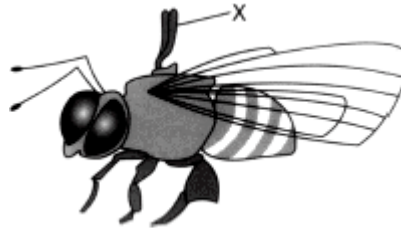


AIM: Please write the AIM from the board.

DO NOW: Answer the following Regents questions.

1. The accompanying diagram represents a species of bee that helps one type of orchid plant reproduce by carrying pollen on structure *X* from one orchid flower to another. Pollination by this species of bee is the only way the orchid can reproduce.

If this bee species dies out, this orchid species would most likely



1. cease to exist
2. find another animal to carry the pollen
3. flower at a different time of year
4. develop another way to reproduce

2. A particular species of unicellular organism inhabits the intestines of termites, where the unicellular organisms are protected from predators. Wood that is ingested by the termites is digested by the unicellular organisms, forming food for the termites. The relationship between these two species can be described as

1. harmful to both species
2. parasite/host
3. beneficial to both species
4. predator/prey

3. Base your answers on the accompanying passage and on your knowledge of biology.

... Corals come in about 1,500 known species—from soft swaying fans to stony varieties with hard skeletons that form reef bases. They are made up of polyps, tiny animals that live in colonies and feed at night on microscopic plants and creatures. The coral's surface is the living part, with color infused by single-celled algae called zooxanthellae that live in polyp tissue. The algae act like solar panels, passing energy to the coral as they photosynthesize while feeding on the coral's waste.

Extremely sensitive, corals survive in a narrow range of temperature, sunlight and salinity. An uncommonly severe El Niño in 1998 raised ocean temperatures and changed currents, causing bleaching that devastated reefs worldwide. Scientists say parts of the Indian Ocean lost up to 90 percent of corals. The bleaching struck reefs around the Persian Gulf, East Africa, Southeast Asia and the Caribbean. Some recovered. Many died. ...

Source: Associated Press, December 2001

The relationship between the polyps and the zooxanthellae can best be described as

1. negative for both
2. neutral for both
3. positive for both
4. negative for one and positive for the other

Mini-Lesson

How are predation & parasitism similar? How do they differ?

- _____ & _____ are both relationships in which _____ while _____.
- In _____, the predator needs _____ in order to benefit
- In _____, the parasite benefits by _____

Parasitism

- Definition: _____ organism _____ and _____ is _____
- Example: _____ and _____
 - Which organism benefits, and how does it benefit? _____
 - Which is harmed, and how is it harmed? _____

Another Example of Parasites

- _____ and _____
 - Which organism benefits, and how does it benefit? _____
 - Which is harmed, and how is it harmed? _____

More Examples of Parasites

- _____ turn _____ into _____!!
 - Which organism benefits, and how does it benefit? _____
 - Which is harmed, and how is it harmed? _____

Still More Examples of Parasites

- A _____ eats a fish's _____ and replaces it with _____!!
- Which organism benefits, and how does it benefit? _____

- Which is harmed, and how is it harmed? _____

Yet another Example of Parasites

- Cordyceps _____ brainwashes an _____!
- Which organism benefits, and how does it benefit? _____

- Which is harmed, and how is it harmed? _____

You thought we were finished...

- _____, a cat parasite, infects _____ and makes them unafraid of _____
- Guess what? *T. gondii* can infect _____ too- and it makes them _____!
- *T. gondii* has been nicknamed the "_____"
- Which organism benefits, and how does it benefit? _____

- Which is harmed, and how is it harmed? _____

Class Activity: Radiolab

Parasites: Are they evil, or are they awesome?

1. Describe how the parasitic wasp "zombifies" the cockroach.

2. What does the wasp do to the cockroach once it subdues it?

3. What do the wasps' babies do to the cockroach?

4. What did Darwin say about parasitic wasps?

5. In your opinion, are parasitic wasps evil, or awesome? Why?

The case FOR hookworm

6. What body system malfunctions to cause allergies and other diseases, such as asthma, multiple sclerosis, and crohn's disease?

7. What facts made Jasper Lawrence decide that he would like to obtain hookworm?

8. How did Jasper Lawrence obtain hookworm?

9. What effect does hookworm seem to have on the immune system?

10. The United States worked hard to eradicate hookworm. In your opinion, knowing what you know about hookworms and the immune system, was that a mistake? Why or why not?
