

Name: _____ Date: _____

Which Symbiosis is it?

M - Mutualism- a symbiotic relationship that benefits both organisms involved.

C - Commensalism- a symbiotic relationship that benefits one organism and the other is not helped or harmed.

P - Parasitism- a symbiotic relationship that benefits one organism and the other is harmed.

P

1. A tick living on a dog.
2. A tapeworm living in a 6th grade student's intestines.
3. A bird building their nest in a tree.
4. The hermit crab carrying the sea anemone on its back.
5. A whale and barnacles.
6. Head lice living on a human scalp.
7. The ants protecting the acacia tree and tree provides food for the ants.
8. Orchids growing in tall tropical trees, the trees are not harmed but the orchids get sunlight.
9. A sixth grader and their pet.
10. Algae growing on the fur of a sloth, giving it camouflage.
11. Small mites live on your skin, eating dead skin cells. You don't even notice.
12. The clownfish and the sea anemone.

| Symbiosis | organism 1 | organism 2 |
|----------------------|-------------|----------------|
| <u>M</u> utualism | <u>good</u> | <u>good</u> |
| <u>C</u> ommensalism | <u>good</u> | <u>neutral</u> |
| <u>P</u> arasitism | <u>good</u> | <u>bad</u> |

1. **Oxpecker and zebras:** Oxpeckers are a type of small bird that land on zebras and eat ticks and other parasites that live on the zebra's skin. The oxpeckers get food and the zebras get pests removed.
 Organism 1: helped harmed not harmed/not helped
 Organism 2: helped harmed not harmed/not helped
 Symbiotic Relationship: Mutual
2. **Tapeworm and animals:** Tapeworms are segmented flatworms that attach themselves to the insides of the intestines of animals such as cows, pigs, and humans. Tapeworms get food by eating the host's (animal) partly digested food, depriving the host (animal) of nutrients.
 Organism 1: helped harmed not harmed/not helped
 Organism 2: helped harmed not harmed/not helped
 Symbiotic Relationship: _____
3. **Spider crab and algae:** Spider crabs live in shallow areas of the ocean floor, and greenish-brown algae lives on the crabs' backs, making the crabs blend in with their environment, and unnoticeable to predators. The algae get a good place to live, and the crab gets camouflage.
 Organism 1: helped harmed not harmed/not helped
 Organism 2: helped harmed not harmed/not helped
 Symbiotic Relationship: _____
4. **Remora and the shark:** Remora fish are small fish that make their niche by picking up the scraps that sharks leave behind while feeding. The shark makes no attempt to prey on the remora fish.
 Organism 1: helped harmed not harmed/not helped
 Organism 2: helped harmed not harmed/not helped
 Symbiotic Relationship: _____

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5. **Bee and the flower:** Bees fly from flower to flower-gathering nectar, which they make into food. When they land in a flower, the bees get some pollen on their hairy bodies, and when they land in the next flower, some of the pollen from the first one rubs off, pollinating the plant.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____

6. **Bacteria and the human colon:** Bacteria live in the colon of humans and are able to feed off the indigestible food that the human body cannot break down (cellulose of plants). In the process of breaking down the food, the bacteria also make much-needed vitamins that the human body in turn can use to keep healthy.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____

7. **Dog and the tick:** Ticks live on dogs and feed off the dog's blood. They may also infect the dog with a parasite that can cause the dog to become quite sick. Dogs also are sometimes found to be very tired because a large volume of their blood has been drained.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____

8. **Ostriches and gazelles:** They feed next to each other and watch for predators, alerting each other to danger. Since the visual abilities of the two species are different, they each can identify threats the other animal would not as readily see.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____

9. **Hermit crabs and snails:** Hermit crabs live in shells made and abandoned by snails.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____

10. **Cuckoo and warbler:** A cuckoo may lay its eggs in a warbler's nest. The cuckoo's young will displace the warbler's young and will be raised by the warbler.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____

11. **Mistletoe and spruce tree:** Mistletoe takes water and nutrients from the spruce, harming the tree.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____

12. **Honey guide birds and badgers:** Honey guide birds alert and direct badgers to bee hives. The badgers then expose the hives and feed on the honey first. Then the honey guide birds eat.

Organism 1: helped harmed not harmed/not helped

Organism 2: helped harmed not harmed/not helped

Symbiotic Relationship: _____