

Complete these notes as you watch the SYMBIOSIS video on EDPuzzle.

1. Symbiosis is a **RELATIONSHIP** between two organisms in which at least one of them **BENEFITS**.

2. Identify each type of symbiosis.

+ - **PARASITISM** - One species benefits and the other species is harmed

+ + **MUTUALISM** - Both species benefit from the relationship

+ 0 **COMMENSALISM** - One species benefits and the other is not helped or harmed.

3. What type of symbiosis exists between clownfish and anemones?

MUTUALISM **ANEMONES - +**
CLOWNFISH - +

What examples were discussed in the Symbiosis Video #2?

Abiotic	Emigration
Adaptations	Food Web
Biodiversity	Generalist Species
Biosphere	Habitat
Biotic	Immigration
Birth Rate	Limiting Factor
Carrying Capacity	Mutualism
Climatogram	Niche
Commensalism	Parasitism
Community	Population
Consumer	Population Density
Death Rate	Predation
Decomposer	Producer
Ecology	Specialist Species
Ecosystem	Succession
	Symbiosis

Term	Definition
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Symbiosis – Relationship between two organisms in which at least one benefits.

Commensalism - + 0 (one helped, one not affected)

Mutualism - + + (both benefit)

Parasitism- + - (one helped, one harmed)

★ Set 1

★ Set 2

★ Set 3

What terms could we add for Set 3?

*Need help? Go to mrstomm.com → Assignments
→ Look for the Quizlet Eco Vocab link!*

Directions: Organize the pairs of organisms into the three groups based on the descriptions. Identify whether each organism benefits (+), is harmed (-), or is not affected.



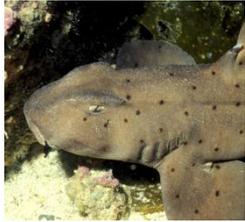
Barnacles create home sites by attaching themselves to **whales**, but it does not hurt them.



Yucca flowers are pollinated by **yucca moths**. The moths lay their eggs in the flowers where the larvae hatch and eat some of the developing seeds. Both species benefit.

Commensalism	Mutualism	Parasitism
Barnacles + Whales 0	Yucca flowers + Yucca moth +	





Remoras attach themselves to a **shark's** body. They then travel with the shark and feed on the leftover food scraps from the shark's meals. The remoras help the shark by eating the parasites on the shark.

Remoras +
Sharks +



Mistletoe extracts water and nutrients from a **spruce tree** and may kill it.

Mistletoe +
Spruce -



The **stork** uses its saw-like bill to cut up the dead animals it eats. This helps the **bees** since the dead animal carcass is accessible for food and egg laying.

Stork 0
Bees +



A **flea** feeds on a **mouse's** blood and harms the mouse.

Mouse -
Flea +



Oxpeckers feed on the ticks found on a **rhinoceros**. The oxpeckers get a meal and the rhinoceros has the ticks removed.

Oxpeckers +
Rhino +

**Go to mrstomm.com → Assignments
to find the rest of the examples you
need to complete the chart.**

[Good Buddies Examples](#)

Due MONDAY!

Find the SYMBIOSIS chart in your notes & check your answers.

Commensalism

Barnacle 😊
Whale 😊

Stork 😊
Bees 😊

Hermit crabs 😊
Snails 😊

Cowbirds 😊
Bison 😊

Sparrow 😊
Osprey 😊

Orchids 😊
Bromeliad 😊

Mutualism

Oxpecker 😊
Rhinoceros 😊

Remora 😊
Shark 😊

Yucca flower 😊
Yucca moth 😊

Honey guide birds 😊
Badgers 😊

Wrasse fish 😊
Black sea bass 😊

Ostriches 😊
Gazelles 😊

Parasitism

Mistletoe 😊
Spruce 😞

Flea 😊
Mouse 😞

Cuckoo 😊
Warbler 😞

Heartworms 😊
Dog 😞

Wasp 😊
Caterpillar 😞

Tick 😊
Deer 😞

Bacteria
Humans

Bee
Flower

Mosquito
Human

What are
some other
examples?

Symbiosis Note Quiz tomorrow!

Your turn ... Use online resources to find other examples of each type of symbiosis – cannot be ones we discussed in class!

- **Create a TIC-TAC-TOE style board on page 8**
- **Work with your tablemates to find three examples for each area.**
- **Be sure to use +, -, or 0 (or smiley faces) to show which ones benefit, which ones are harmed, and which are not affected.**

Commensalism	Mutualism	Parasitism