

Food web species and threats: Guide for Teachers

1. Pass out species cards to each student; the teacher can consult the printed poster and this guide sheet for a list of species, interactions (facts), and threats
2. Have students take about two minutes to review their species' facts on the back of the card.
3. Have the entire class form a large circle around the room.
4. Explain to the students that they are going to connect their species together in a food web.
5. Call out each species name, one at a time. Ask students to look at their cards to see what species they should connect to and pass the yarn around to connect with each species. **Once all species are connected, you will have created a large web.**

*Wow! Can you believe how each of these species are connected? **What can you tell by looking at our model?***

Each species depends on others within an ecosystem. Every species is connected in some way, from the largest predators (the sharks), to the smallest organisms (bacteria, algae). They rely on each other to keep the reef healthy.

Now that we have built this healthy food web, let's see what can happen when some of the threats we've learned about come into this coral reef ecosystem.

6. Read threats one by one. When you read a threat, have students raise their hand if their species is affected. Cut the yarn when they raise their hand. (Threats: (1) Anchors, boats, and divers, (2) Pollution, (3) Overfishing, (4) Fishing Gear, (5) Climate change). **What do you notice has happened each time a threat comes into the food web?**

*Several species are affected. If one organism is taken away, this hurts the food supply for others. This can cause the entire ecosystem to be unbalanced. **If these threats continue, what can happen to the coral reef ecosystem?***

The reef will eventually die off, forcing species to relocate or potentially become locally extinct.

Learn more: [Coral Reef Food Web | National Geographic Society](#) (Original Poster, some species are modified to be Florida-specific)

#	Card	Facts (connections)	Threats				
1	Coral colony	Built by CORAL POLYPS // Feeds POLYCHAETE WORM // Hosts MACROALGAE	Climate change	Pollution			Anchor, boats, and divers
2	Green sea turtle	Eats SEAGRASS	Climate change	Pollution		Fishing gear	
3	Phytoplankton and bacteria	Feeds CORAL POLYPS and SEA FAN and ZOOPLANKTON	Climate change				
4	Zooplankton	Eats PHYTOPLANKTON // Feeds CORAL POLYPS and POLYCHAETE WORMS	Climate change				
5	Macroalgae	Lives on CORAL COLONY // Feeds PARROTFISH and SURGEONFISH and SERGEANT MAJOR and SPONGE					
6	Zooxanthellae	Feeds CORAL POLYPS	Climate change	Pollution			
7	Coral polyps	Hosts ZOOXANTHELLAE // Eats ZOOPLANKTON	Climate change	Pollution			
8	Hammerhead shark	Eats JACK and BLUE RUNNER and LOBSTER and SOUTHERN STINGRAY	Climate change		Overfishing	Fishing gear	
9	Blue runner	Eats SERGEANT MAJOR and SHRIMP // Feeds HAMMERHEAD SHARK and GOLIATH GROUPER	Climate change		Overfishing		
10	Jack	Eats SERGEANT MAJOR and SHRIMP // Feeds HAMMERHEAD SHARK and GOLIATH GROUPER	Climate change		Overfishing		
11	Goliath grouper	Eats SERGEANT MAJOR and LOBSTER and SURGEONFISH and JACK and PARROTFISH and BLUE RUNNER	Climate change		Overfishing		
12	Sea fan	Feeds FLAMINGO TONGUE SNAIL	Climate change	Pollution			Anchor, boats, and divers
13	Flamingo tongue snail	Eats SEA FAN // Feeds LOBSTER					Anchor, boats, and divers
14	Polychaete worm	Eats CORAL COLONY and ZOOPLANKTON // Feeds LOBSTER and STINGRAY					Anchor, boats, and divers
15	Surgeonfish	Eats MACROALGAE // Feeds HAMMERHEAD SHARK and GOLIATH GROUPER and JACK	Climate change		Overfishing		
16	Sergeant major	Feeds BLUE RUNNER and GROUPER	Climate change	Pollution			
17	Stoplight parrotfish	Feeds HAMMERHEAD SHARK and GOLIATH GROUPER	Climate change		Overfishing		
18	Caribbean spiny lobster	Eats FLAMINGO TONGUE SNAIL and SHRIMP and ZOOPLANKTON // Feeds GOLIATH GROUPER and NURSE SHARK and HAMMERHEAD SHARK	Climate change	Pollution	Overfishing		
19	Nurse shark	Eats QUEEN CONCH and LOBSTER	Climate change		Overfishing		

20	Sea sponge	Eats MACROALGAE	Climate change	Pollution			Anchor, boats, and divers
21	Pink shrimp	Eats ZOOPLANKTON // Feeds BLUE RUNNER and JACK and LOBSTER and SOUTHERN STINGRAY	Climate change	Pollution			Anchor, boats, and divers
22	Queen conch	Eats MACROALGAE // Feeds NURSE SHARK and HAMMERHEAD SHARK		Pollution	Overfishing		Anchor, boats, and divers
23	Southern stingray	Eats SHRIMP and POLYCHAETE WORM and SERGEANT MAJOR // Feeds HAMMERHEAD SHARK	Climate change		Overfishing	Fishing gear	
24	Seagrass	Feeds GREEN SEA TURTLE	Climate change	Pollution		Fishing gear	Anchor, boats, and divers