

# Sea Creature Life Cycle and Food Web Systems Activities Kit

Welcome to the **Sea Life Cycle and Food Web Systems Game Kit**. There are six activities included, all aimed to teach students about life cycles of sea creatures and food web ecology. While each game includes instructions, below is a description of each.

## Oyster Life Cycle Game:

**Description:** This is a board game meant for four players. Players move through the board game and learn about the struggles oysters face as they grow into adults.

### Materials:

- 1 sheet with instructions and board game
- 1 six-sided die
- 4 oyster player pieces
- Playing cards (30)

### Instructions:

- Roll die
- If an even number is rolled (2,4, or 6) draw a card; if an odd number is rolled (1,3, or 5), the turn is over
- If a card was drawn, read the card and follow the instructions
- First player to get to “reproduce: sperm and egg” final square wins!

### Critical Thinking Questions:

- Why do you think oysters produce so much sperm and egg?
- How do you humans affect the oyster life cycle? How can humans lessen their effects?
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## Clam Life Cycle Game:

**Description:** Students try to assemble the clam life cycle cards in the correct order. This game can be done alone or in groups of up to 4 students. There are two sets included in this kit, so two groups could do this at once and try to see which group can assemble the clam life cycle correctly the fastest.

### Materials:

- 1 sheet with instructions and clam life cycle
- 7 life stage cards

**Instructions:** Try to place the different stages of a clam’s life cycle in order. When students think they have the correct order, flip over the sheet to check if their answer is correct.

### Critical Thinking questions:

- What might be some challenges a clam faces throughout a clam’s life cycle?

## Anemone Life Activity:

**Description:** Students learn about the two different ways sea anemone’s can reproduce through constructing the anemone life cycle stages with play dough. This activity can be done alone or in groups of up to 4-6 students. There are two sets included in this kit.

### Materials:

- 1 sheet with instructions and life cycle diagram
- 1 bag of play dough

**Instructions:** Anemones can reproduce two different ways. Mold the different stages of anemone’s life out of the dough.

### Critical Thinking Questions:

- Why might sea anemones and other sea creatures need two ways to reproduce and what are the advantages/disadvantages of each?



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## Whale Jenga Food Web Game

**Description:** This game demonstrates the relationship between the trophic levels of a food web in the ocean and the potential impact of humans on that food web. If the balance on one level is disturbed too much by climate change, the other levels will be affected and potentially the food web will collapse.

### Materials:

- 1 set of Jenga
- 21 green blocks (Phytoplankton), 12 blue blocks (Zooplankton), 12 red blocks (Krill and small fish)
- 1 purple block (Whales)
- 1 stack of playing cards
- Informational whale cards

### Game set up:

- Place the green blocks on the bottom, then blue, then red and the purple block on the very top.
- Shuffle the playing cards and stack them upside down.

### Instructions

- The first player picks a card, reads it aloud and follows the instructions written on the card. Only the block being removed or returned may be touched. (You are not allowed to hold the rest of the stack together while removing the blocks.)
- Put the used cards into a discard pile.
- Place removed wood blocks into a discard pile off to the side.
- Continue to take turns until the tower falls and the food web collapses or all cards are used up.

### Critical Thinking Questions:

- Which part of the game had the biggest influence on the block pieces?
- Which incidences created the most disturbances in the food web?

## Krill Food Web Game

**Description:** Five different games can be played with the Krill (A Whale of a Game!) deck of cards. This is an introduction to the Antarctic Ocean food web system.

### Materials:

- Krill Game Cards
- Krill Game Instructions

### Instructions:

- There are five different games all using the playing cards and directions provided.

### Critical Thinking Questions:

- What did the biggest animal eat?
- What were differences/similarities of being a predator in this game? What about prey?

## Food Web Jumbo Checkers

**Description.** This spin on the classic checkers game allows students to see a Pacific Northwest food web system both aquatic and terrestrial.

### Materials:

- 1 set of jumbo checkers pieces
- 1 game rug

### Instructions:

- Set up pieces however student would like as in a normal checkers game
- Each piece can jump the organisms on the underside of their picture. (You can only jump what you can eat!)

### Critical Thinking Questions:

- Which animals remained at the end of the game?
- Which animals were the first to be “eaten”?
- What were the human’s role in this game?

