

# Marsh Web Connections

Trace predator-prey relationships through a salt marsh food web.

**LS.6.a** "relationships exist between predators and prey and these relationships are modeled in food webs;"

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## 1 READ AND MARK \_\_\_\_\_ Read it twice

**YOUR JOB** Underline each phrase that tells who eats whom. Circle the first sentence of paragraph 2 to show how arrows represent energy in a food web.

### Life in a Salt Marsh

- ① At the edge of a salt marsh, smooth cordgrass uses sunlight to make food. Grasshoppers chew its leaves, and marsh mice eat its seeds. Spiders catch grasshoppers, while garter snakes eat mice and spiders. Great blue herons hunt fish, frogs, and small snakes. Each animal has a food source, but several animals may use the same marsh resource. This sharing can connect many feeding paths in one place. A food web models those connected paths rather than a single feeding chain.
- ② In a food web, arrows point from the organism being eaten to the organism that receives energy. For example, an arrow from cordgrass to a grasshopper shows that the grasshopper gains energy by eating cordgrass. Another arrow can run from a grasshopper to a spider, then from a spider to a garter snake. Because mice, spiders, and small snakes can all be eaten by predators, the web shows more than one possible route for energy through the marsh.
- ③ Suppose a disease greatly lowers the number of garter snakes. Fewer snakes may mean that more marsh mice survive, because snakes are predators of mice. More mice could eat more cordgrass seeds. At the same time, snakes are prey for herons, so herons may have one less food source. A food web helps scientists trace these possible ripple effects. It shows that a change in one population can affect organisms connected by several predator-prey relationships, not only the organism eaten directly.

**2 ANSWER WITH EVIDENCE** \_\_\_\_\_ Use the passage

**1** What does an arrow from cordgrass to a grasshopper show in a food web?

---

---

**2** Name one predator in the passage that has more than one kind of prey. List its prey.

---

---

**3** Write one energy pathway from cordgrass to a garter snake using the relationships in the passage.

---

---

**4** If garter snakes become less common, what are two possible effects described in the passage?

---

---

---

**3 YOUR TURN** \_\_\_\_\_ Your own words

Draw a salt marsh food web using at least six organisms named in the passage. Draw arrows from the food or prey to the organism that receives energy, then write two sentences that identify one predator-prey relationship and predict one possible ripple effect if garter snakes decline.

---

---

---

**PART 1 • READ AND MARK**

Underline each phrase that tells who eats whom. Circle the first sentence of paragraph 2 to show how arrows represent energy in a food web. Accept any marking that follows this job and points at the right text.

**PART 2 • ANSWERS**

| # | QUESTION                                                                                          | ANSWER                                                                                                    |
|---|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1 | What does an arrow from cordgrass to a grasshopper show in a food web?                            | <b>The grasshopper eats cordgrass and receives energy from it.</b>                                        |
| 2 | Name one predator in the passage that has more than one kind of prey. List its prey.              | <b>Great blue heron: fish, frogs, and small snakes. Also accept garter snake: marsh mice and spiders.</b> |
| 3 | Write one energy pathway from cordgrass to a garter snake using the relationships in the passage. | <b>cordgrass → grasshopper → spider → garter snake</b>                                                    |
| 4 | If garter snakes become less common, what are two possible effects described in the passage?      | <b>More marsh mice may survive and eat more cordgrass seeds. Herons may have one less food source.</b>    |

**PART 3 • YOUR TURN (SAMPLE ANSWER)**

My food web has these energy pathways: cordgrass → grasshopper → spider → garter snake → heron; cordgrass → marsh mouse → garter snake; fish → heron; frog → heron. In this web, a garter snake is a predator of a marsh mouse, and if garter snakes declined, more marsh mice might survive and eat more cordgrass seeds.

Accept food webs using at least six organisms named in the passage, with arrows moving from food or prey to consumer or predator. Accept logical, qualified ripple effects that follow the stated relationships, including increased marsh mice and reduced food for herons.