

Match the Habitat Cards

Grade Level: upper elementary/
middle school

Duration: one 40-minute class
period.

Skills: vocabulary, critical thinking,
and team building

Subjects: science and language arts,
fine arts (with additional activity)

Concepts

- Habitat is the place where an organism lives because it is adapted to find food, water, shelter, and space there. Habitat is located within ecosystems.
- Shorebirds are one part of a healthy functioning ecosystem.
- Wetland and grassland ecosystems provide extremely important habitats for shorebirds.
- Your local environment may provide important habitat for shorebirds.

Vocabulary

See the *Match the Habitat Terms and Definitions Cards* for 35 words.

Overview

By playing a card-matching game, students learn that shorebirds use diverse habitats to find food and a place to breed or to rest. Students will discover that shorebirds use these habitats to meet their own specific needs.

Objectives

After this activity, students will be able to:

- Name seven different habitat types used by shorebirds.
- Describe the three reasons many shorebirds use more than one habitat type throughout the year.
- Correctly match habitat terms with their definitions.

Materials

- Set of 30–60 game cards (included here)
- A completed *Match the Habitat Clues Sheet*

- A copy of the *Habitat Readings* for each student or student team found in the *Types of Habitats* activity

Introduction

Bog, mudflat, tundra, swamp, marsh, prairie pothole, playa lake, and beach are some of the many areas that people recognize as wetlands. Although these wetlands may have very different climates, plant communities, and food webs, they all have one thing in common—they are wet at least part of the year.

Most shorebirds depend on many different wetlands to nest, migrate, and rest during the winter season. In fact, shorebirds are especially adapted for life in the wetlands they inhabit. Shorebirds with long legs easily keep their bodies dry as they wade into water in search of invertebrates. The long toes of mudflat shorebirds help them balance on the slippery, wet mud or sand. Those with long, sensitive, pointed bills can easily probe the mud for small crustaceans. Shorebirds of rocky-intertidal wetlands have strong, chisel-like beaks designed for cracking open the mussels they find clinging to the rocky shores.

Some shorebird species live in dry upland grasslands. Their bills are adapted for gleaning insects from the surface instead of probing in the mud.

For more information about the unique adaptations of shorebirds, read *Shorebirds Have Special Adaptations* in the *Shorebird Primer*. For more information about shorebird habitats read *Shorebirds Depend on a Chain of Healthy Habitats*, also found in the *Shorebird Primer*.

Activity Preparation

1. Photocopy and cut out the *Match the Habitat Terms and Definitions Cards* included at the end of this activity. Add your own terms and definitions to the blank cards provided. Vary the definitions according to the reading level of your students. Focus on the habitats and definitions most appropriate for your area, and combine this activity with information your class studied in other shorebird activities.

Note: Twenty to 40 possible matches (40 to 80 cards) are a good level for seventh and eighth grade students. For younger students, use 15 matches (30 cards). You may choose to increase the number slightly for small classes (five to ten students).

2. Read through the *Habitat Readings* and complete the column “Source Clue” for each term on your master *Match the Habitat Cards Clue Sheet* by indicating what page and habitat reading the term came from.
3. Write your students’ names in alphabetical order on the chalkboard or flipchart.

Procedure

1. Have students take out one or two blank sheets of notebook paper to write their sentences on (explained below.) A set of *Habitat Readings* should be available as resource material.
2. Mix the term and definition cards together. Deal the cards to the students. It is not necessary that all students initially receive the same number of cards.



3. Explain the rules of this card game:

- The object of the game is to make as many matches as possible in the given amount of time (30 minutes is suggested). Tell the students the number of matches possible (example: 60 cards, 30 matches).
- Point out that more than one definition may match a term, but they should be looking for the best match.
- To make matches they will have to move around the room, find the students with their matching cards, and write down on their paper exactly what is written on the cards. This is a critical part of the game because this way you can tell that they actually found the match and did not just make up a definition or copy one from a book glossary. Once a student finds the person with a matching card, both write down the sentence. Do not actually exchange cards.

Note: Alternatively, students must form sentences using the pair of cards and the word “shorebird(s)” or you may choose to have them write the terms and definitions as a complete sentence (“A wetland is land that is covered or saturated with water at least part of the time.”). Another option is to have students write the terms and definitions separated by a period or “equals” sign. Write an example of what you want them to do on the chalkboard.

- The original owner of the term card then passes his or her card to the classmate whose name comes alphabetically after his or hers. The owner of the matching definition card does the same. If the holder of one of the matches happens to be the person who is next alphabetically, pass the card anyway after both students have written down the sentence. The match-holder should immediately pass the card to the next person in order.

Example: Wesley has the card “wetland” and recognizes that Franny’s card that reads “Land that is covered or saturated with water at least part of the time” is the match. Wesley and Franny each write “A wetland is land that is covered or saturated with water at least part of the time” on their own papers. Then Wesley passes the “wetland” term card to William (or Archie, if Wesley is the last student, alphabetically, in the class), and Franny passes the definition card to Grace (because “Grace” is the first name in the class, alphabetically, after “Franny”).

- Keep your private “clue” sheet of sources you prepared earlier. If you notice that a student is really stumped on a card, use your “clue” sheet to refer him or her to “page so-and-so in such-and-such reading” for help with a definition. Knowing a basic definition should help them recognize the matching card.
- The game ends when the time limit has run out. Students turn in their papers. The student(s) with the most correct matches are the winners.
- Follow up the game with a discussion to ensure that the students know all the terms. Go around the room, asking each student to read one sentence from his or her paper and see if the rest of the class agrees that he or she has made the best match. What other matches might work?

Keep in Mind....

- Let students discover their own efficient ways to find matches (like spreading out their cards on the desk in front of them).

| <i>Term Cards</i> | <i>Definition Cards</i> |
|-------------------|--|
| Surfbird | Nests in alpine tundra |
| Pampas | Wintering habitat of American Golden-Plover |
| Mudflats | Habitat type where migrating Dunlin and Western Sandpipers are found |

- Some students will accumulate a large pile of cards. Others will quickly go through their own cards. Either way, you may have to facilitate reluctant students to get up, move around the room, and communicate with each other to find matches.
- You may choose to accept some matches that work even if they are not “the best.”
- To make the game more difficult, alter the definitions so they reflect the habits of specific shorebirds of your area. See the example alternatives below.

Additional Activities

Match More Habitats

Hand out four index cards to each student (more for smaller classes), and instruct the students to choose two of their own shorebird habitat terms and compose definitions for them. Gather all of the cards, shuffle, and play the game with the student-made cards.

Habitat Card Rummy

Create a batch of cards with the habitat terms on them. Write down the list of corresponding definitions on a sheet of paper for yourself. Deal out the cards, at least three each, to the students (duplicates are okay). Read the first definition out loud to the class. Ask the students who think they have the matching term card to raise their hands. If they have the correct match they turn in their cards to the teacher. The first student to give up all of his or her cards is the winner.

Habitat Card Bingo

Create a batch of bingo cards with habitat terms in place of numbers. Remember to vary the order of the terms. Print the title “Habitat Bingo” across the top of each card and a small shorebird illustration in the center as the free space. Pass out one card and bingo markers (pinto beans, marshmallows, etc.) to each student. Read the definition of the term. Students who can match the definition with the correct term on their cards cover the spaces with a marker. The first student who completes a row horizontally, vertically, or diagonally wins.

Say It with a Picture

Have each student draw a picture that represents one of the matches. Hang up or presented the pictures to the class. Ask students to try to guess what each picture represents. If you prefer, create a larger wetland mural as a class. Start by brainstorming a list of wetland habitat elements so students have specific ideas about what to draw. Unroll a long sheet of paper on the floor and provide colored pencils, crayons, markers, or paints.



Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|--------------------|---|
| Habitat | A place where organisms are adapted to live and find food and shelter |
| Term Card | Definition Card |
| Wetlands | Land that is covered or saturated (soaked) with water at least part of the time |
| Term Card | Definition Card |
| Marsh | Open, wet, grassy areas that can be inland or coastal |
| Term Card | Definition Card |
| Ocean Beach | Sandy habitat affected by the tides; home of oystercatchers and migrating Sanderlings |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|--|---|
| <p style="text-align: center;">Mudflat</p> | <p>Mud habitat that is exposed at low tide and is home to many invertebrate animals</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Freshwater Marsh</p> | <p>Inland habitat where the roots of grasses, sedges, and rushes are always under water</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Saltwater Marsh</p> | <p>Coastal or inland habitat made of ocean water and plants adapted to salt water</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Tundra</p> | <p>Northern Arctic wetland habitat with permafrost and no trees</p> |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|---|--|
| <p style="text-align: center;">Intertidal Zone</p> | <p>Nutrient-rich, rocky beach habitat between the high and low tide mark</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Estuaries</p> | <p>Nutrient-rich places where freshwater and saltwater meet</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Roost</p> | <p>Flock of resting shorebirds or the place where they rest together on migration or in winter</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Tide</p> | <p>Daily movement of ocean water as it is affected by the moon's gravity</p> |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|-------------------------|---|
| Prairie Potholes | Shallow, temporary wetlands found within grasslands |
| Term Card | Definition Card |
| Permafrost | Permanently frozen subsoil of the tundra |
| Term Card | Definition Card |
| Playa Lakes | Shallow temporary wetlands in grasslands that are lined with a water-tight layer of bedrock |
| Term Card | Definition Card |
| Migration | The regular movement of shorebirds every spring and fall |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|--|--|
| <p style="text-align: center;">Stopover Sites</p> | <p>Important habitats where shorebirds stop every year on migration</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Nonbreeding Season</p> | <p>The portion of the year when shorebirds are not breeding</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Breeding Season</p> | <p>The portion of the year when shorebirds are nesting</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Shelter</p> | <p>A place in the habitat where an animal can escape from wind, weather, and predators</p> |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|---|---|
| <p style="text-align: center;">Food</p> | <p>tiny clams and worms in the winter, and insects in the summer eaten by shorebirds</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Invertebrates</p> | <p>Small animals without a spine or backbone that shorebirds eat</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Crustaceans</p> | <p>Group of animals that includes small shrimp and crabs which shorebirds, especially phalaropes, feed on</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Grasslands</p> | <p>Upland dry habitat that some shorebirds are adapted to use instead of wetlands</p> |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|--|---|
| <p>Mudflats, Estuaries, and Sandy Beaches</p> | <p>Places where organisms adapted to changes in wetness and salinity live</p> |
| Term Card | Definition Card |
| <p>Black Oystercatchers</p> | <p>A group of shorebirds specially adapted to nest and feed in rocky coastal habitat</p> |
| Term Card | Definition Card |
| <p>Stream and River Corridors</p> | <p>Low areas along the banks of rivers and streams that flood in the spring as snow and ice melt in the mountains</p> |
| Term Card | Definition Card |
| <p>Grasslands</p> | <p>Prairie habitats found in the Central United States and Canada that are breeding grounds for six species of shorebirds</p> |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|--------------------------|--|
| Halophytes | Plants adapted to high levels of salt |
| Term Card | Definition Card |
| Runoff | Water that carries nutrients from land into freshwater wetlands and streams |
| Term Card | Definition Card |
| Upland Sandpipers | Shorebirds that live in tallgrass prairies |
| Term Card | Definition Card |
| Riparian Habitat | Vital habitat for many migrating birds, such as Spotted and Solitary Sandpipers, found along the banks of rivers and streams |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|--|--|
| <p style="text-align: center;">Tundra</p> | <p>A habitat made up of mounds of grasses and sedges with low areas in between that are filled with water</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Ecosystems</p> | <p>A collection of habitats that include all the living and nonliving parts interacting and linked by nutrient and energy flow</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Common Snipe</p> | <p>A shorebird adapted to live in freshwater marshes</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Shorebird Habitats</p> | <p>Streams and river corridors, freshwater and saltwater marshes, grasslands, tundra, mudflats and sandy beaches, rocky intertidal areas, playa lakes and prairie potholes</p> |

Match the Habitat Terms and Definitions Cards

(Make one photocopy.)

| Term Card | Definition Card |
|---|---|
| <p style="text-align: center;">Spotted Sandpiper</p> | <p>A shorebird that uses riparian habitat</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Sanderlings</p> | <p>Small shorebirds adapted to running along the shoreline and probing for food</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Greater Yellowlegs</p> | <p>A group of shorebirds adapted to live in freshwater marsh habitat</p> |
| Term Card | Definition Card |
| <p style="text-align: center;">Black-necked Stilts</p> | <p>A group of shorebirds adapted to live in saltwater marsh habitat</p> |

Match the Habitat Terms and Definitions Cards

(Make as many copies as necessary
for your own terms and matching
definitions.)

| Term Card | Definition Card |
|-----------|-----------------|
| | |
| Term Card | Definition Card |
| | |
| Term Card | Definition Card |
| | |
| Term Card | Definition Card |
| | |

Match the Habitat Clues Chart

Term Card

Definition Card

Source Clue

| Habitat | Definition Card | Source Clue |
|--------------------|--|-------------|
| Habitat | A place where organisms are adapted to live and find food and shelter | |
| Wetlands | land that is covered or saturated (soaked) with water at least part of the time | |
| Marsh | Open, wet, grassy areas that can be inland or coastal | |
| Ocean beach | Sandy habitat affected by the tides; home of Oystercatchers and migrating Sanderlings | |
| Mudflat | mud habitat that is exposed at low tide and is a home to many invertebrate animals | |
| Freshwater Marsh | Inland habitat where the roots of grasses, sedges, and rushes are always under water | |
| Saltwater Marsh | Coastal or inland habitat made of ocean water and plants adapted to salt water | |
| Tundra | Northern Arctic wetland habitat with permafrost and no trees | |
| Intertidal Zone | Nutrient-rich, rocky beach habitat between the high and low tide mark | |
| Estuaries | Nutrient rich places where freshwater and saltwater meet | |
| Roost | Flock of resting shorebirds, or the place where they rest together on migration or in winter | |
| Tide | Daily movement of ocean water as it is affected by the moon's gravity | |
| Prairie Potholes | Shallow, temporary wetlands found within grasslands | |
| Permafrost | Permanently frozen subsoil of the tundra | |
| Playa Lakes | Temporary wetlands in grassland or desert areas that are lined with a water-tight layer of bedrock | |
| Migration | Regular movement of shorebirds every spring and fall | |
| Nonbreeding season | The portion of the year when shorebirds are not nesting | |
| Stopover sites | Important habitats where shorebirds stop every year on migration | |

Match the Habitat Clues Chart

| <i>Term Card</i> | <i>Definition Card</i> | <i>Source Clue</i> |
|--|---|--------------------|
| Breeding Season | The portion of the year when shorebirds are nesting. | |
| Shelter | a place in the habitat where an animal can escape from wind, weather, and predators | |
| Food | tiny clams and worms in the winter and insects in the summer eaten by shorebirds | |
| Invertebrates | Small animals without a spine or backbone that shorebirds eat | |
| Crustacean | The group of animals that includes small shrimp and crabs which shorebirds, especially phalaropes, feed on | |
| Grasslands | Upland dry habitat that some shorebirds are adapted to use instead of wetlands | |
| Mudflats, Estuaries, and Sandy Beaches | Places where organisms adapted to changes in wetness and salinity live | |
| Black Oystercatcher | A group of shorebirds specially adapted to nest and feed in rocky coastal habitat | |
| Stream and River Corridors | Low areas along the banks of rivers and streams that flood in the spring as snow and ice melt in the mountains | |
| Grasslands | Prairie habitats found in the Central United States and Canada that are breeding grounds for six species of shorebirds | |
| Halophytes | Plants adapted to high levels of salt | |
| Runoff | Water that carries nutrients from land into freshwater wetlands and streams | |
| Upland Sandpipers | A group of shorebirds that live in tallgrass prairie | |
| Riparian Habitat | Vital habitat for many migrating birds, such as spotted and solitary sandpipers, found along the banks of rivers and streams | |
| Common Snipe | A shorebird adapted to live in freshwater marshes | |
| Shorebird Habitats | Stream/river corridors, freshwater/saltwater marshes, grasslands, tundra, mudflats/sandy beaches, rocky-intertidal areas, playa lakes, or prairie pothole | |

