

Flipped Friends

OBJECTIVE

The student will be able to name and describe seven sea lion adaptations.

BACKGROUND

Adaptations are body parts of an animal that make it more suited to live in its environment. Adaptations include the ways an animal moves, eats, hears, or smells, increasing its chances for survival.

MATERIALS

per student dress-up:

- swim fins
- toy plastic teeth
- costume parts made from page 22 (You can substitute a down vest, coat, hat, and two oven mittens for these body parts.)



ACTION

1. Prepare for the dress-up by gathering or making the necessary parts. See page 22 for more details.)
2. Begin the dress-up by choosing and introducing a student volunteer. Throughout the activity, ask the class to compare and contrast human behaviors and adaptations with those of a sea lion.

HIND FLIPPERS. Point to the student's feet. Talk about behaviors humans do that require feet (playing soccer, dancing, riding a bike, running, etc.). Ask the class if sea lions do these behaviors. Have students name sea lion behaviors. What adaptations do sea lions need? Sea lions use hind limbs for steering through the water as they swim and for walking on land. Sea lions have hind flippers instead of feet. (*Put swim fins on student's feet.*)

FRONT FLIPPERS. Point out the student's arms and hands. (*Put front flippers on.*) Role-play how sea lions move their front (pectoral) flippers in an up-and-down motion to swim. Point out that California sea lions do not have fur on their front flippers.

BLUBBER. Explain that warm-blooded mammals, like humans, lose body heat quickly in cold water. What adaptation do sea lions have that helps them stay warm? Sea lions are insulated with a thick layer of blubber. (*Put on blubber layer.*) Blubber also helps to streamline a sea lion's body, and can be used as a reserve energy source when food is scarce.

FUR. Ask the class to name what sea lions have covering their bodies that hides their blubber. Tell the class that a sea lion's fur is very sleek and smooth. (*Put on the coat for fur. Also put fur hat on the student's head.*)

EARS. Show the class that sea lions have ear flaps that stick out from the sides of their heads—seals don't. This is one way we can tell the difference between seals and sea lions.

WHISKERS. Is it light or dark in the ocean? What do sea lions use to explore their surroundings and find food in the dark and murky water? They have sensitive whiskers, similar to a cat's whiskers. (*Put on whiskers.*)

TEETH. What do people use to eat food? Are our teeth flat or pointed? Do we chew our food or swallow it whole? What do sea lions use to catch food? A sea lion uses its pointed teeth to catch its food, then swallows it whole. (*Put toy plastic teeth in student's mouth.*)



Turn a student into a sea lion using different items for body parts and explain sea lion adaptations.

3. Now you have created a sea lion! Review sea lion adaptations as you take body parts off.

- Pointed teeth to capture prey.
- Whiskers to explore surroundings and detect prey.
- Fur as a body covering.
- Blubber for insulation, streamlining, and a reserve energy source.
- Pectoral flippers for swimming and walking on land.
- Hind flippers for steering in the water and walking on land.

DEEPER DEPTHS

Discuss how humans adapt themselves to live, work, or play in various environments. For example, bring in a wetsuit and scuba or snorkeling gear to discuss how we can adapt ourselves for a sea lion's environment. Or bring in snow suits, mittens, hats, and boots, and discuss how humans adapt themselves to survive in a cold environment like that of a polar bear, walrus, or penguin.

Have students research what astronauts must wear in order to survive outside the earth's atmosphere (bringing our environment with us).

Directions For Making Your Flipped Friends

OBJECTIVE

Students, with parental help, will be able to create a sea lion costume.



MATERIALS

fabric:

- white quilted fabric: 1- 2/3 yd. (45 inch wide) or 1 yd. (60 inch wide)
- brown plush fur: 2 yd. (45 inch wide) or 1-1/2 yd. (60 inch wide)
- brown vinyl: 3/4 yd. (45 inch wide)

notions:

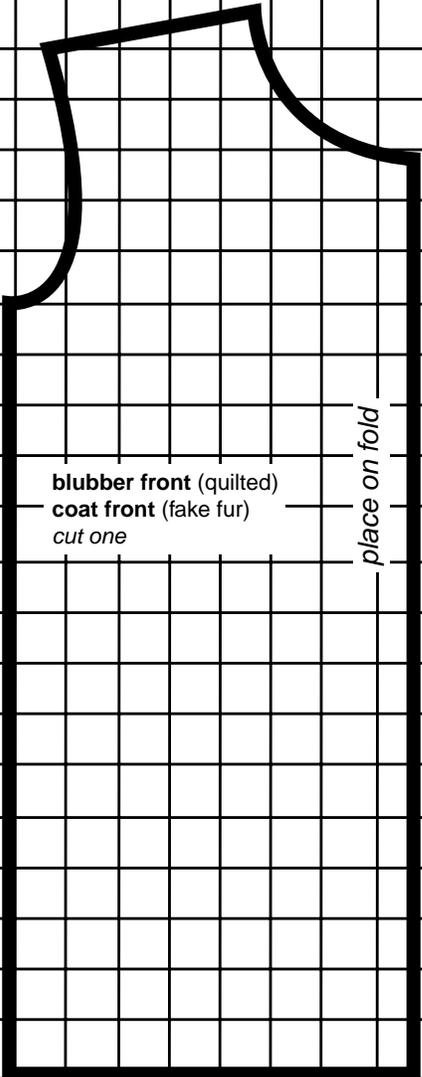
- brown thread
- 3/4 yd. of 1-inch black hook and loop tape
- 1 yd. ribbon
- six 6-inch white or black pipe cleaners
- 12 inches of 1-inch wide elastic
- pins
- scissors
- seam marking materials

pattern:

- enlarge pattern on page 23 onto pattern drafting paper

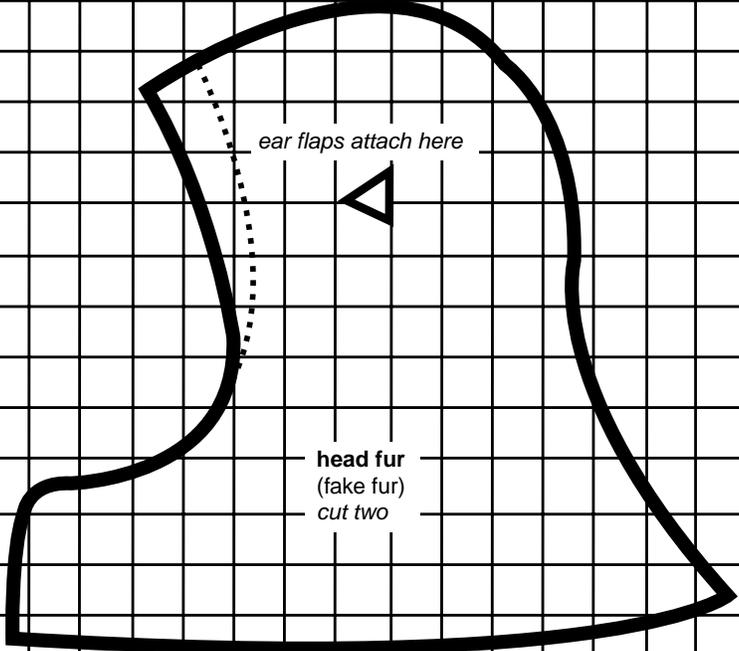
ACTION

1. Enlarge the pattern on page 23 onto drafting paper and cut the pieces. Cut the blubber from the quilted fabric, the coat and head fur from the plush, and the pectoral flippers from the vinyl material. Cut four 2-inch triangles for ear flaps from the vinyl scraps. Mark all seams at 5/8 inch.
2. **BLUBBER.** Sew shoulder seams first. Fold the neck and armholes under and stitch. Sew the side seams. Turn under the back edges and the bottom and stitch. Sew pieces of ribbon on the back for ties.
3. **COAT.** Repeat steps for sewing blubber. Use a hook or pin to pull fur fibers from seams to hide lines.
4. **HEAD FUR.** Sew the back seam. Turn the top edge under and stitch. Sew two vinyl triangles together (right sides out). Sew to outside of head piece as shown on pattern.
5. **FLIPPERS.** Sew seams and trim and clip edges. Turn flippers right side out. Join the two flippers with elastic at the top front edges. (The elastic stretches across the student's chest.) Sew ribbon on the top back edges for ties OR join the two flippers with elastic at the top front edges and with another elastic strip at the top back edges. The flippers will then slip over the student's head.
6. **WHISKERS.** Cut a 12-inch hook and loop tape. Pull the two sides apart and sew opposite ends together so one side faces up and the other faces down (the sides will reattach behind the student's head). Sew the middle of the pipe cleaners to the middle seam of the hook and loop tape.



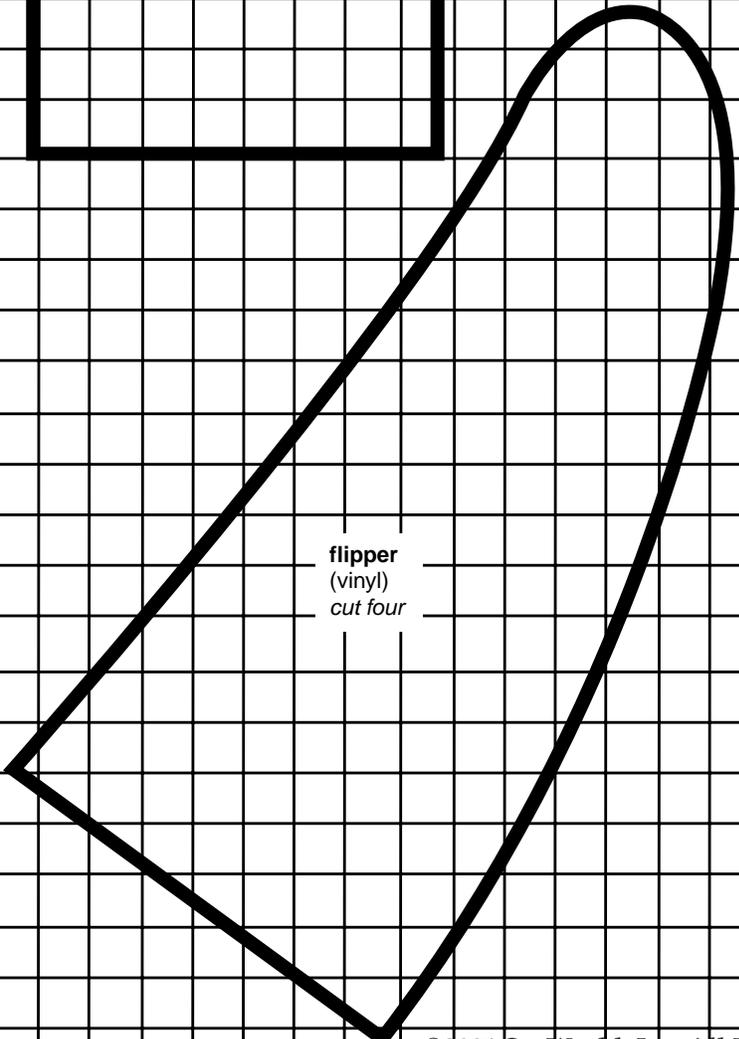
blubber front (quilted)
coat front (fake fur)
cut one

place on fold

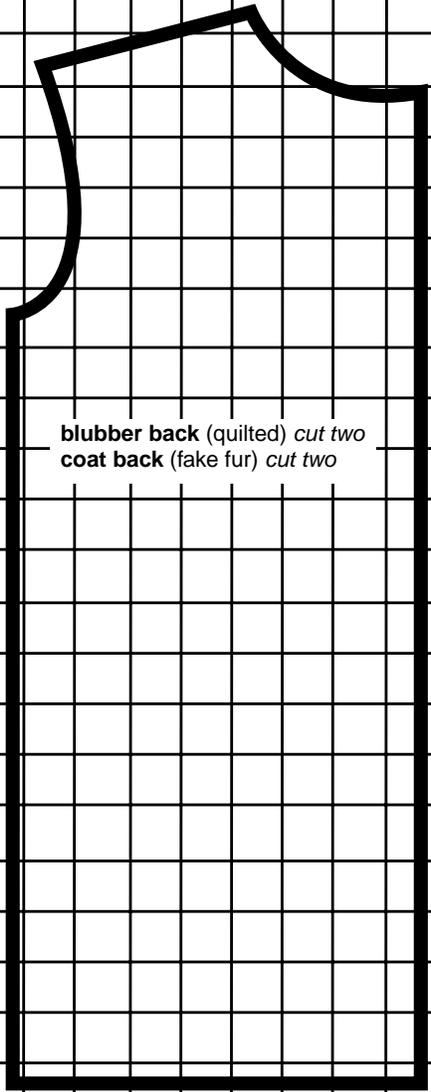


ear flaps attach here

head fur
(fake fur)
cut two



flipper
(vinyl)
cut four



blubber back (quilted) *cut two*
coat back (fake fur) *cut two*

1 square = 1.5 inches