

## Just Squidding Around

### OBJECTIVE

Given directions and a squid, the student will be able to identify the squid's external anatomy and internal body parts.

### MATERIALS

*per student pair:*

- fresh or frozen and thawed whole squid (not bait squid)
- scissors
- tweezers
- paper towels
- photocopy of *Just Squidding Around* funsheet on page 15

### BACKGROUND

Squids are an important food item for many pinnipeds. To avoid being eaten, squids have many adaptations. Squids can change color by expanding or contracting pigmented skin cells. They can confuse predators by shooting a jet of ink that forms a dark cloud in the water. To capture prey, a squid uses its two long front tentacles and eight arms. Its jawlike beak bites prey.

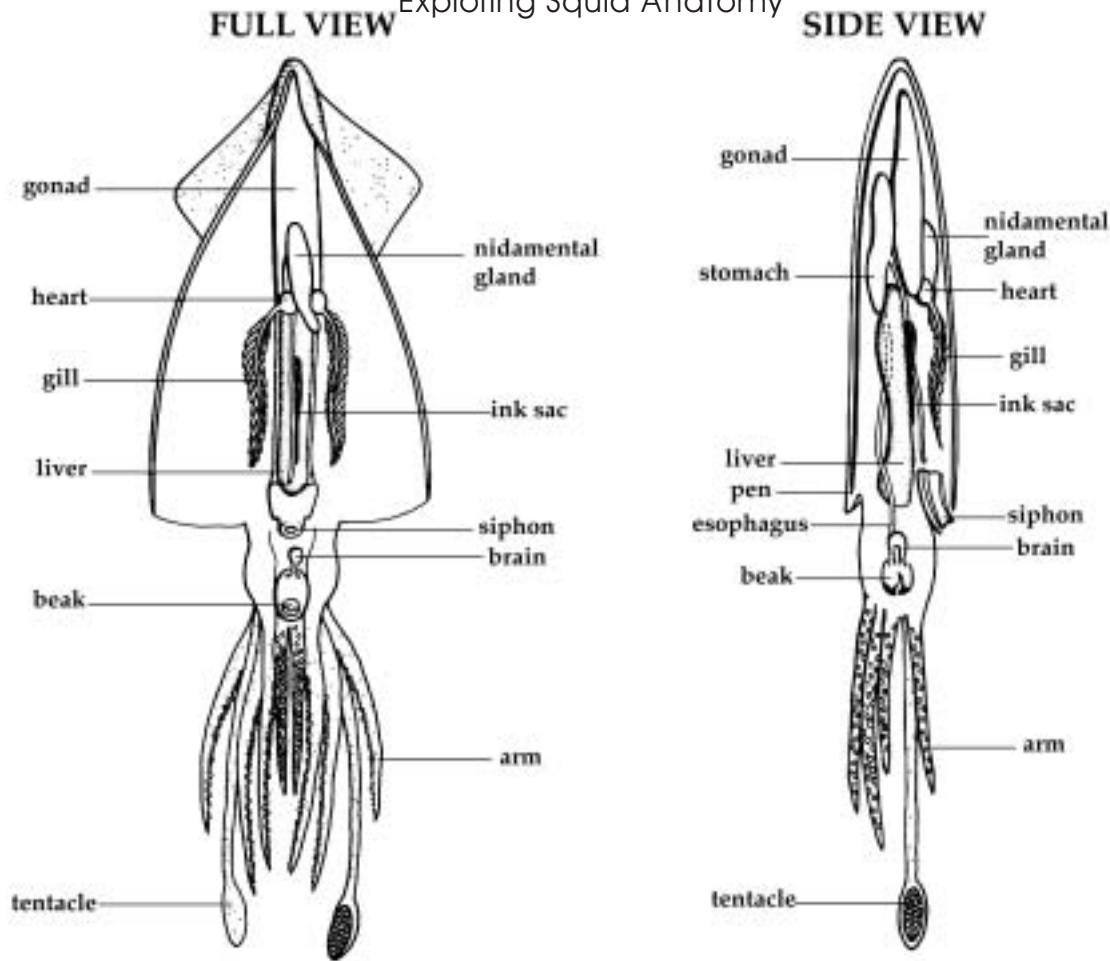


### ACTION

1. Rinse and dry squids. Distribute materials and squids.
2. Begin with external anatomy by having students extend and straighten the arms, tentacles, and body. Use the *Just Squidding Around* funsheet to identify these parts and the mantle, pen, siphon, fins, and chromatophores.
3. Have students prepare the squid for cutting by positioning the squid siphon-side up with the fins placed against the table.
4. For best results, students should lift, then cut the mantle from the base near the head to the tip between the fins. Place mantle flaps to the side.
5. Use the funsheet illustration to identify internal body parts: gills, heart, ink sac, stomach, liver, and gonads.
6. After identifying the internal body parts, students can remove the pen by firmly grasping it at the tip (near the squid's head) with the tweezers and pulling it straight out. Also, they can gently remove the two beak halves for a closer look.

# Just Squidding Around

Exploring Squid Anatomy



**Make a check next to the name as you identify different parts of the squid.**

- |  |  |
|--|--|
| <input type="checkbox"/> arms — seize prey.  | <input type="checkbox"/> hearts — circulate blood.   |
| <input type="checkbox"/> beak — cuts prey into bite-sized pieces.  | <input type="checkbox"/> ink sac — holds thick, black ink that the squid releases to confuse predators.                            |
| <input type="checkbox"/> brain — controls movement. A squid's brain is highly developed for an invertebrate. The brain appears as a small white ball just behind the beak. | <input type="checkbox"/> liver — secretes digestive enzymes. The liver is salmon colored and is often found under the ink sac.     |
| <input type="checkbox"/> chromatophores — pigment-bearing cells that expand or contract to change the skin color (dark spots on mantle).                                   | <input type="checkbox"/> mantle — body, holds internal organs.   |
| <input type="checkbox"/> esophagus — carries food from the mouth to the stomach.   | <input type="checkbox"/> nidamental gland — females only; secretes a gelatinous mass that surrounds the eggs in the mantle cavity. |
| <input type="checkbox"/> eyes — form an image, detect changes in light.  | <input type="checkbox"/> pen — remnant of shell.   |
| <input type="checkbox"/> fins — stabilize squid while swimming.  | <input type="checkbox"/> siphon — squirts water to propel squid.   |
| <input type="checkbox"/> gills — absorb oxygen from the water.   | <input type="checkbox"/> stomach — digests food.   |
| <input type="checkbox"/> gonad — the male gonad (testis) is a white filamentous mass that produces sperm. The female gonad (ovary) is an opaque mass that produces eggs.   | <input type="checkbox"/> tentacles — seize prey.   |