

# Introduction to Animals

## Section 3 Sponges and Cnidarians

**Main Idea** \_\_\_\_\_ **Details** \_\_\_\_\_

**Skim** Section 3 of the chapter. Write two questions that come to mind from reading the headings and the illustration captions.

1. **Accept all reasonable responses.** \_\_\_\_\_
2. \_\_\_\_\_

**Review Vocabulary**

Use your book or dictionary to define diploid.

diploid

**cell with two of each kind of chromosome** \_\_\_\_\_

**New Vocabulary**

Use your book or dictionary to define each term.

filter feeder

**organism that gets its food by filtering small particles from water** \_\_\_\_\_

sessile

**organism that attaches to one place and stays there** \_\_\_\_\_

cnidocyte

**stinging cell** \_\_\_\_\_

nematocyst

**capsule holding a coiled, threadlike tube containing poison and barbs** \_\_\_\_\_

gastrovascular cavity

**in cnidarians, large cavity where digestion takes place** \_\_\_\_\_

nerve net

**nervous system of cnidarians that conducts impulses to and from all parts of the body** \_\_\_\_\_

polyp

**cnidarian body form in which the body is tube-shaped with a mouth surrounded by tentacles** \_\_\_\_\_

medusa

**cnidarian body form in which the body is umbrella-shaped with tentacles that hang down** \_\_\_\_\_

**Academic Vocabulary**

Define survive to show its scientific meaning.

survive

**to remain alive** \_\_\_\_\_

**Section 3 Sponges and Cnidarians** (continued)

**Main Idea** \_\_\_\_\_

**Details** \_\_\_\_\_

**Sponges**

I found this information on page \_\_\_\_\_.

SE, pp. 705–709  
RE, pp. 290–292

**Model** a sponge. Use the figure in your book to help you. Label the six parts that are listed in the table below on your diagram. Then describe the function of each part in the table below.

Diagrams should resemble the illustration on SE p. 706. Accept all reasonable responses.

Sponges	
Body Part	Function of Body Part
Osculum	water and wastes are expelled through this mouthlike opening at the top of the sponge
Epithelial-like cells	thin, flat cells that contract (and close pores) in response to touch or an irritating chemical
Collar cells	cells that line the interior of the sponge; their flagella whip back and forth to draw in water
Pores	cells that surround pores and allow water (with food and oxygen) into the sponge's body
Archaeocytes	carry nutrients to other cells, aid in reproduction, and produce spicule chemicals
Spicules	small, needlelike structures between cell layers that form the support structure

**Section 3 Sponges and Cnidarians (continued)**

**Main Idea** \_\_\_\_\_ **Details** \_\_\_\_\_

**Cnidarians**

*I found this information on page \_\_\_\_\_.*

**SE, pp. 710–715**  
**RE, pp. 292–294**

**Compare** a polyp with a medusa by filling in the table.

	<b>Polyp</b>	<b>Medusa</b>
Body shape	tubelike	umbrella (bell)
Position of mouth	top side (dorsal)	underside (ventral)
Position of tentacles	top side (dorsal)	underside (ventral)

**Model** the complete life cycle of a jellyfish.

Diagrams should resemble SE p. 712. Accept all reasonable responses.

**SUMMARIZE**

Compare cnidarians and sponges.

Accept all reasonable responses. Both groups have one body opening and two cell layers, although cnidarian cell layers are organized into tissues. Cnidarians have radial symmetry, but sponges are asymmetrical. Most cnidarians have polyp and medusa stages in their life cycle. Most sponges have the same form throughout their life cycle.