# Chapter 12: Invertebrates

## 12A (from text)

1. zoology 2. False 3. It doesn’t have a backbone 4. True

## 12B

2. How and what do sponges eat? They are filter feeders that catch food particles and algae with their collar cells as water flows through their central cavity

3. How does water move through a sponge’s central cavity? The collar cells have flagella that whip a current through the sponge

7. Where do jellyfish digest their prey? Inside their gastrovascular cavity

10. List three cnidarians other than jellyfish. Hydra, portugueseman of war, corals, sea anemones

## 12C

5. How does a planarian eat? It extends its pharynx through its mouth in the middle of its body

6. Planarians reproduce asexually by regeneration

10. List three types of parasitic worms. Tapeworms, liver flukes, hookworms, pinworms, Trichina worms

## 12D

1. Earthworms are classified in the phylum Annelida
2. Name three segmented worms besides earthworms. Leeches, bristleworms, fireworms, sandworms, tubeworms, scale worms

6. Why is the earthworm called the “intestines of the soil?” because they digest plant and animal materials as they consume soil, and leave it rich in minerals

9. How does an earthworm breathe? Through its skin

What is the difference between closed and open circulatory system? An open circulatory system has no vessels to pick up the blood and return it to the heart

## 12E

Name four kinds of mollusks. Snails, clams, slugs, octopuses, squids, oysters

Do all mollusks have shells? No the octopus and squid have no shells

Name three kinds of echinoderms. Sea cucumbers, starfish, brittle stars, sand dollars, sea urchins

What are several attributes of echinoderms? Radial symmetry, spiny skin; sometimes suction or tube feet, spines

## 12F (from text)

1. d 2. Head, thorax, abdomen 3 True 7. Egg, larva, pupa, adult 10. Crabs, crayfish, lobsters, shrimp, centipedes, scorpions, spiders…

## 12: Vocabulary

Radial symmetry v. bilateral symmetry

Closed vs. open circulatory system

Complete vs. incomplete metamorphosis

Invertebrate vs Vertebrate

Filter feeder

Nymph

Molting

Exoskeleton

Nematocyst

Spiracles

Porifera

Cnidaria

Platyhelminthes

Nematoda

Annelida

Mollusca

Echinodermata

Arthropoda