Last Name: _____ First Name: _____ Date: _____ Class: BIO3 Section: _____

Assignment 11 - Biodiversity of Animals

1. Compare the similarities of animals by listing characteristics that all animals have in common.

Animal Characteristics
• All animals are multicellular.

2. Contrast the body structure of animals by illustrating and explaining the difference between radial symmetry and bilateral symmetry.

Body Structure	
Radial Symmetry	**Bilateral Symmetry**
Illustrate an organism with radial symmetry.	Illustrate an organism with bilateral symmetry.
Explain how animals with radial symmetry are different from those with bilateral symmetry._____ _____ _____ _____ _____	

3. Complete the tables below to analyze how animals are categorized into various groups, by comparing and contrasting their similarities and differences.

Kingdom Animalia	
Phylum Porifera	
Characteristics	**Illustration**
Lacks planes of body symmetry Does not have true tissues, organs, or organ systems Water-dwelling	Sponge

Kingdom Animalia	
Phylum Cnidaria	
Characteristics	**Illustration**
Radial symmetry Many species have nematocysts (stinging cells) Water-dwelling Single body cavity for digestion Many species have polyp stage and medusa stage Has a gastrovascular cavity	Sea anemone Coral Jellyfish Hydra

Last Name: _____ First Name: _____ Date: _____ Class: BIO3 Section: _____

Kingdom Animalia	
Phylum Platyhelminthes (Flatworms)	
Characteristics	**Illustration**
Bilateral symmetry Gastrovascular cavity Flat body structure Lacks respiratory and circulatory organs	Planarian Liver fluke Tapeworm Turbellarian (marine flatworm)

Last Name: _____ First Name: _____ Date: _____ Class: BIO3 Section: _____

Kingdom Animalia	
Phylum Annelida (Segmented Worms)	
List of Characteristics	**Illustration**
Bilateral symmetry Segmented Complete digestive system with separate mouth and anus Closed circulatory system	Earthworm Leech Polychaetes

Kingdom Animalia	
Phylum Nematoda (Roundworms)	
Characteristics	**Illustration**
Cylindrical body Not segmented Outer cuticle	Soil Nematode Ascaria lumbricoides

Last Name: _____ First Name: _____ Date: _____ Class: BIO3 Section: _____

Kindom Animalia		
Phylum Mollusca		
Characteristics	**Class**	**Illustration**
Bilateral symmetry Soft-bodied, many have shells for protection Body typically has: 1. Muscular foot 2. Visceral mass 3. Mantle Many species feed using a radula to scrape food from hard surfaces	Class Polyplacophora	Chiton
	Class Monoplacophora	*Neopilina*
	Class Gastropoda	Snail
	Clas Bivalvia	Clam
	Class Cephalopoda	Octopus
	Class Scaphopoda	Tusk shell

Last Name: _____ First Name: _____ Date: _____ Class: BIO3 Section: _____

Kingdom Animalia			
Phylum Arthropoda			
General Characteristics	**Subphylum**	**Specific Characteristics**	**Illustration**
Bilateral symmetry Segmented body Exoskeleton comprised of chitin Jointed appendages	Subphylum Chelicerata	Have mouth appendages called chelicerae	Arachnids (spiders) Horseshoe crab Scorpion
	Subphylum Myriapoda	Many body segment Body segments have one or two pairs of legs	Millipede Centipede
	Subphylum Crustacea	Aquatic, except woodlice Biramous appendates (split into two), with segments attached end-to-end	Lobster Crab

			Barnacle Shrimp
	Subphylum Hexapoda	All insects Body has head, thorax, and abdomen Six legs attached to the thorax Two antennae	Honey bee Mosquito

Last Name: _____ First Name: _____ Date: _____ Class: BIO3 Section: _____

Kingdom Animalia			
Phylum Echinodermata			
General Characteristics	**Subphylum**	**Specific Characteristics**	**Illustration**
Ocean-dwelling Endoskeleton comprised of calcium carbonate	Asterozoa	Star-shaped body Larvae have bilateral symmetry Adults have five-fold symmetry Tube feet	Sea star Brittle star
	Crinozoa	Mostly sessile, but may be free-swimming as adult Five-fold symmetry recognizable, but may have many more arms	Sea lily
	Echinozoa	Globe-shaped body Spiny appendages Five-fold symmetry Tube feet	Sea urchin Sea cucumber