

Oceanography

Investigating Invertebrates



Students will learn about invertebrates and what phyla they are in through an invertebrate classification game. Additionally, students are challenged with a scavenger hunt to explore the different species of invertebrates.

Materials

- Paper
- Tape
- Pens/pencil crayons
- Pennies

Safety Considerations

- Be careful when using scissors and putting together the game board - adult supervision is recommended

Keywords & Concepts

A **phylum** is a taxonomic category that ranks organisms. **Taxonomy** is a branch of science that classifies (or ranks) organisms (living things). The order goes: Domain, Kingdom, Phylum, Class, Order, Family, Genus, species

Invertebrate Phyla:

- **Porifera** (sponges): multicellularity, specialized cells but no tissues, asymmetry, incomplete digestive system
- **Cnidaria** (jellyfish, corals): radial symmetry, true tissues, incomplete digestive system
- **Platyhelminthes** (flatworms, tapeworms, flukes): cephalization, bilateral symmetry, mesoderm, complete digestive system
- **Nematoda** (roundworms): pseudocoelom (which is a fluid-filled body cavity lying inside the external body wall of the nematode that bathes the internal organs, including the alimentary system and the reproductive system), complete digestive system
- **Mollusca** (snails, clams, squids): true coelom (body cavity), organ systems, some with primitive brain
- **Annelida** (earthworms, leeches, marine worms): segmented body, primitive brain
- **Arthropoda** (insects, spiders, centipedes): segmented body, jointed appendages, exoskeleton, brain
- **Echinodermata** (seastars, sea urchins, sand dollars): complete digestive system, coelom, spiny internal skeleton

Investigating Invertebrates

Setup Steps:

- 1) Tape all photos of invertebrates in a large rectangle on a desk or large piece of poster paper. On the inside of the rectangle, have the phyla's as flappy paper tabs with the list of what invertebrates fall under each, as shown in the photo.



Phyla:

- Porifera
 - i) Tube sponge
- Cnidaria
 - i) Green hydra
 - ii) Sea pen
 - iii) Sea anemone
 - iv) Sea fan
- Platyhelminthes
 - i) Land planarian
 - ii) Fluke
- Annelida
 - i) Deep sea tube worms
 - ii) Earthworm
 - iii) Fan worm
 - iv) Peanut worm
- Nematoda
 - i) Parasitic horsehair worm
 - ii) Pinworms
- Mollusca
 - i) Tree snail
 - ii) Leopard slug
 - iii) Nudibranch
 - iv) Squid
 - v) Razor clam
 - vi) Octopus
 - vii) Nautilus
- Arthropoda
 - i) Daphnia Magna
 - ii) Copepod
 - iii) Millipede
 - iv) Spider
 - v) Moth
 - vi) Grasshoppers
 - vii) Tick
- Echinodermata
 - i) Star fish
 - ii) Sand dollar
 - iii) Sea cucumber
 - iv) Sea urchin



Investigating Invertebrates



Before playing, allow players to peek under all the flaps, to refresh their memory of what creatures are in each phylum.

- 1) Give each player a die (number cube). Also, each player needs two identical tokens of some kind. One token will stay on the picture track, and the other will be placed on top of a phylum flap to represent their guess.
- 2) Players place one of their tokens on Start.
- 3) All players roll their dice at the same time.
- 4) After players have all landed on their creatures, they think about what phylum that creature might be in. They make a guess and indicate this by placing their other token on top of the flap
- 5) Once all players have placed their guess tokens (on the flaps of the invertebrate phylums), then they are all allowed to lift that flap to see if they are correct.
- 6) If they are correct, they get a point. (Using pennies or small candies makes it easy to keep track of points.)
- 7) If they are not correct, then they just gained valuable information about what is under that flap! This information will probably come in handy during a future turn.
- 8) Once all the players have gotten back to the START/FINISH, they add up their pennies to see who won.

Investigating Invertebrates



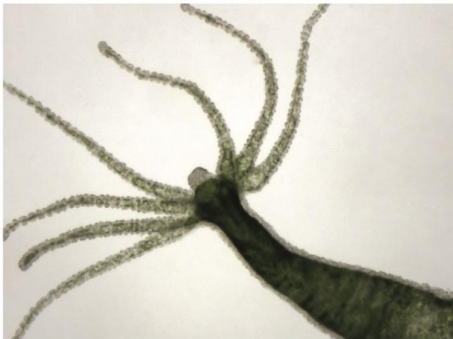
Daphnia magna



Tree snail



leopard slug



green hydra



sea pen



sea anemone



land planarian



deep sea tube worms



parasitic horsehair worm

Investigating Invertebrates



ribbon worms



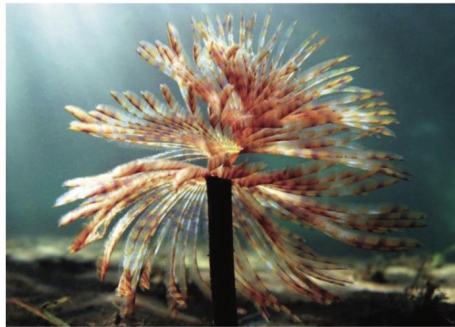
flake



earthworm



pinworms



fan worm



peanut worm

Investigating Invertebrates



copepod



millipede



spider



moth



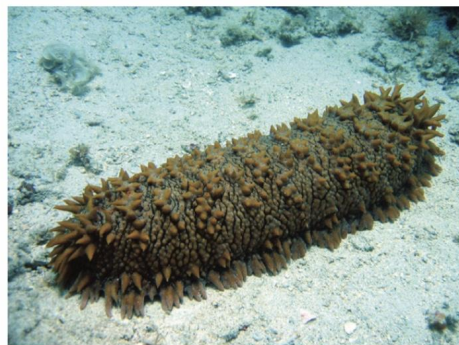
grasshopper



sea star



sand dollar



sea cucumber



sea urchin

Investigating Invertebrates



philodina



nudibranch



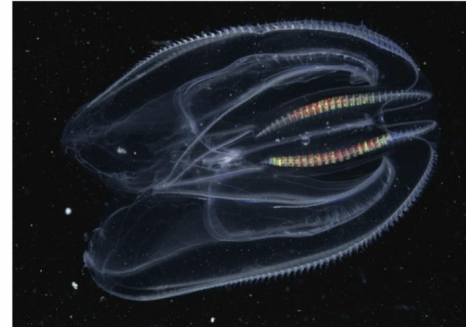
water bear



squid



tube sponge



comb jelly

Investigating Invertebrates



tick



arrow worm



roundworms in soil



tapeworm



sea fan



razor clam



octopus



nautilus

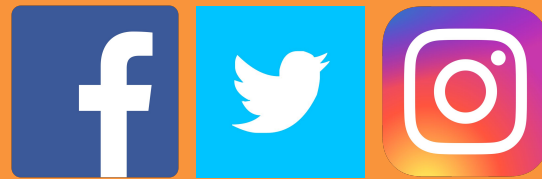


mealworms

#SVatHome

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project or results with us?

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Have a question?

Reach us at
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