

Phylum Mollusca Jigsaw

For your reference

Block 2-3

Classification

Gastropoda: - means "stomach foot" (move by muscular foot located on stomach side)
- snails, land slugs

Bivalvia: - 2 shells hinged together at back, held by 2 muscles
- clams, oysters, scallops

Aplousobranchia: no shell, worm-like appearance

Cephalopoda: - most active
- octopus, squids, cuttlefish
- means "head foot" (head is attached to foot, divided into tentacles / arms)

Body Plan

- Consist of four basic parts

- foot, mantle, shell and visceral mass

- Shell, found in almost all mollusk's body is made by glands that secrete

Calcium carbonate

Block 2-3

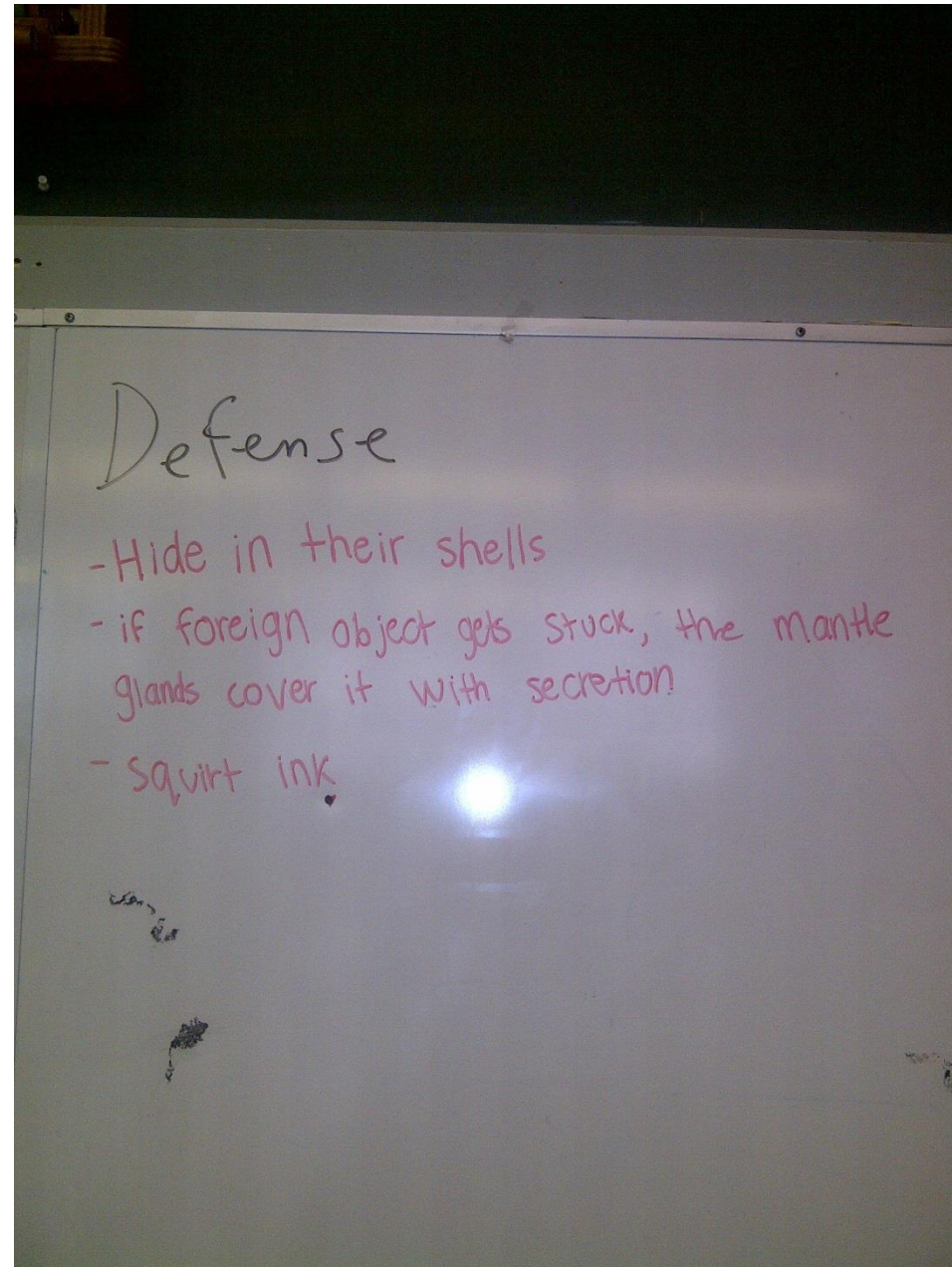
Respiration

- Breathe by gills called ctenidial
- Mollusks breathe by opening their shells

Excretion

- Undigested food becomes a solid and eliminated through the anus
- Cellular metabolism: produces nitrogen containing the waste in the form of ammonia.
- Excretory organ called nephridium, removes metabolic waste.

Block 2-3



Block 2-3

Ecological Importance

- Found in land, Sea, and fresh water
- Provides food for Organism
- Play vital roles in recycling forest nutrients and Plant/animal Waste

Block 2-3

Nervous

- small ganglia near mouth
- a few nerve cords
- have statocysts, simple organs for balance
- have ocelli, eye spots
- tentacled mollusks have the most highly developed brain

Block 2-3

Feeding

- Many feed through tongue shaped structure called a radula. Stiff rod of cartilage with flexibility with hundreds of teeth.
- Herbivores - use radula to scrap off algae
- Carnivores - tear up and swallow tissue
- Food enters mouth
- goes through digestive glands, then into intestines
- waste goes through Anus
- Some use gills to stir through food in water
- Class gastropods, mouth and anus are in same ends

Block 2-3

Defense

- Hide in their shells
- if foreign object gets stuck, the mantle glands cover it with secretion
- Squirt ink

Block 2-3

Movement

- Land mollusk use flat sole (foot) to move
ex: slug and snails
- Ocean mollusk move by jet propulsion
↳ ejects water from a cavity within their bodies
move forward.

Block 2-3

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Reproduction-

- Simplest mollusks rely on external fertilization
 - ↳ they remain of one sex all their lives

Block 1-3

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hair cells, eye spots
- Cephalopod mollusks have the most highly developed brain

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Actual Size
Drawing by Teacher

F.D. 4500mm 1800mm 450mm N/A

bcscience.com (JS39, WB39)

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Phylum Mollusca / Molluska

Classification - *Paulet, Jessica*
Jasmine D

Body Plan / Structure / appendages
Socorro, Gelo, Ann

Respiration
Carlalette, Julius, Oman

Circulation / Internal transport
Maniah, Jasmine, Hauken

Feeding / digestive system
Jennifer, Vanleen, Megan

- movement *Albera, Kenneth*

- reproduction / (sexual or asexual) internal or external fertilization
Rica, Ang

- nervous *Alvaro, Ellie*

- excretion *Guilem, Kristina*

- ecological importance *Alvaro, Ellie*

Block 1-1

Circulation

Oxygen and nutrients taken in by molluscs are carried through the body by blood
open circulatory system - blood is not being contained in blood vessels

- goes through body tissue into sinuses (open spaces)
- Slow moving circulatory system

Reproduction

- in most mollusks, the sexes are separate & fertilization is external
- mollusks release eggs/sperm into open water, in large numbers. Eggs/sperm find each other by chance & fertilize to create free swimming larvae.

Tentacle Mollusks / some snails: fertile inside woman's body

- ↳ hermaphrodites also do internal fertilization
- ↳ hermaphroditic snails go together in pairs to fertilize at the same time.
- ↳ some oysters switch from one sex to the other

Block 1-1

Digestion / Feeding

- Mouth, Esophagus, Stomach and Anus
- Most mollusks are Herbivores, Carnivores or Filter feeders, but some are detritus Feeders
- They scrape bits of food into their mouth by pulling the tooth covered skin of the radula back and forth over a supporting rod of cartilage.

Mobility / Appendages

- have a foot used for locomotion and anchorage
- they are constantly washed with waves
- only appendage is the foot

Block 1-1

Nervous system

The cephalic molluscs

have 2 pairs of main

nerve cords organized around
of paired ganglia, the visceral
cords serving the internal
organ. and the pedal one serving
the foot.

Block 1-1

Ecological Importance

- They are a food source for many species
- Important recyclers of plant and animal waste
 - ↳ keeps water clean & healthy
 - ↳ recycles nutrients
- Can provide us with an early warning of habitat deterioration as they are extremely sensitive change in environment.

Block 1-1

Classification & classes

- 1) Monoplacophora - Tryblidiida
- 2) Aplacophora
- 3) Caudofoveata
- 4) Polyplacophora
- 5) Pelecypoda
- 6) Gastropoda - Snails
- 7) Scaphopoda
- 8) Cephalopoda - Squid

Block 1-1

Respiration

- Gills serve as organs of respiration as well as filters of food.
- Aquatic mollusks such as snails, clams and Octopi breathe by using gills.
- Land snails and slugs breathe by using a specially adapted mantle cavity that is lined with many blood vessels.
- The surface is constantly kept moist so that oxygen can enter cell.