

Directions:

Glue the note worksheet on page 11 – FAF Right

Find the link for the Animals Ch 3 Textbook on mrstomm.com → Assignments

Science Textbooks
Animals - Ch 1:1
Animals - Ch 1:2
Animals - Ch 3

Complete **Parts A & B before class tomorrow!**

Done?

You may work ahead if you have time.

Help your bug team by identifying the bugs you “captured” last week.

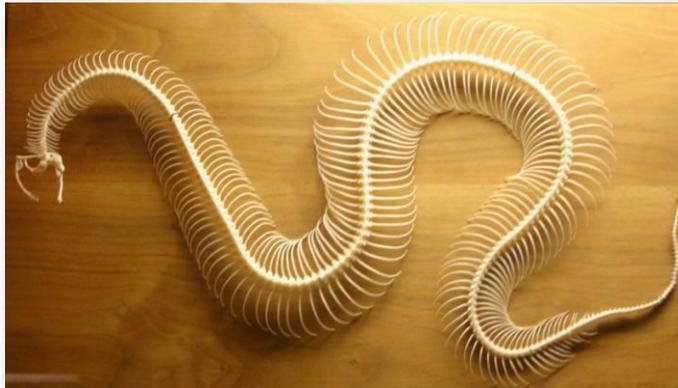
Part A: Section 3.1 Notes - Animal Classification

1. **VERTEBRATES** have a backbone made of bone or cartilage, while **INVERTEBRATES** have no backbone.

2. All vertebrate organisms are in the phylum **CHORDATA**. Invertebrates, which make up about **95%** (or more) of the animal kingdom, are divided into over **30** different phyla.

3. Use a V for vertebrate and an I for invertebrates to classify each organism.

Snail I	Human V	Whale V	Spider I	Catfish V
Frog V	Crab I	Earthworm I	Wolf V	Shark V
Eel V	Hydra I	June Bug I	Wasp I	Snake V



https://upload.wikimedia.org/wikipedia/commons/3/38/Snake_skeleton.jpg



Click the shark to learn more about its skeleton!

[It's time to dance ...](#)

Glue the worksheet on page 11 (FAF – sideways).



Click the movie reel to watch the **Marine Arthropods** video or go to mrstomm.com → Assignments for the link

Complete Part A as you watch the video.

Part A: Marine Arthropods

1. What were the first animals to come to the land? **Arthropods**
2. What are three advantages to having jointed legs?
 - Provide stability to help them move**
 - Act as shock absorbers**
 - Give them more flexibility**
3. What do arthropods use to sense their environments?
 - They use complex eyes, antennae, and other structures on their bodies as sense organs.**

Examples:

Lobsters using its claws to pick up things.

Crickets “hearing” with their legs

Butterflies “tasting” with their feet.

4. How did the arthropod exoskeleton help them dominate the ocean?

It provides support for the arthropod and acts as an armor to protect the inner organs

5. Why do crabs molt?

To grow a new, larger “shell”

Their exoskeleton does not grow with them, so they have to shed the old one to create a new, larger one.



6. About how long does it take the new arthropod shell to completely harden?

About 2 days (called “softshell crabs before this happens)

7. How did the arthropod succeed in the arms race?

**Size & Strength There are a lot of them (many species)
They are able to adapt to be good predators.**

8. Name one arthropod that has thrived near hydrothermal vents.

**Vent crab
(survives in a toxic environment)**



9. What aspect of horseshoe crabs' behavior gives clues to why arthropods first left the ocean?



They leave the ocean to lay their eggs on the beach (or land).

Click the movie reel to watch the
Terrestrial Arthropods video or go to
 mrstomm.com → Assignments for the link



Complete Part B as you watch the video.

**We will go over the answers for
 Part B on Monday.**

**ASSIGNMENT for Monday:
 Finish Part C on this worksheet
 Finish Parts C & D on Ch 3 Notes**

Part B: Terrestrial Arthropods

1. What was one of the first animals on land? **PILLBUGS**
2. What does the scorpion use to get oxygen? **BOOK LUNGS**
3. How does a millipede get oxygen to all of its body?
TRACHEA (TUBES) ALONG ITS BELLY
4. What is detritus? **DEAD AND DECAYING PLANT AND
 ANIMAL MATTER**
5. What do we call things that eat detritus? **DETRITIVORES**

What other consumers have you heard about?

**Carnivores Herbivores Omnivores
 Planktivores Insectivores**

6. What is one arthropod that lives in water part of its life?
DRAGONFLY or DAMSELFLY NYMPH (NOT A LARVA)
7. What is metamorphosis? **LIFE CYCLE OF AN INSECT
 (Stages from egg to adult)**
8. What fraction of all the world's animals are flying insects? **3/4**
9. How are insects important to us?
NATURE'S RECYCLERS (Break down dead organisms)
POLLINATORS (Pollinates plants = more food)
FOOD (Good source of protein in many cultures)

Part C: Answer these questions based on what you learned from the video.

1. **Explain the meaning of marine and terrestrial using examples from the video.**

Marine = Water/Ocean = Lobsters & Crabs

Terrestrial = Land = Millipedes, Pill Bugs, Insects

2. **How does an arthropod compare to a Swiss army knife? Give at least 2 reasons.**

- (1) **Many different tools**
- (2) **Able to change to different tools as needed**

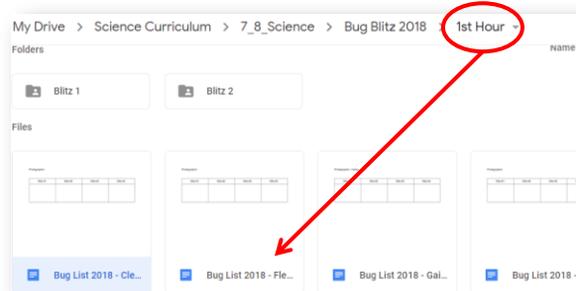


THINGS TO DO ...

1st - Complete Part C & D on your notes BEFORE class tomorrow. Use the Chapter 3 Textbook on mrstomm.com → Assignments

2nd – Identify bugs in your team's folder (either one – 1 or 2)

3rd – Photographers – Make a list of what you have identified using the document I created for you.



Done with everything? Get a start on Part E on your notes – it will be due Wednesday.

Part B: Section 3.13-3.14 - Arthropods

- How many different species of arthropods have been identified?
5 MILLION
- What does the term "arthropoda" mean? **JOINTED FEET**
- What are the 3 body segments of an arthropod?
HEAD, THORAX, & ABDOMEN
Head + Thorax = CEPHALATHORAX ← Add to notes
- What is molting? **THE SHEDDING OF AN EXOSKELETON IN ORDER TO GROW LARGER**
- What is hemolymph? **A BLOOD-LIKE FLUID IN ARTHROPODS**

Part C: Section 3.15 - Crustaceans

1. How many species of crustaceans are known to exist? **52,000**



2. To which class of crustaceans do barnacles belong?

MAXILLOPODA

3. To which class do crabs, lobsters, and shrimp belong?

MALACOSTRACA

4. What is one example of a crustacean that lives on land (terrestrial)?

**WOODLICE OR
WOOD LOUSE
(AKA PILL BUG)**



<http://luviow.wikispaces.com/file/view/potato-bugs.jpg/238105433/550x366/potato-bugs.jpg>

5. What do we call the thick back shield that forms a protective space?

CARAPACE

6. How is the gastric mill used?

**USED TO GRIND FOOD BEFORE IT GOES TO THE
DIGESTIVE GLANDS**

7. What makes up a crustacean's brain?

GANGLIA – A MASS OF NERVE CELLS

8. Why do crustaceans shed their exoskeleton?

**SINCE THE EXOSKELETON DOESN'T GROW WITH
THE CRUSTACEAN, THEY MUST SHED IT TO GROW
LARGER.**

9. What type of reproduction do crustaceans have?

SEXUAL REPRODUCTION WITH EGGS AND SPERM

Part D: Section 3.16– Centipedes & Millipedes

CHILO = 1000

1. Tell the class for each:

Centipedes = **CHILOPODA**

Millipedes = **DIPLOPODA**

DIPLO = DOUBLE



2. Complete each statement:

A. Centipedes are fast, predatory **CARNIVORES**, and venomous.
They have **1** pair of legs per body segment.

B. Millipedes feed on leaf **LITTER** and organic **MATERIAL**.
They have **2** pairs of legs per body segment & are not **POISONOUS**

NOTE Quiz Time

Go to **mrstomm.com** → **QUIA** and sign in.

Click the link for your **CLASS PERIOD** → **CLASS WEB PAGE**

Click the link for the **Arthropod Note Quiz B**.

My Quia activities and quizzes

QUIZ **Arthropod Ch 3 Note Quiz B**
<https://www.quia.com/quiz/6940877.html>

You may use **YOUR notebook** to help you with the quiz.

Only one tab open and no other resources.

Done?

- Finish Part E (#1-5) on your note worksheet (p. 11)

- Get a copy of the new Ch 3 Notes worksheet

- Glue on page 10 FAF Left

- Parts F & G will be due Thursday

- You may listen to music AFTER the quiz if you are working quietly.

Part E: Section 3.17– Arachnids

1. How many species of arachnids have been named? **100,000**
2. How many pairs of legs does an arachnid have? **4 Pairs (8 Total)**
3. List the functions/purposes for each type of arachnid appendage.
 Chelicerae - **Used for feeding and defense**
 Pedipalps - **Used for feeding, moving, and reproduction**
4. What is the arachnid body called? **Cephalothorax & abdomen**
5. What does it mean if a spider is nocturnal or diurnal? Explain.
Nocturnal spiders are active at night & usually brown in color, while diurnal species are active during the day and often colored with yellow, green, and black.

★6. Complete this section as you watch the video.



- 6.1. How do spiders differ from insects?
Spiders have 2 body segments and 4 pairs of legs.
- 6.2. What are some of the uses of their silk?
The webs are used to catch food, protects their eggs, and provides shelter.
- 6.3. How do spiders keep from becoming stuck in their own webs?
Special claws on their legs help them hook onto the silk and move around. They also make silk that is not silky.
- 6.4. What role do spiders play in their ecosystem?
Help control insect populations and they provide food for other creatures.

Take a look at the arthropods being passed around the room.

DO NOT open the jars.

Do you know which group they would belong in?

Arachnids
Insects
Crustaceans
Chilopoda
Diplopoda

Write scientific definitions for words we have studied.

- | | | |
|---|---|---|
| <input type="checkbox"/> Abdomen | <input type="checkbox"/> Gizzard | <input type="checkbox"/> Proboscis |
| <input type="checkbox"/> Adaptation | <input type="checkbox"/> Head | <input type="checkbox"/> Pupa |
| <input checked="" type="checkbox"/> Arachnids | <input type="checkbox"/> Hemolymph | <input type="checkbox"/> Siphoning |
| <input type="checkbox"/> Antennae | <input type="checkbox"/> Homing | <input type="checkbox"/> Spiracles |
| <input checked="" type="checkbox"/> Arthropod | <input type="checkbox"/> Incomplete | <input type="checkbox"/> Sponging |
| <input checked="" type="checkbox"/> Aquatic (Marine) | <input checked="" type="checkbox"/> Insects | <input checked="" type="checkbox"/> Taxonomy |
| <input checked="" type="checkbox"/> Binomial nomenclature | <input type="checkbox"/> Insecticides | <input checked="" type="checkbox"/> Terrestrial |
| <input type="checkbox"/> Biological control | <input checked="" type="checkbox"/> Invertebrates | <input type="checkbox"/> Thorax |
| <input type="checkbox"/> Cerci | <input checked="" type="checkbox"/> Kingdom | |
| <input checked="" type="checkbox"/> Chilopoda | <input type="checkbox"/> Larva | Other terms: |
| <input type="checkbox"/> Complete | <input checked="" type="checkbox"/> Linnaeus | <input checked="" type="checkbox"/> Domain |
| <input type="checkbox"/> Crop | <input checked="" type="checkbox"/> Molting | <input checked="" type="checkbox"/> Diurnal |
| <input checked="" type="checkbox"/> Crustaceans | <input type="checkbox"/> Nymph | <input checked="" type="checkbox"/> Nocturnal |
| <input type="checkbox"/> Defense Mechanisms | <input type="checkbox"/> Ocelli (Ocellus) | <input type="checkbox"/> _____ |
| <input checked="" type="checkbox"/> Diplopoda | <input type="checkbox"/> Ovipositor | <input type="checkbox"/> _____ |
| <input checked="" type="checkbox"/> Entomology | <input type="checkbox"/> Parasite | <input type="checkbox"/> _____ |
| <input checked="" type="checkbox"/> Exoskeleton | <input type="checkbox"/> Pheromones | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Ganglions (Ganglia) | <input checked="" type="checkbox"/> Phylum | <input type="checkbox"/> _____ |

GROUP 1

GROUP 2

Vocab Masters

What terms do we know?

Vocabulary	Definition

THINGS TO DO ...

1st – Finish Parts F and G on the new note worksheet BEFORE class tomorrow.

→ Use the Ch 3 textbook - mrstomm.com → Assignments

→ Fill in all the questions except the ones with stars!

2nd – Finish writing definitions for the vocab words in Set B.

→ The list is on mrstomm.com → Assignments

→ Use the Quizlet set IF you cannot find it in your notes.

Science Textbooks

Animals - Ch 1:1

Animals - Ch 1:2

Animals - Ch 3

Arthro Vocab List

Class Notes/Tutorials

Ch 3 Notes - Parts A & B (plus Shape of Life worksheet)

Review & Reinforce

Quizlet Arthropod Vocab



Arthropod Records by _____

Use online resources to find record-breaking ARTHROPODS (arachnids, crustaceans, chilopoda, diplopoda, & insects). Complete the chart to show the award you would give to the critter along with details.

<i>Name of Arthropod</i>	<i>Name of Award</i>	<i>Reason</i>
Goliath Spider	Biggest Arachnid	Can grow to over 12" in diameter

Turn in by next Tuesday!

What are some award ideas?

1. Largest Spiders (World & US)
2. Deadliest Spiders (World & US)
3. Largest Millipedes/Centipedes (World & US)
4. Weirdest/Coollest Crustacean
5. Largest Insects (World & US)
6. Deadliest Insects (World & US)
7. Fastest Arthropods (World & US)
8. Most Colorful Arthropods (World & US)

After the quiz,

- (1) Get a copy of the note worksheet from the front table and complete sections 3.18 - 3.19 for tomorrow.**
- (2) Finish the Arthropod Awards worksheet and turn it in! Don't forget to include a fact (reason) to support your award!**