

Diversity of Life: Animal Kingdom

Lessons 1-2 Invertebrates

7th Grade Science
Class Notes & Activities



Kingdoms of Life Answer Key

- 1 – Fix anything you missed as we discuss the answers.
- 2 – If you are not done, you need to listen and then complete the worksheet on your own.

Site #1: Study Jams: Kingdoms of Life

1) Click the "Play Video" link and complete the chart as you watch the video.

Kingdom	Characteristics (+1 for each blank)	Examples (+2 each)
Animals	Can BREATHE and MOVE around Can't make their own FOOD Have multiple CELLS	<i>Lizards, humans, butterflies</i>
Plants	Contain CHLOROPHYLL to make their own food Have multiple cells and CELLULOSE CAN'T move around	<i>Grass, trees, roses</i>
Fungi	No ROOTS , flowers, or leaves Eat DECAYING matter (No chlorophyll) CAN'T move around	<i>Mushrooms, mold, and mildew</i>
Protists	SINGLE celled organisms Many live together in COLONIES Move around like ANIMALS and most CAN make their own food	<i>Algae, amoebas, protozoans</i>
Bacteria	ONE -celled living things that exists all around you and INSIDE you Can exist in EXTREME conditions	<i>Helpful and harmful bacteria</i>

2) How did you do on the quiz? **?/7 (+1)**

Site #2: Brain Pop: Six Kingdoms






Click "Play" when the video has loaded and complete this section as you watch the video. Use the buttons to help you pause, rewind, or fast forward the video.

- 1) How many kingdoms does the video mention? **6** (+1)
- 2) Which two kingdoms were not included in the first video? **EUBACTERIA & ARCHAEBACTERIA** (+2)
- 3) Scientists use traits, such as appearance, **CELL** structure, **DNA**, and ancestry, to classify living things. (+2)
- 4) What are prokaryotic cells? **THEY HAVE NO NUCLEUS.** (+1)
- 5) Which of the two types of bacteria can live in extreme conditions?
ARCHAEBACTERIA (+1)

- 6) To what phylum does the dolphin belong? **CHORDATE (+1)**
- 7) To what class does the dolphin belong? **MAMMALS (+1)**
- 8) What other animals belong to the Cetacea order? **WHALES** and **PORPOISES**
(+2)
- 9) Try the quiz. How did you do? Circle one: 😊 😐 😞 (+1)

Site #3: Ology: What'sThis?

(+3 each row)

Picture	Your Answer	Correct ?	More Info
		Y N	
		Y N	
		Y N	
		Y N	
		Y N	

Ch 4 Notes

- 1 – Glue the Chapter 4 Notes on page 11 (FAF).
- 2 – Open your textbook on Pearson (or offline) and go to Diversity of Life → Chapter 4 (starts on page 138).
- 3 – You will need to do Lessons 1 & 2 for tomorrow.

NOTE: Click to the next slide to see how to find your textbook!

1. Read Lesson 1 (pages 138-141) to complete this section.

(A) All animals are **MULTICELLULAR** organisms that feed on other organisms. The main functions are to obtain **FOOD** and **OXYGEN**, keep internal conditions stable, **MOVE** in some way (called ★ **LOCOMOTION**), and **REPRODUCE**.

What do we call an organism's ability to keep internal conditions stable?

Add to notes
HOMEOSTASIS

What do we call the rate at which an animal uses up the energy it takes in?

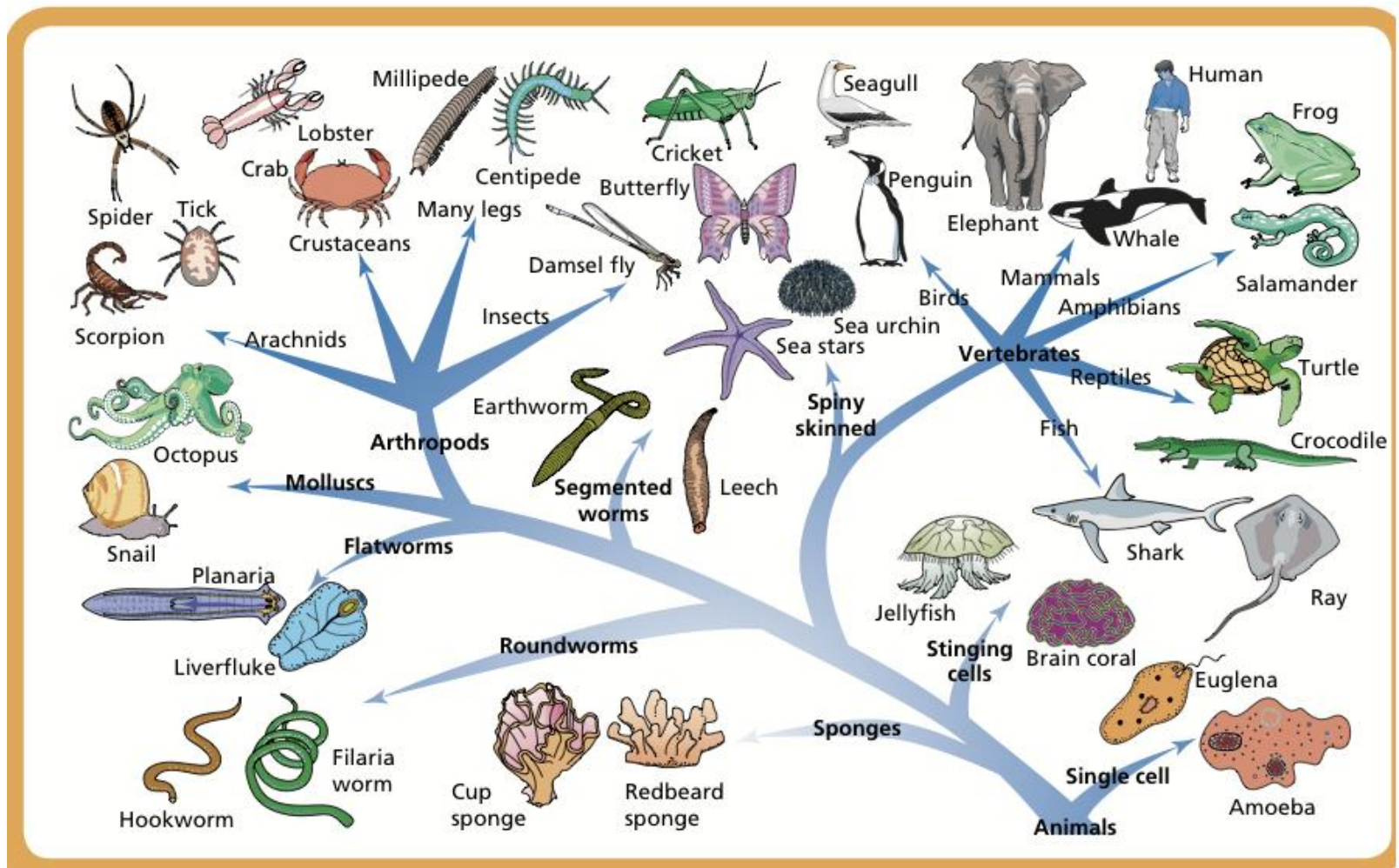
METABOLISM

(B) **ADAPTATIONS** are structures and behaviors that allow animals to perform their functions.

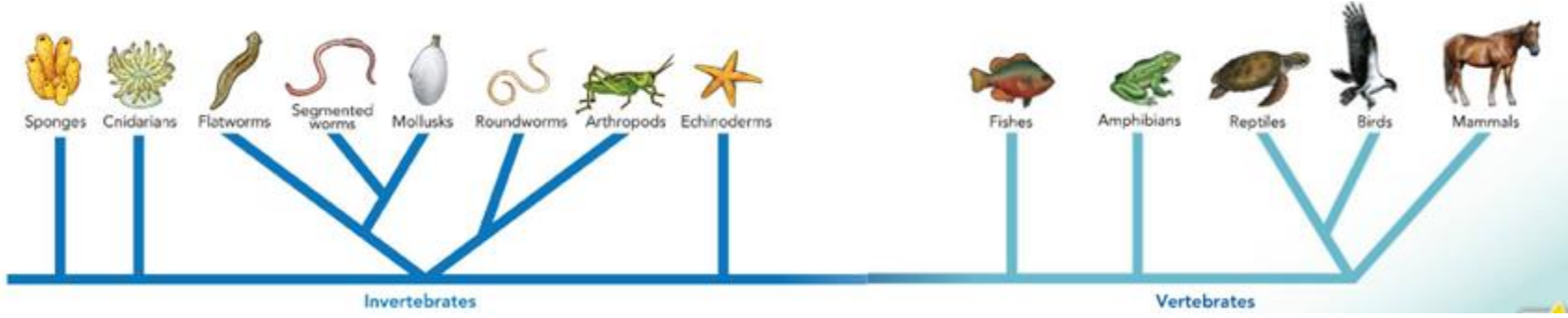
What are some examples of adaptations?

Insects that blend in
Antlers to fight for territory
Cheetahs run fast to catch prey

(C) There are about **35** major groups of animals with more than **1.6 MILLION** species identified. They are classified according to how they are **RELATED** to other animals, which are determined by an animal's **BODY** structure, the way it **DEVELOPS**, and its **DNA** (a nucleic acid).



(D) Use the diagrams on pages 140-141 to answer these questions.



1 - How many groups of animals with backbones are shown? **5**

2 - How many groups of animals without backbones are shown? **8**

3 - How are echinoderms classified: **invertebrate** or vertebrate?

4 - To which class do turtles belong? **REPTILES**

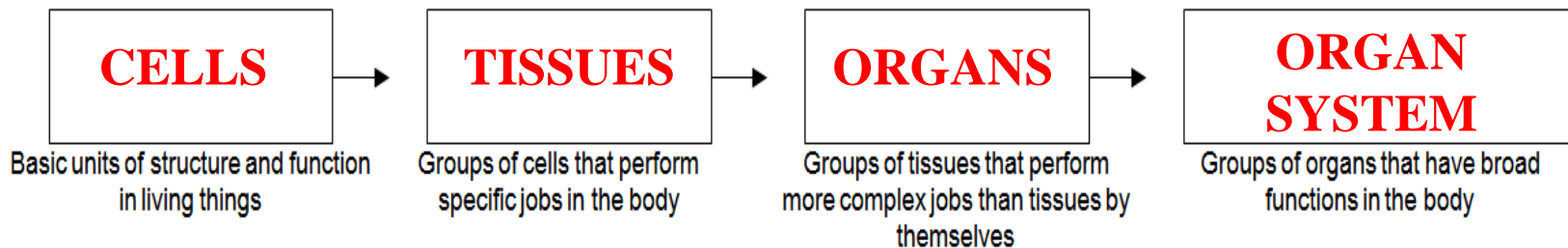
5 - Are flatworms more closely related to segmented worms or roundworms? Why? **Flatworms are more closely related to segmented worms since they share a “branch”.**

6 - What does the bird branch coming off the reptile branch indicate? **Reptiles and birds share some common characteristics.**

2. Read Lesson 2 (pages 142-147) to complete this section.

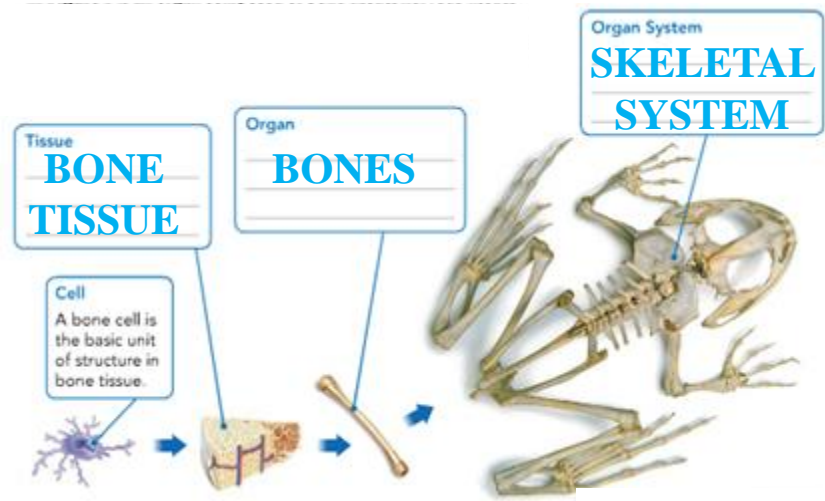
(A) The organization of an animal's cells into higher LEVELS of structure helps to describe an animal's body plan.

(B) Complete this graphic about the organization of an animal's cells.



What would each level in the diagram be called?

What other organ systems would it work with to keep the frog alive?



(C) Complete the chart based on what you read on pages 146-147.

	No Symmetry (Asymmetrical)	Radial Symmetry	Bilateral Symmetry
Description	<i>Does not have either type of symmetry</i>	Lines can be drawn through a central point into 2 mirror images	Only 1 line of symmetry can be drawn to create 2 mirror images
Examples	<i>Sponges & corals</i>	Starfish, sand dollars, and jellyfish	Butterfly, crabs, and humans
Body Plan	<i>Some specialized cells, but no tissues</i>	Complex body plans with tissues and some organ systems	Complex body plan with organ systems

Which type of symmetry is shown in each picture?







Things to do ...

Add definitions to your vocab page

How many do you have? _____

Finish Lesson 3 on the note worksheet for tomorrow (skip the blank if it has a star in front of it)

Open Your Textbook

1 – Sign in to Pearson and then click the arrow in front of Sci 7.



2 – Click Interactive Science 2011 Diversity of Life



3 - Scroll down to find the “Open Book” link for Diversity of Life (the slug book).



Player Mission

Collect the most “complete clades.”

A **clade** (rhymes with “braid”) includes all of the animals that share a common ancestor, indicated by the 17 circles on the tree: 10 solid-color clades and 7 deeper clades.

In this game, a **complete clade** is one of each animal in a solid-color clade (2, 3, or 4 cards depending on the clade).



Set Up

- 1) Gather 3-6 players.
- 2) Unfold the evolutionary tree board. Look it over, check out the color-coded clades, and find your favorite animals!
- 3) Shuffle the 54 animal cards and deal 6 to each player. Keep in mind that there are two of each animal card in the deck.
- 4) Spread the remaining cards face down as the draw pile.
- 5) The player to the left of the dealer goes first and turns proceed clockwise (to the left).

Turn Play each turn has 3 actions

- 1) Ask a specific player for a card

You can ask this person for anything on the tree, such as:

A specific animal, like the Chameleon
If they have a Chameleon card, they must give it to you.

A solid-color clade, like the Tail Losers
They could give you any Tail Loser card (Tuatara, Chameleon, or King Snake). If they have several Tail Losers, they choose one to give you.

A deeper clade, like the Holy Heads
They could give you one animal card from any of the following solid-colored clades:



Ask Again Rule

*If you ask a person for a specific card and get it, you have **ONE** more chance to ask for a card and then your turn is over.*

- 2) Declare your complete clades

Place the cards face-up in front of you (not on the tree) so other players can confirm. These cards are out of play and will count for points when the game ends.

- 3) Reset your hand

Draw from the draw pile until you have 6 cards. You can declare new clades if you pick up the required cards! Your turn ends when you have 6 cards and can't declare. If you have 6 or more cards, your turn ends without drawing.

Winning Go Extinct!

The game ends when:

- (1) A player plays all the cards in their hand.
- (2) No one can play anymore
- (3) Your group is stuck asking for the same card over and over.

Scoring:

Add 10 points for each card you laid down in a completed clade.
Subtract 10 points for each card you still had in your hand.

The player with the highest points is the winner!

Go Extinct Rules

Keep at least 6 cards in your hand

You can only lay down clades at the start of the game and during your turn.

You must ask for a specific card and get it in order to ask again.

You have to ask a specific person – not everyone!

You earn 10 points for each card you have laid down in a clade, but have to subtract 10 points for each card you get stuck with in your hand when the game ends.