Invertebrates

Circle the invertebrates.
Place an "x" on the vertebrates.
## Similarities and Differences

### Vertebrate

### Invertebrate

List similarities and differences.

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1.</td>
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<tr>
<td>2.</td>
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<tr>
<td>3.</td>
<td>3.</td>
</tr>
</tbody>
</table>
Fossils

Do these shells live on top of a mountain today?
Yes  No

Draw a picture in this space of a shell where it lives today.
Name:

**Insect Parts**

Adult insects have three sections of their body, **head**, **thorax**, and **abdomen**. Attached to the thorax are two or four **wings** and six legs.

Fill in the blanks with name of insect body parts.
Insect Life Cycle

Gradual metamorphosis of a stonefly.

Complete metamorphosis of a midge.
Midge

Fill in adult, larva, pupa

Adult midges have______wings, just like all true flies.

The midge larva can be found on the______ponds and streams.
**Metamorphosis Squares**

Cut and rearrange to show life cycle of stonefly and mosquito.

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Mosquito

Fill in female, larva, adult, pupa male, tail.

Mosquito larvae breathe through a tube near their ___________
Adult _______ mosquitoes suck blood.
The adult _______ mosquitoes suck plant juices.
Mayflies often live only one. Usually a large swarm of adults emerge from the water at once.

After laying eggs, they die on the surface. Both adults and nymphs are important food for other insects and fish. Mayflies eat plants.
Name:

**Black Fly**

*adult*

*larva*

*pupa*
Predacious Diving Beetle

color the beetle
dark brown or black

Predacious diving beetles chase and eat tadpoles, insects and even small fish.

Beetles are eaten by frogs, fish and birds.
Insect Predators.

Match predator and prey.
Fill in the blanks with adult, nymph, and mosquito.

**Dragonfly**

**Damsel Fly**

dragonfly nymph
with lower mouth opening to catch prey.

Dragon flies and Damsel flies eat
Dragon Fly Home
Insects at Home

Fill in the blanks with these words:
plant
habitat
bottom
dragonfly
open water
surface

The pond is the insects__________________
In this picture the damselfly nymph is on the_______
The water strider is on the water__________________
The diving beetle is in the__________________________
The adult____________________lives out of the water.
The dragonfly nymph is on the____________________
Caddis Fly

Caddis fly larvae scrape food off rocks, eat dead leaves and collect plankton for food.

Label cases, adult, larva.
Help the Water boatman get to the surface.
Water boatman

How many seen?
- Few
- Some
- Many

Where seen?

Name:

Field Trip Book

Water strider

How many seen?
- Few
- Some
- Many

Where seen?

Caddis fly larva

How many seen?
- Few
- Some
- Many

Where seen?

Midge larva

How many seen?
- Few
- Some
- Many

Where seen?
Mayfly nymph

How many seen?
Few
Some
Many

Where seen?

Stonefly nymph

How many seen?
Few
Some
Many

Where seen?

Predacious diving beetle

How many seen?
Few
Some
Many

Where seen?

Mosquito larva

How many seen?
Few
Some
Many

Where seen?
Dragonfly

How many seen?
Few
Some
Many

Where seen?

Damselfly nymph

How many seen?
Few
Some
Many

Where seen?

Cut line

Damselfly nymph

How many seen?
Few
Some
Many

Where seen?

Cut line

Damselfly

How many seen?
Few
Some
Many

Where seen?
Organisms in their Habitat

Place organisms from page 2 in their habitat.
Organisms in their Habitat

Color these organisms and place in their habitat on page 1.
10-B

Name: ____________________________

Insect Word Search

Reading forward, backward, up, down or diagonally, (but always in a straight line and not skipping any letters), you can find the names of 41 insects in the diagram below. To help, the names are given below. Circle the name of the insect in the puzzle when found, and check its name off the list.

EL TE E B E D B U G U B R E T A W
API RE B R A T E E B Y E N O H L
L G R A O H U D E F H C O A R O O A
O L W U T R B A R I T J H I U W R C
C O A S I D O C M R O W A S P R N E
U U L I U T G I I E M T E G L E E W
S S K T Q E F C T F V F N Z C P T I
T E I N S K A L E L L Y B A E P H N
A E N A O C K O Y Y G N A T D O S G
G B G M M A Y F L Y L F N R O H I A
U E S G E J R F F L L I O Z E E F D
B L T N Y W N G R F A F B H A E R I
Y B I I A O D I E R D E E C R R E D
D M C Y G L E W T E I V L N W T V Y
A U K A U L P R T E H Z A F O Y L T
L B R R N E O A U D P I L G R T I A
V D N P I Y R E B U A D D U M O S K
G R A S S H O P P E R T E K C I R C

Words to find:

ant wasp honeybee cricket hornet locust katydid treehopper earworm

grasshopper beetle butterfly moth firefly housefly fruitfly yellowjacket firebrat

flea bedbug aphid cicada earwig louse hornfly walking stick

deerfly stonefly dragonfly waterbug mayfly bumblebee earworm

mosquito roach ladybug termite bumblebee lacewing mud dauber silverfish
Name:

**Bivalve Word Search**

Reading forward, backward, up, down or diagonally, (but always in a straight line and not skipping any letters), you can find the names of 13 bivalves in the diagram below. To help, the names are given below. Circle the name of the bivalve in the puzzle when found, and check its name off the list.

C O M M U S S E L I L N O X U E S V
E X N I E V B L J U C I O E V H T W
N O U C Z P O Y A S B M G Q L I T A
U J F R A N U T S T J O U A F N S N
M O H O K I M V C S G D Y J M G R P
B Z I S U C B I A P U N B N H E Z L
O N U C F A I O L J T S I P H A N Y
S T M O Z E V K L X C U F D O M U T
F I Y P B V A I O R A A N W H K B O
U F N I K Z L O P G T E Y W N U Y N
Z W O C R S V Q Z C O C K L E N I J
O V N O U A E W D N A I N Y C Q U B
T I S N T E E T H M X U C O K C L E

Words to find:

- bivalve
- byssus
- cockle
- foot
- hinge
- ligament
- microscopic
- mussel
- neck
- scallop
- siphon
- teeth
- umbo
Mollusk Word Search

Reading forward, backward, up, down or diagonally, (but always in a straight line and not skipping any letters), you can find the names of 24 mollusks in the diagram below. To help, the names are given below. Circle the name of the mollusks in the puzzle when found, and check its name off the list.

M A D D U C T O R A D U L L A S
O A R S M O S R H I T Z R E D N
L Z B T B C H G I J U A F S O A
L B Q Y O K E E T V B T S P I
U D P U S L L N E K O C S U O L
S Q U I D E L I R L W N Y M R M
K E O V W X U P U M X T O M T U
S C A L L O P S T W H E L K S I
B I V A L V E E R N N N D E A U
S U P O T C O F E O O T F G G C
F I N H Z Y C D P P T A H M O R
H J E N O L A B A Q I C A I K E
K G M A B N E C K R H L M N L P
A D O P O L A H P E C E R O R O
L T N E M A G I L S Y P Q R S T

Words to find:
mollusks         squid        triton          oyster
bivalve          chiton       octopus         snail
univalve         cephalopoda  aperture        limpet
scallop          cockle       abalone         operculum
spine            umbo         shell           snail
whelk            tentacle     ligament
Fishing Flies

What insect is the fisher trying to copy? Draw a line from the fish fly to the insect it is copying. Write the name of the insect in the blank.
## Insect and Mollusk Squares

<table>
<thead>
<tr>
<th>Mollusk</th>
<th>Insect</th>
</tr>
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<td>![Mollusk Image]</td>
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</table>
**Insect Concentration**

**Directions**

1. Paste the insect cards to stiff paper or cardboard.
2. Cut up the insect cards.
3. Turn the cards face down on the table in four rows of four, arranged randomly.
4. Play progresses around the circle.
5. Each player in turn chooses a card, turns it over and names the insect on the card.
6. The player then attempts to turn over another card with the same kind of insect on it.
7. If successful, the player takes the pair of cards.
8. The play continues to the next player whether or not the play was successful.
9. The game is over when all cards have been chosen and the winner is the player with the most pairs of cards.
## Insect Concentration

<p>| | |</p>
<table>
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<th></th>
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</tr>
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<td>![Insect 6]</td>
</tr>
<tr>
<td>![Insect 7]</td>
<td>![Insect 8]</td>
</tr>
<tr>
<td>![Insect 9]</td>
<td>![Insect 10]</td>
</tr>
</tbody>
</table>
Name:

Color the Mollusk Review

Follow the directions:
1. Color the univalves pink
2. Color the bivalves green
3. Color the chitons brown
4. Put a black X on the mollusks
5. Put a green circle around the cephalopods
Mollusk Matching

1. mussels
2. clam
3. scallop
4. cockle
5. whelk
6. limpet
7. abalone
8. rock oyster
9. chiton
10. octopus
11. squid

Name:
Name:

Shell Treasure Hunt

List 3 different kinds of bivalves.

List 2 univalves.

On the back of the paper trace the largest clam you can find.
On the back of the paper trace the smallest clam you can find.
What kind of shell has a round hole drilled in it?

Who made the hole?

Find a rough shell.
Find a smooth shell.
Find something old.
Find something new.
Write down the name of your favorite shell.

Which shell looks happy?
10-K

Mollusk Crossword

Name:

Across

1. the hard coverings of a sea animal
3. a large body of salt water
5. snail with one valve to its shell
6. a univalve shell shaped like a Chinaman's hat
9. a kind of clam that has a bluish black shell

Down

1. a plant that grows in the ocean
2. tiny loose grains of crushed rock and shells
4. a mollusk with 2 matching shells and a hinge
7. an animal that has no backbone and has a shell to protect its soft body

words to use:
bivalve
seaweed
sea
univalve
shells
sand
mussel
mollusk
limpet
clam
Sea Week Puzzle

Directions:

Write the numbers 1-26 in a long line. Write the letters of the alphabet under the numbers.

\[ 1 = A \quad 2 = B \quad \text{etc.} \]

\[ \begin{array}{ccc}
1 & 2 & 3 \\
\hline
a & b & c \\
\end{array} \]

The groups of numbers below make words.
Place the right letter under each number.
What is the message?

\[ 19, 8, 5 \quad 19, 5, 12, 12, 19 \quad 19, 5, 1 \]

\[ 19, 8, 5, 12, 12, 19 \quad 2, 25 \quad 20, 8, 5 \]

\[ 19, 5, 1 \quad 19, 8, 15, 18, 5 \]

Make your own message here. Give it to a friend.