

Name _____ Date _____



How Much Biodiversity Exists in a Pond Microcosm? Thinksheet



Begin with a Question: *How much biodiversity exists in a pond microcosm?*

Think It Through: Study your microcosm closely for a few minutes. Record observations of life below. When finished, study the biodiversity key below.

Biodiversity Key (simplified)

number of different organisms found (per class)	level of pond microcosm biodiversity
0 - 5	poor
6-10	moderate
11 or more	rich

Hypothesis: The biodiversity of this pond microcosm is poor/moderate/rich (circle one)

because _____

Name _____

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*How Much Biodiversity Exists
in a Pond Microcosm? Thinksheet
(continued)*



Do an Activity: Create wet slides of producers and consumers found in your pond microcosm. Record observations on the Data Sheet. Use the *What Lives in a Pond Microcosm?* pages and any resources supplied by your teacher to aid in identifying and learning about pond organisms.

Make Some Sense of It:

- 1) Review your Thinksheet and Data Sheet(s).
- 2) Explain what you learned about microcosms and biodiversity below. Include three or more of the following words in your response: biodiversity, magnification, algae, producer, consumer, energy, matter.

- 3) Complete this sentence: I accept/reject (circle one) my original hypothesis because _____

(Use your Data Sheet for support.)

- 4) Write a new hypothesis. (Use the space below.)

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How Much Producer Biodiversity Exists in a Pond Microcosm? Data Sheet



Directions: You will use a microscope today to investigate the producers that live in pond water. Though they are small, they supply most of the energy and oxygen needed to keep the rest of the organisms alive. Each one is unique. Each plays a different role in the pond. Each has its own story. Draw and write about these producers as you investigate. Be sure to share what you find with others.

Question: *How much producer biodiversity exists in a pond microcosm?*

Name of producer

This producer's story

Observations (words, numbers, and/or pictures)

Name of producer

This producer's story

Observations (words, numbers, and/or pictures)

If a pond is "healthy," does that make it good for us to drink? _____ Explain. _____

Name _____

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How Much Consumer Biodiversity Exists in a Pond Microcosm? Data Sheet



Directions: You will use a microscope today to investigate the consumers that live in pond water. Though they are small, they are more important to the health of the pond than the larger consumers. Each one is unique. Each plays a different role in the pond. Each has its own story. Draw and write about these consumers as you investigate. Be sure to share what you find with others.

Question: *How much consumer biodiversity exists in a pond microcosm?*

Name of consumer

This consumer's story

Observations (words, numbers, and/or pictures)

Name of consumer

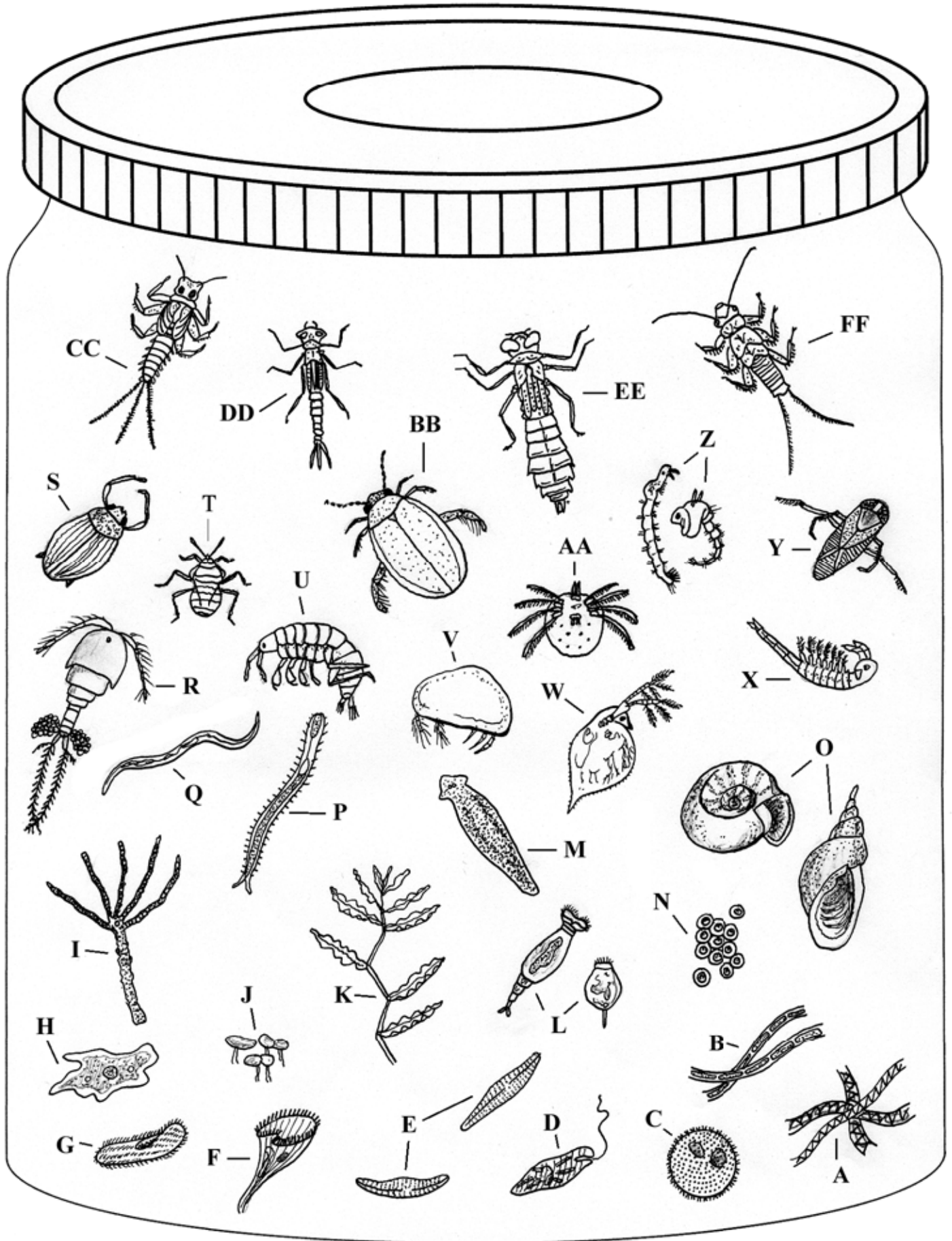
This consumer's story

Observations (words, numbers, and/or pictures)

Two Great Laws of Nature

_____ flows and _____ cycles.

What Lives in a Pond Microcosm?





What Lives in a Pond Microcosm?

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Directions: Use this key to identify images on the accompanying page of *What Lives in a Pond Microcosm*. Consult additional resources for information about each producer or consumer.

Code	Producer/Consumer
A	spirogyra algae
B	algae (non-specific)
C	volvox algae
D	euglena
E	diatoms
F	stentor
G	paramecium
H	amoeba
I	hydra
J	duckweed
K	crisp pondweed
L	rotifer
M	flatworm
N	amphibian eggs (frog, salamander)
O	snail
P	Dero vaga (worm)

Code	Producer/Consumer
Q	roundworm
R	copepod
S	whirligig beetle
T	broad-shouldered water strider
U	scud
V	seed shrimp (ostracod)
W	water flea (daphnia)
X	fairy shrimp
Y	diving beetle
Z	mosquito larvae
AA	water mite
BB	predacious diving beetle
CC	mayfly nymph*
DD	damsfly nymph*
EE	dragonfly nymph*
FF	stonefly nymph*
	*Nymph = young