

Unit 1
Science 7
Topic 4 Research Questions

Name:

Date:

1.) define the following terms:

a.) Biotic:

b.) abiotic:

c.) niche:

d.) Producers:

e.) consumers:

f.) herbivores

g.) carnivores:

h.) predators:



i.) prey:

j.) omnivores:

k.) food chain:

l.) food web:



m.) biomass:

n.) pyramid of numbers:

o.) scavengers:

p.) decomposers:



2.) Read page 39 very carefully. Pick one of the variables to test on mealworms (check with teacher first)

Write your lab or ask for a activity sheet from your teacher.

Your lab sheet should include : Problem, hypothesis, procedure, observations, and analysis question. Your lab must be neat, clear, and detailed. Everything must be in complete sentences. Procedures are written in numbered steps. This lab will be marked according to the lab activity rubrics- request a copy before you begin.

ASSESSMENT CHECKLIST 4**Designing an Experiment****(Initiating and Planning)**

Element	Assessment	
	Self	Teacher's
1. The experimental design tests the prediction.	<input type="checkbox"/>	<input type="checkbox"/>
2. The statement of the problem explains the need for the experiment.	<input type="checkbox"/>	<input type="checkbox"/>
3. The methods and procedures used in the experiment follow a logical sequence.	<input type="checkbox"/>	<input type="checkbox"/>
4. The experimental procedure is complete and clear enough that another person could carry it out.	<input type="checkbox"/>	<input type="checkbox"/>
5. An appropriate manipulated variable is clearly identified.	<input type="checkbox"/>	<input type="checkbox"/>
6. The plan allows for the manipulated variable to be controlled and measured accurately.	<input type="checkbox"/>	<input type="checkbox"/>
7. An appropriate responding variable is clearly defined.	<input type="checkbox"/>	<input type="checkbox"/>
8. The plan allows for the responding variable to be measured accurately.	<input type="checkbox"/>	<input type="checkbox"/>
9. The experimental design uses the metric system.	<input type="checkbox"/>	<input type="checkbox"/>
10. The experiment includes proper controls.	<input type="checkbox"/>	<input type="checkbox"/>
11. Margin of error is noted, and a thoughtful discussion of reducing errors is made.	<input type="checkbox"/>	<input type="checkbox"/>
12. A complete list of required materials is provided.	<input type="checkbox"/>	<input type="checkbox"/>
13. An appropriate strategy to use repeated trials and measurements is described.	<input type="checkbox"/>	<input type="checkbox"/>
14. Experimental design includes appropriate safety concerns.	<input type="checkbox"/>	<input type="checkbox"/>
15. The experimental write-up is neat, presentable, and well organized.	<input type="checkbox"/>	<input type="checkbox"/>
16. If appropriate, a neat, fully labelled diagram is included.	<input type="checkbox"/>	<input type="checkbox"/>
17. Analysis includes all the data.	<input type="checkbox"/>	<input type="checkbox"/>

ASSESSMENT CHECKLIST 4**Designing an Experiment** (continued)**(Initiating and Planning)**

Element	Assessment	
	Self	Teacher's
18. Data are organized in a way that makes them easy to read or access (i.e., in charts, graphs, etc.).	<input type="checkbox"/>	<input type="checkbox"/>
19. Appropriate vocabulary, language mechanics, and complete sentences are used.	<input type="checkbox"/>	<input type="checkbox"/>
20. Instructions are provided for proper clean-up and disposal of wastes.	<input type="checkbox"/>	<input type="checkbox"/>