

Name _____ Date: _____

2025-2026 Incoming 7th Grade Science Summer Packet

Part I - Scientific Method (Big Idea 123)

For the following experiments, define the independent variable, dependent variable, and control group.

Vocabulary Word	Definition	Example
Test Variable	<ul style="list-style-type: none">• The variable being changed. Only one variable can be changed per experiment.	Height of dropping the ball
Outcome Variable	<ul style="list-style-type: none">• The variable being measured. Must be numerical (such as height, mass, distance, volume, etc...)	Size of the Crater
Control	<ul style="list-style-type: none">• Not all projects will have a control.	None
Constants	<ul style="list-style-type: none">• The factors that stay the same.	The ball, the person dropping the ball, weather conditions, surface

1. Three redwood trees are kept at different humidity levels inside a greenhouse for 12 weeks. One tree is left outside in normal conditions. The heights of the trees are measured once a week.

Independent Variable:

Dependent Variable:

Control Group:

2. Pea plant clones are giving different amounts of water for three-week period. The first pea plant receives 400 milliliters a day. The second pea plant receives 200 milliliters a day. The third pea plant receives 100 milliliters a day. The fourth pea plant does not receive any extra water: the plant only receives natural ways of receiving water. The heights of the pea plants are recorded daily.

Independent Variable:

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Dependent Variable:

Control Group:

3. One tank of gold fish is fed the normal amount of food once a day. A second tank is fed twice a day. A third tank is fed four times a day during a six week study. The fish's weight is recorded daily.

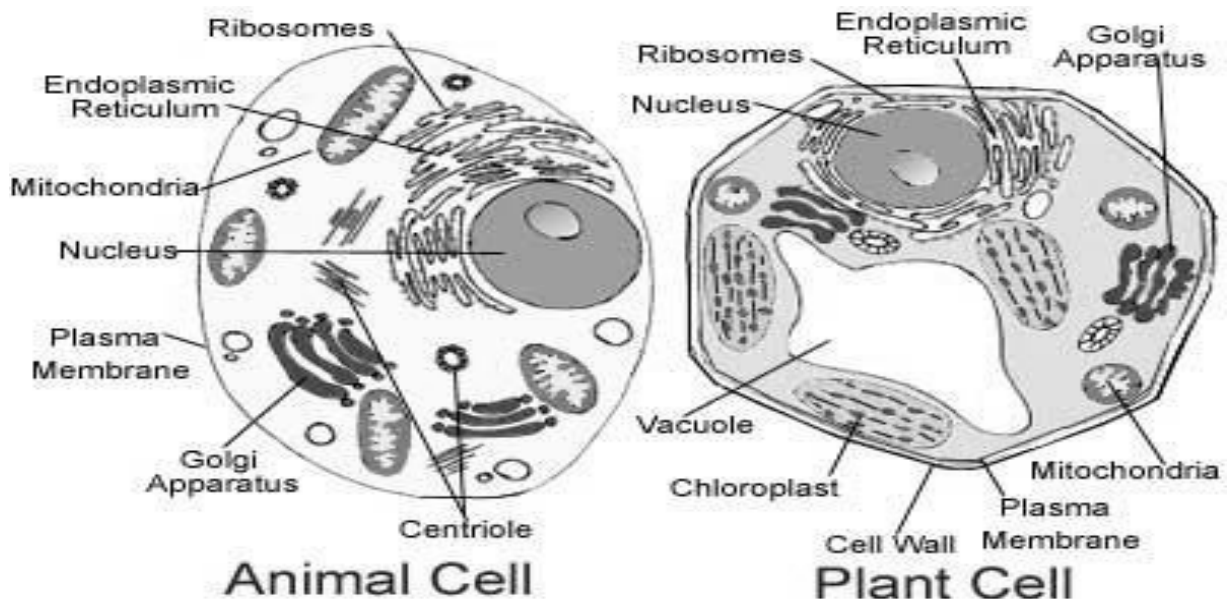
Independent Variable:

Dependent Variable:

Control Group:

PART II: PLANT AND ANIMAL CELLS (Big Idea 14)

Read the following information and then complete the exercise. Compare the plant and animal cells provided and use the picture to complete the framed paragraph below.



FRAMED PARAGRAPH:

Animal and plant cells are similar in that they both have

_____.

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_____, _____,

_____, _____ and

_____. However, only the plant cell has a

_____, _____

and _____. A _____ can be found

only in the animal cell.

PART III. BODY SYSTEMS (Big Idea 14)

An organism has various body systems that interact together to allow for bodily functions. For example, the digestive system (controls the process of breaking down food) works with the muscular system (your stomach) to digest meals.

Directions: Complete the chart by listing three body systems that are involved in the injury described below and then explain how each body system is involved in the injury.

Kelly was playing soccer and sprained her ankle. She was unable to walk without being in pain and the increased swelling was obvious.

Body System	Explanation of how each system is involved in the injury.

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PART IV: SYMBIOTIC RELATIONSHIPS (Big Idea 17)

Symbiotic relationships describe close interactions between two or more different species. Write the definition for the following terms and give an example of each. You may draw pictures for your examples.

You may use the Study Jam video at the website below for assistance.

<http://studyjams.scholastic.com/studyjams/jams/science/ecosystems/symbiosis.htm>

Term	Definition	Example
Parasitism		
Mutualism		
Commensalism		