Dalton

Science

Snow Day 1 – Complete Metrics warm up

Snow Day 2 – Complete Plant vs. Animal Cells

Snow Day 3 – Mitosis and Meiosis Crossword

Snow Day 4 – Scientific Method Warm Up

Snow Day 5 – Cell Theory Warm Up

Name: _____ Date: _____

Metrics Warm-Up

Define the following key terms in your own words.

Metric System - _____

Meter - _____

Gram - _____

Liter - _____

Second - _____

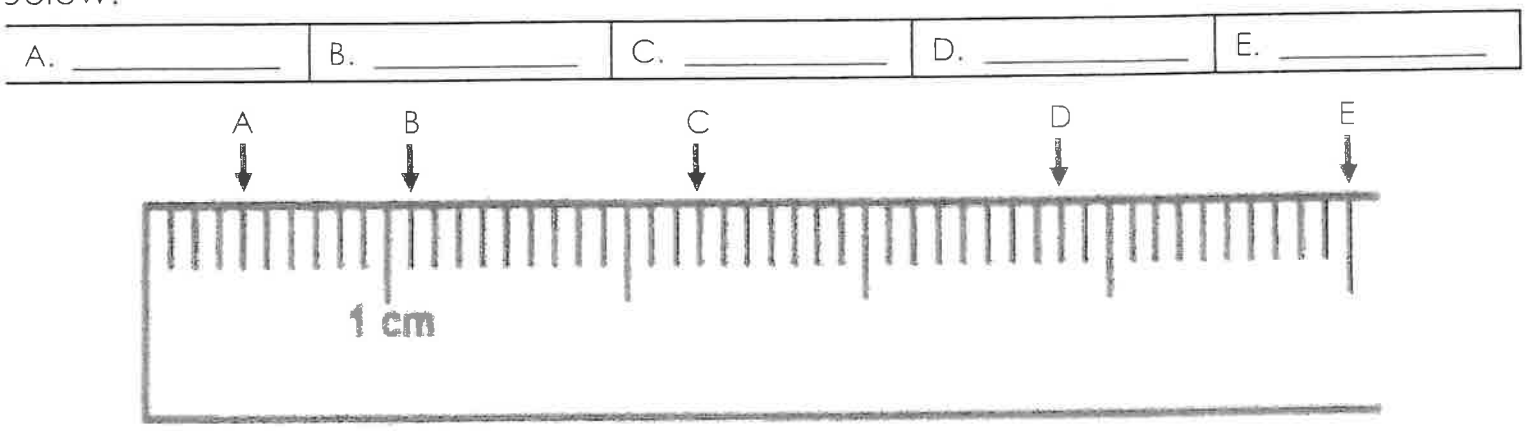
Mark "T" for True and "F" for False for the following statements.

1. _____ A centimeter is greater than a millimeter.
2. _____ 30 milliliters is equal to 3 liters.
3. _____ The metric system is based on powers of 10.
4. _____ The metric volume of a liquid is measured in milliliters.
5. _____ The metric mass of an object is measured in pounds.
6. _____ The prefix "kilo" means thousand.
7. _____ A kilometer is longer than a mile.
8. _____ The prefix "centi" means one-thousandth.
9. _____ A centigram is equal to 10 grams.
10. _____ A meter is longer than a yard.
11. _____ Milliliters are the metric unit for mass.
12. _____ The prefix "milli" means one-thousandth.

Complete the following metric conversions.

1. 1 cm = _____ mm
2. 500 cg = _____ kg
3. 7 mL = _____ cL
4. 30 s = _____ min
5. 7 m = _____ cm
6. .0003 kg = _____ mg
7. 300 min = _____ hr
8. 4 km = _____ m
9. 6 kL = _____ mL
10. 2000 mg = _____ g
11. 8 cL = _____ L
12. 1000 mm = _____ km
13. 3 hr = _____ s
14. 2 g = _____ cg
15. 100 L = _____ kL

Observe and record the measurements (in mm) for points A-E on the meter stick below.



Circle the correct answer for questions 1-4.

1. Which of the following units would be most appropriate for measuring the length of hallway?
A. Millimeters
B. Centimeters
C. Meters
D. Kilometers

2. Which of the following units would be most appropriate for finding the mass of a bowling ball?
A. Milligrams
B. Centigrams
C. Grams
D. Kilograms

3. Which of the following units would be most appropriate for finding the volume of a can of soda?
A. Milliliters
B. Centiliters
C. Liters
D. Kiloliters

4. Which of the following units would be most appropriate for the time it takes to cook popcorn in the microwave?
A. Seconds
B. Minutes
C. Hours
D. Days

Name: _____ Date: _____

Plant vs. Animal Cells Warm-Up

Describe each of the following key vocabulary terms using your own words.

Cell - _____

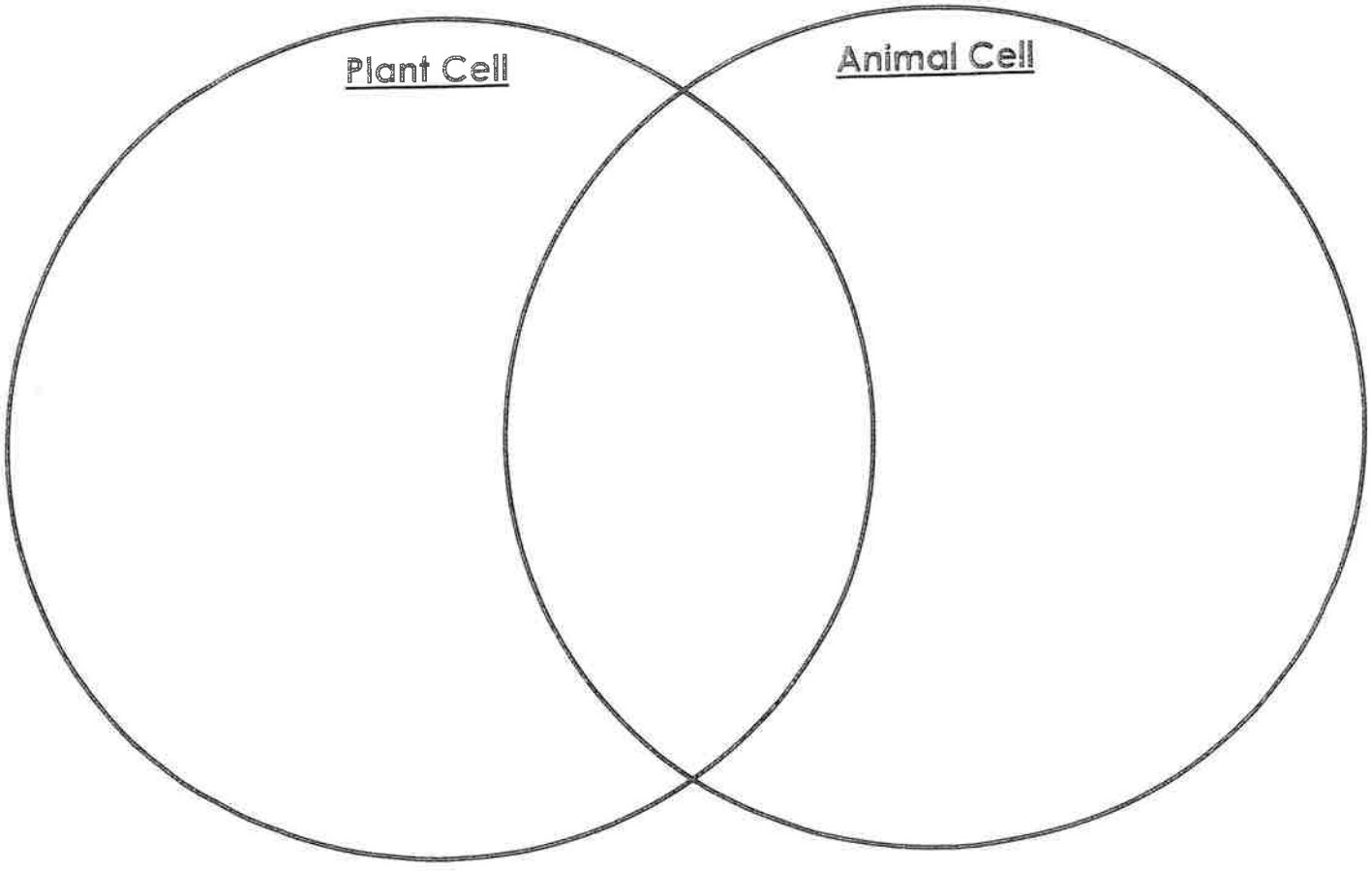
Organelle - _____

Animal - _____

Plant - _____

Photosynthesis - _____

Compare and contrast Plant and Animal cells using the Venn Diagram below.



Sketch a plant cell and an animal cell in the boxes below. Label at least 3 organelles of each cell and describe their function in the cell. Use different organelles for each cell.

Plant Cell	Animal Cell

Circle the correct answer for questions 1-4.

1. How could you tell that a cell is a plant cell and not an animal cell?
A. The cell has a nucleus.
B. The cell has a cell membrane.
C. The cell contains cytoplasm.
D. The cell has a cell wall.

2. Which two structures do plant cells contain that animal cells do not?
A. vacuoles and chloroplasts
B. chloroplasts and cell wall
C. nucleus and cell membrane
D. mitochondria and chlorophyll

3. What happens when a plant cell is placed into salt water?
A. It will shrink.
B. It will expand.
C. It will shrink and then expand.
D. None of the above.

4. Why do plant cells have larger vacuoles than animal cells?
A. Plants store sunlight for food.
B. Animals store the food they make.
C. Plants store water for structure and support.
D. Animals store water for structure and support.

Fill in the blanks below using the terms from the word bank. Each term will only be used once.

Plant	Animal	Photosynthesis	Chloroplast	Cell Wall

. A(n) _____ cell contains a cell wall and has a rectangular shape.

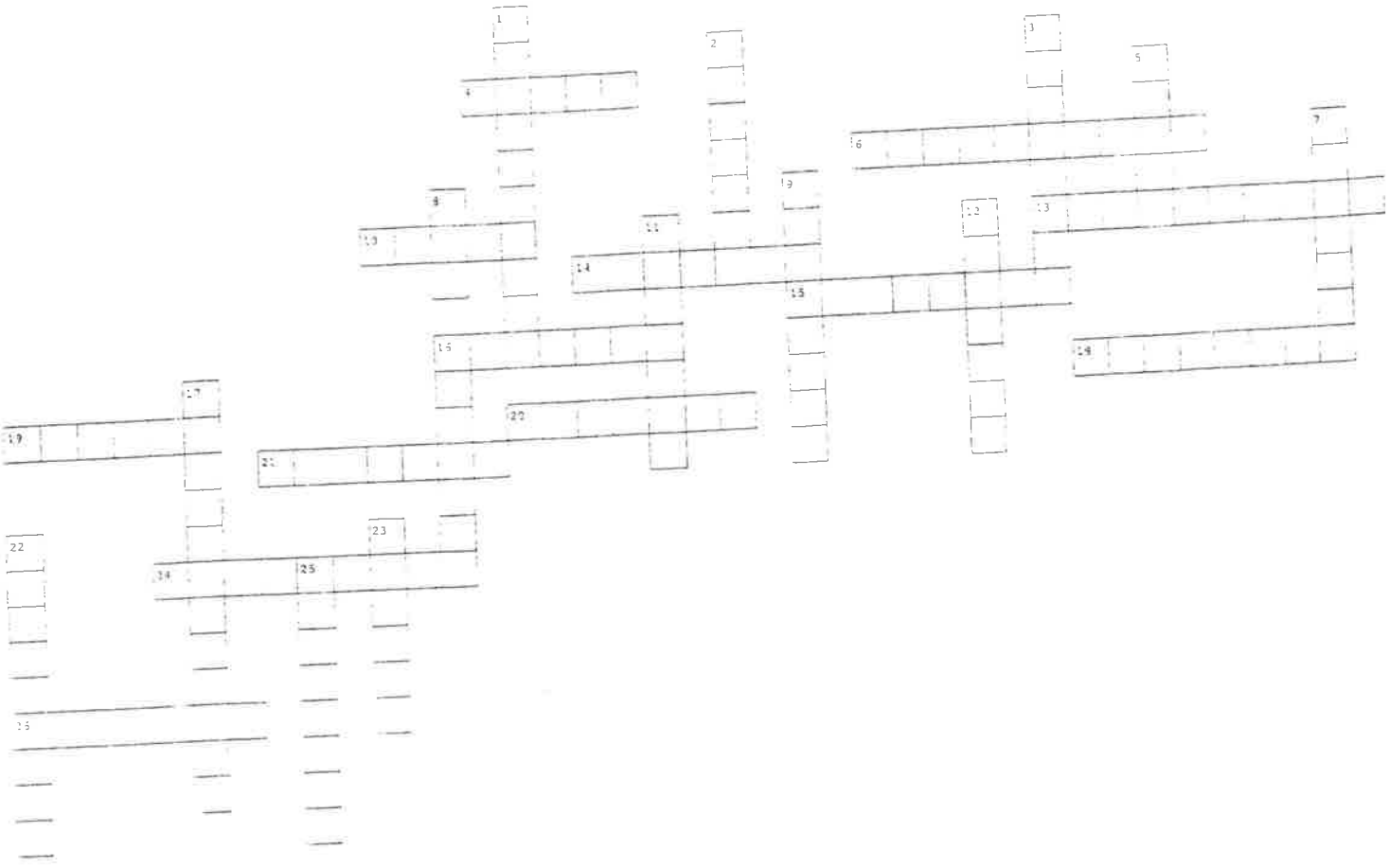
2. _____ is the process by which plants are able to use sunlight to make food.

3. A _____ helps to convert sunlight into food for plants.

. The _____ is the rigid layer surrounding a plant cell.

. A(n) _____ cell contains many vacuoles and has a circular shape.

Mitosis and Meiosis Crossword



Across

4. One of the creators of the 1st DNA model.
6. Holds chromosomes together.
10. A section of DNA on chromosomes that codes for traits.
13. Nucleus can be seen, chromosomes duplicating themselves.
14. When the nucleus divides to make sex cells.
15. Strands of chromosomes pulled apart and move to opposite ends of each other.
16. A type of reproduction where new organisms are produced by one parent.
18. Any permanent change in the DNA sequence.
19. When egg and sperm combine (start of life).
20. New organism grows from the parent.
21. 1 of the 4 nitrogen bases of DNA.
24. The cytoplasm of both cells begins to separate.
26. Sex Cells that has 23 chromosomes.

Down

1. Structure in the nucleus that contains DNA.
2. When the nucleus of a cell divides to form 2 identical cells.
3. 1 of the 4 nitrogen bases of DNA.
5. How many steps are involved with DNA copying itself?
7. Division of organism into 2 equal parts.
8. Deoxyribonucleic acid, it has a double helix shape.
9. _____ Franklin was the first person to discover DNA.
11. Body cells that has 46 chromosomes.
12. 1 of the 4 nitrogen bases of DNA.
16. 1 of the 4 nitrogen bases of DNA.
17. Making new body parts.
22. Chromosome pairs line up across center and attach to spindle fibers.
23. One of the creators of the 1st DNA model.
25. Chromosome pairs are visible, centrioles move to opposite ends.

Name: _____ Date: _____

Scientific Method Warm-Up

Define the following key terms in your own words:

Scientific Method – a way of problem solving by making a hypothesis and testing it

Problem – the question in an experiment that is being tested

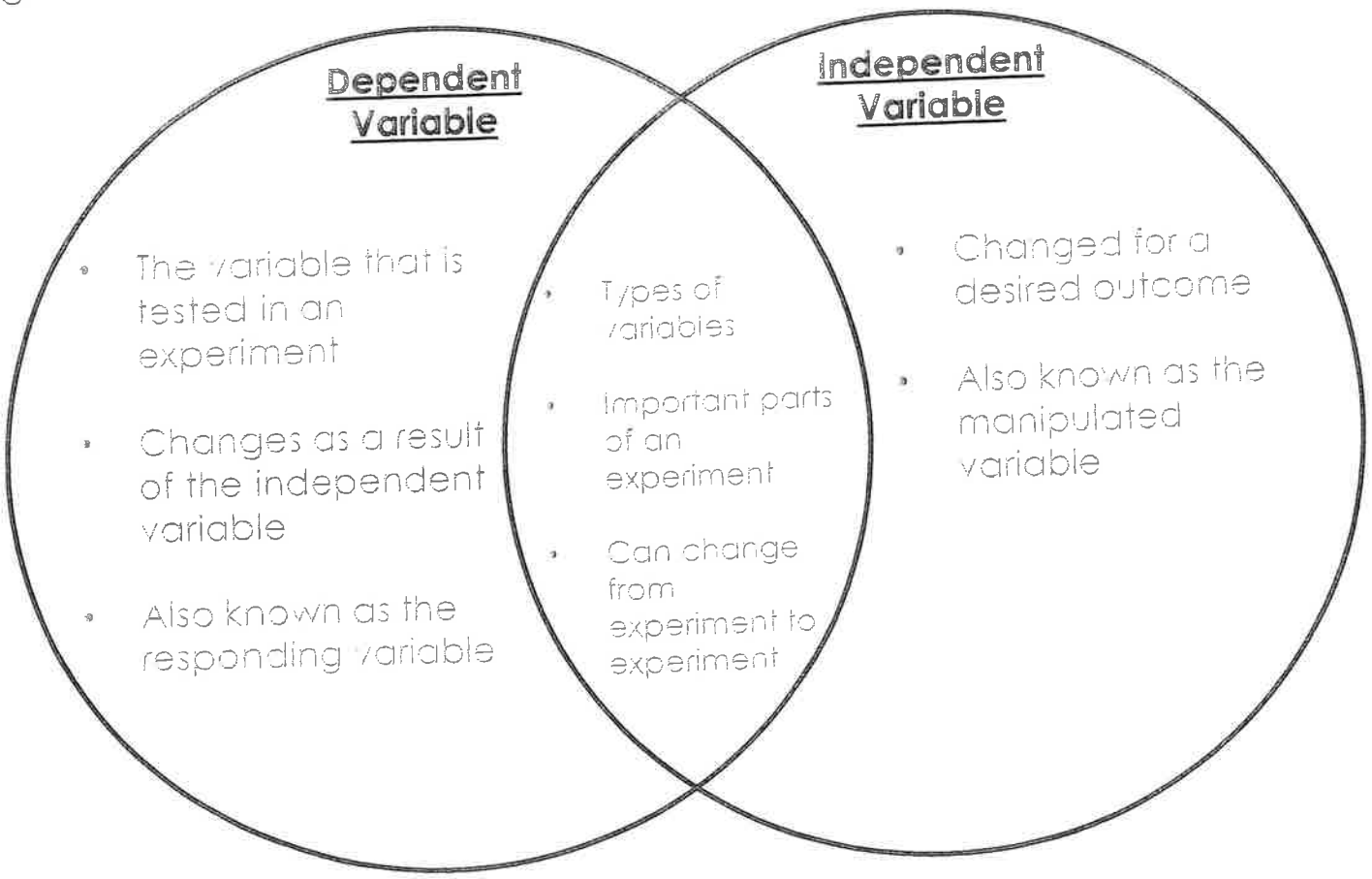
Hypothesis – an educated guess or statement about what is going to happen

Procedure – a set of steps to follow in order during an experiment

Variable – a factor in an experiment that can exist in different amounts

Conclusion – the final summary of the data and results

Compare and contrast Dependent and Independent Variables using the Venn Diagram below.



Create an icon (picture) for the following terms.

Problem	Hypothesis	Experiment	Data/Results	Conclusion

Match each term in the word bank below to the correct definition.

A. Experiment	B. Hypothesis	C. Problem	D. Data/Results
E. Conclusion	F. Observation	G. Inference	H. Controlled Variable

1. _____ Information or observations collected during an experiment.
2. _____ The final summary of the data and results.
3. _____ An educated guess or a statement about what is going to happen.
4. _____ Making an interpretation from an observation.
5. _____ The variable that is kept the same during an experiment.
6. _____ The question that is being tested.
7. _____ The process of obtaining information by using your senses.
8. _____ The process of testing a hypothesis under controlled conditions.

Circle the correct answer for questions 1-4.

1. What skill is a scientist using when she listens to the sounds that birds make?
A. Making observations
B. Interpreting data
C. Drawing conclusions
D. Forming a hypothesis

2. The variable that is changed in an experiment is known as which of the following?
A. Experimental variable
B. Controlled variable
C. Independent variable
D. Dependent variable

3. The variable that is measured in an experiment is known as which of the following?
A. Experimental variable
B. Controlled variable
C. Independent variable
D. Dependent variable

4. Which of the following would make the results of an experiment more reliable?
A. Changing the procedure
B. Repeated/Multiple trials
C. Multiple variables
D. Change the hypothesis

Name: _____ Date: _____

Cell Theory and Levels of Organization Warm-Up

Describe the following scientist's contributions to Cell Theory using your own words.

Robert Hooke - _____

Francesco Redi - _____

Anton van Leeuwenhoek - _____

Briefly list and describe the three major parts of Cell Theory.

1. _____
2. _____
3. _____

Match the following vocabulary terms to the correct definition.

1. _____ Cell
2. _____ Tissue
3. _____ Organ
4. _____ Organ System
5. _____ Organism

A. groups of organs working together

B. groups of similar tissues performing the same function

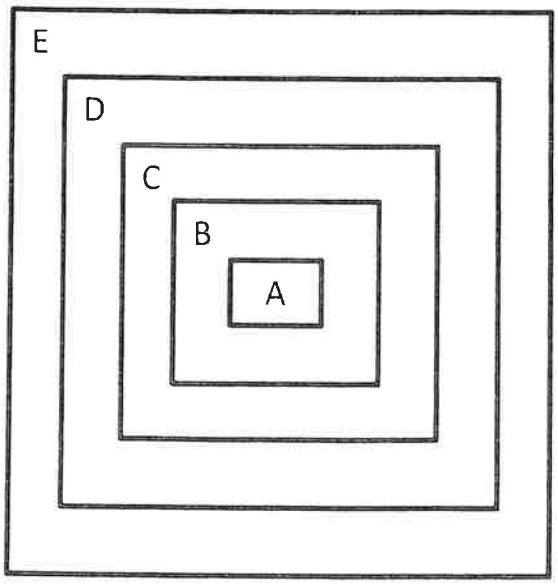
C. the most basic unit of life

D. groups of organ systems working together

E. groups of similar cells performing the same function

Match each Level of Organization to the correct letter in the diagram.

1. _____ Organism
2. _____ Organ
3. _____ Organ System
4. _____ Cell
5. _____ Tissue



6. Which level of organization is made up of all of the others? _____

7. Which level of organization is the building block for all of the others? _____

Circle the correct answer for questions 1-4.

1. Which of the following is not a part of Cell Theory?
A. Cells are the basic unit of life.
B. Cells come from other cells.
C. All living things are composed of one or more cells.
D. All cells reproduce through meiosis.

2. Complete the following. Cells are to tissues as tissues are to _____.
A. Organ Systems
B. Organs
C. Organisms
D. Bacteria

3. What do a worm, cat, elephant, and mouse all have in common?
A. They all move the same way.
B. They all have the same structures internally.
C. They are all composed of cells.
D. They all have hair or fur covering their body.

4. What is a group of organs that work together to perform a specific function?
A. Organism
B. Organ
C. Tissue
D. Organ System