Marion High School
Student Instructional Packet Assignments
September 28th - October 16st

Student: _____ Period: _____ Teacher(s): Circle your teacher's name, if more than one teacher is listed below. Teacher 1: Mrs Habibunnisa Shaik Email: hshaiK@marion.k12.sc.us Teacher 2: Mrs Aruna Sagar Email: asagar@marion.k12.sc.us Teacher 3: Ms Taffy Rowell Email: tarowell@marion.k12.sc.us Teacher 4: Mr George Connell Email: gconnell@marion.k12.sc.us Course: ___CP Biology_____ Teacher Planning Period: __3rd Block_____ **School Number: 843-423-2571**	**Student:** **Please put your name and class period on this sheet.** **You will need to return this sheet and any assignments attached.** **Circle your teacher's name**
	Monday – September28th Scientific Method ppt Questionnaire
Tuesday – September29th Scientific Method and variables ppt and practice	Wednesday September 30 th Scientific Method and variables Practice

Marion High School
Student Instructional Packet Assignments
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Thursday October 1 Graphing Practice	Friday October 2 Identifying Variables Practice , Inquiry
Monday October 5 Scientific Method Practice	Tuesday October 6 Scientific Method Practice
Wednesday October 7 Scientific Method Practice	Thursday October 8 Characteristics of life ppt and questionnaire
Friday October 9 Characteristics of life reading and questionnaire	Monday October 12 Atomic structure and chemical bonding review
Tuesday October 13 Properties of water and questionnaire	Wednesday October 14 Properties of water and questionnaire
Thursday October 15 Ph reading and Practice	Friday October 16 Special Properties of water practice

2020~~Oct~~ Sep 28 Monday

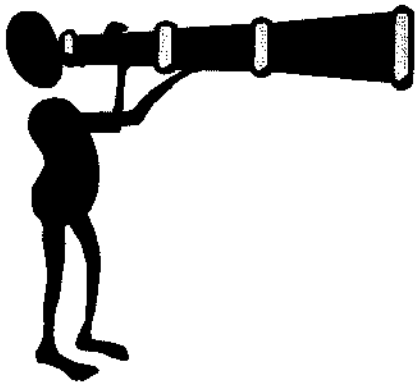
Scientific Method

Steps in the Scientific Method

- Observation
- Hypothesis
- Experiment
- Data Collection
- Conclusion
- Retest

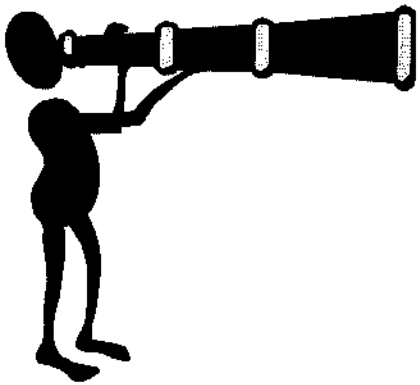
Observations

- Gathered through your senses
- A scientist notices something in their natural world



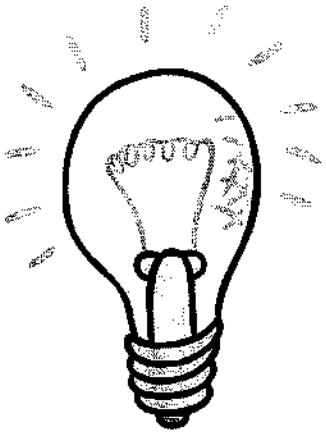
Observations

- An example of an observation might be noticing that many salamanders near a pond have curved, not straight, tails



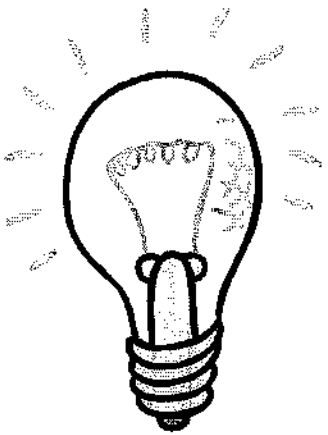
Hypothesis

- A suggested solution to the problem.
- Must be testable
- Sometimes written as If…Then… statements
- Predicts an outcome



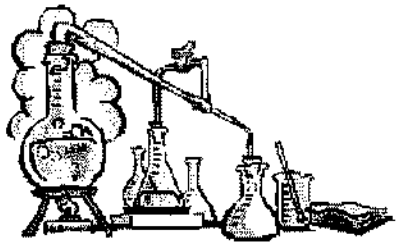
Hypothesis

- An example of a hypothesis might be that the salamanders have curved tails due to a pollutant in the moist soil where they live.



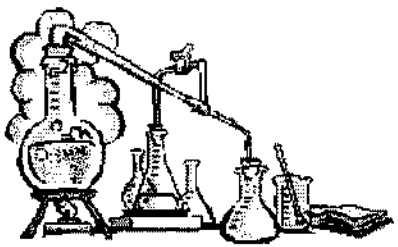
Experiment

- A procedure to test the hypothesis.



Experiment

Variable - factor in the experiment that is being tested



Experiment

A good or "valid" experiment will only have ONE variable!

Scientific Experiments Follow Rules

- An experimenter changes one factor and observes or measures what happens.

The Control Variable

- The experimenter makes a special effort to keep other factors constant so that they will not effect the outcome.
- Those factors are called control variables.

What is the Purpose of a Control?

- Controls are NOT being tested
- Controls are used for COMPARISON

Other Variables

- The factor that is changed is known as the **independent variable.**
- The factor that is measured or observed is called the **dependent variable.**

Example of Controls & Variables

- For example, suppose you want to figure out the fastest route to walk home from school.
- You will try several different routes and time how long it takes you to get home by each one.
- Since you are only interested in finding a route that is fastest for you, you will do the walking yourself.

What are the Variables in Your Experiment?

- **Varying the route is the independent variable**
- **The time it takes is the dependent variable**
- **Keeping the same walker throughout makes the walker a control variable.**

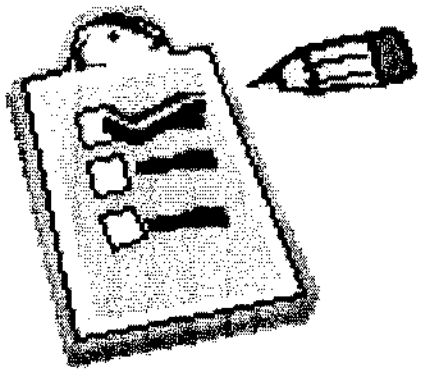
One more thing... it is best to make several trials with each independent variable.

Remember: To be a Valid Experiment:

- Two groups are required --- the control & experimental groups
- There should be only one variable

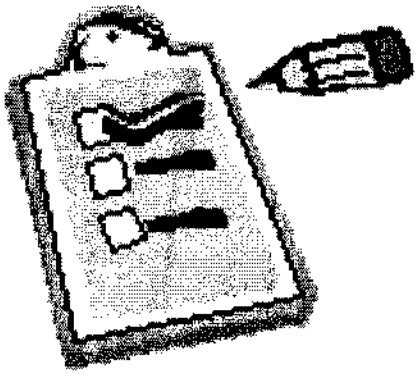
Data

- Results of the experiment
- May be quantitative (numbers) or qualitative



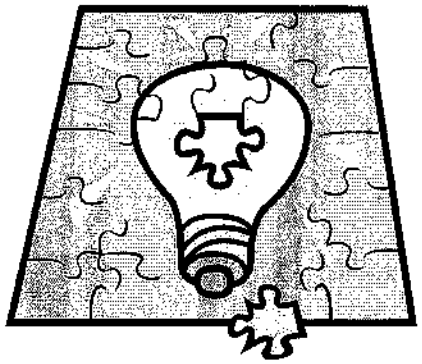
Data

- Must be organized
- Can be organized into charts, tables, or graphs



Conclusion

- The answer to the hypothesis based on the data obtained from the experiment



Retest

In order to verify the results, experiments must be retested.

Solving a Problem

1)Identify a Problem
2) State Observations about the problem
3) Form a Hypothesis about the problem (if...then...)
4) Design an Experiment to test the hypothesis
5) Collect Data
6) Form a Conclusion
7) Retest

Sep 28, 2020 Mon.

Scientific Method PPT Questions

1. Name the steps in the scientific method.

2. Explain a scientist's first step in the scientific method.

3. Give an example of an observation that a scientist might make.

4. Scientists use their _____ to make observations.

5. What is a hypothesis?

6. A hypothesis must be _____ and it _____ an outcome.

7. Some hypotheses are written as _____ statements.

8. Write a hypothesis for the observation you wrote in question 3.

9. What is an experiment?

10. What part of an experiment is the variable?

11. How many variables should there be in a good experiment?

Controls and Variables

12. An experimenter changes _____ factor and then observes and _____ what happens.

13. Other factors in an experiment must be kept _____ so they won't effect the _____.

14. What are these constant factors called?

15. What is the purpose of having a control in an experiment?

16. Name the two types of variables in an experiment.

17. What is the independent variable?

18. What is the independent variable?

19. In the experiment to find the fastest route to school, what serves as:

    a. the independent variable?

    b. the dependent variable?

    c. the control variable?

20. The best experiments make _____ trials with the independent variable.

Valid Experiments

21. Name the two group needed to have a valid experiment.

22. What is data?

23. What are the two types of data?

24. If the data is numbers, this is called _____ data.

25. To be useful, collected data must be _____.

26. Name 3 ways of organizing data.

27. What is the conclusion of an experiment?

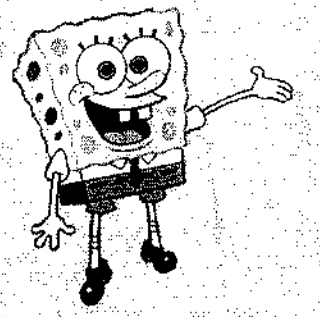
28. What must be done to verify the results of an experiment?

29. To solve a problem, you should _____ the problem and state _____ you have made about it.

30. Next, you form a _____ or prediction and conduct an _____ to test the prediction.

Sep 29, 2020 Tue

Scientific Method - Controls and Variables



1

Scientific Experiments Follow Rules.

- An experimenter changes one factor and observes or measures what happens.

2

The Control Variable

- **The experimenter makes a special effort to keep other factors constant so that they will not effect the outcome.**
- **Those factors are called control variables.**

3

What is the Purpose of a Control?

- Controls are NOT being tested
- Controls are used for COMPARISON

4

Other Variables

- The factor that is changed is known as the **independent variable**.
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Example of Controls & Variables

- For example, suppose you want to figure out the fastest route to walk home from school. You will try several different routes and time how long it takes you to get home by each one.
- Since you are only interested in finding a route that is fastest for you, you will do the walking yourself.

What are the Variables in Your Experiment?

- **Varying the route is the independent variable**
- **The time it takes is the dependent variable**
- **Keeping the same walker throughout makes the walker a control variable.**

One more thing… it is best to make several trials with each independent variable.

Sep 29, 2020 Tue

(1)

Name: _____

For each item below, specify the independent and dependent variables, as well as constants.

1. A study was done to find if different tire treads affect the braking distance of a car.

I: _____ **D:** _____ **C:** _____

2. The time it takes to run a mile depends on the person's running speed.

I: _____ **D:** _____ **C:** _____

3. The height of bean plants depends on the amount of water they receive.

I: _____ **D:** _____ **C:** _____

4. The higher the temperature of the air in the oven, the faster a cake will bake.

I: _____ **D:** _____ **C:** _____

5. Lemon trees receiving the most water produced the most lemons.

I: _____ **D:** _____ **C:** _____

6. An investigation found that more bushels of potatoes were produced when the soil was fertilized more.

I: _____ **D:** _____ **C:** _____

7. Students measured the temperature of the water at different depths in Lake Skywalker and found that the temperature varied.

I: _____ **D:** _____ **C:** _____

8. The amount of pollution produced by cars was measured for cars using gasoline containing different amounts of lead.

I: _____ **D:** _____ **C:** _____

9. Four groups of rats are first massed and then fed identical diets except for the amount of vitamin A they receive. Each group gets a different amount. After 3 weeks on the diet, the rats' masses are measured again to see if there has been a decrease.

I: _____ **D:** _____ **C:** _____

2

Name: _____
Date: _____ **Period:** _____

For each experiment below, specify the independent variable, dependent variable, control group and any constants.

1. A student wanted to test how the mass of a paper airplane affected the distance it would fly. Paper clips were added before each test flight. As each paper clip was added, the plane was tested to determine how far it would fly.

Independent variable _____

Dependent variable _____

Control _____

Constant _____

2. Two groups of students were tested to compare their speed working math problems. Each group was given the same problems. One group used calculators and the other group computed without calculators.

Independent variable _____

Dependent variable _____

Control _____

Constant _____

3. Students of different ages were given the same puzzle to assemble. The puzzle assembly time was measured.

Independent variable _____

Dependent variable _____

Constant _____

There can be several controlled variables. If an experiment is to be useful, only one variable at a time can be manipulated intentionally. All other variables must be controlled throughout all parts of the experiment. If more than one variable is altered (changed), the results of an experiment cannot be interpreted with any validity.

4. An experiment was performed to determine how the amount of coffee grounds could affect the taste of coffee. The same kind of coffee, the same percolator, the same amount and type of water, the same perking time, and the same electrical sources were used.

Independent variable _____

Dependent variable _____

Constants (3) _____

Sep 30, 2020 Wed

Scientific Method Name _____

Controls and Variables – Part 1

SpongeBob and his Bikini Bottom pals have been busy doing a little research. Read the description for each experiment and answer the questions.

1 - Patty Power

Mr. Krabbs wants to make Bikini Bottoms a nicer place to live. He has created a new sauce that he thinks will reduce the production of body gas associated with eating crabby patties from the Krusty Krab. He recruits 100 customers with a history of gas problems. He has 50 of them (Group A) eat crabby patties with the new sauce. The other 50 (Group B) eat crabby patties with sauce that looks just like new sauce but is really just mixture of mayonnaise and food coloring. Both groups were told that they were getting the sauce that would reduce gas production. Two hours after eating the crabby patties, 30 customers in group A reported having fewer gas problems and 8 customers in group B reported having fewer gas problems.

Which people are in the control group?

What is the independent variable?

What is the dependent variable?

What should Mr. Krabs' conclusion be?

Why do you think 8 people in group B reported feeling better?

2 – Slimotosis

Sponge Bob notices that his pal Gary is suffering from slimotosis, which occurs when the shell develops a nasty slime and gives off a horrible odor. His friend Patrick tells him that rubbing seaweed on the shell is the perfect cure, while Sandy says that drinking Dr. Kelp will be a better cure. Sponge Bob decides to test this cure by rubbing Gary with seaweed for 1 week and having him drink Dr. Kelp. After a week of treatment, the slime is gone and Gary's shell smells better.

What was the initial observation?

What is the independent variable?

What is the dependent variable?

What should Sponge Bob's conclusion be?

3 – Marshmallow Muscles

Larry was told that a certain muscle cream was the newest best thing on the market and claims to double a person's muscle power when used as part of a muscle-building workout. Interested in this product, he buys the special muscle cream and recruits Patrick and SpongeBob to help him with an experiment. Larry develops a special marshmallow weight-lifting program for Patrick and SpongeBob. He meets with them once every day for a period of 2 weeks and keeps track of their results. Before each session Patrick's arms and back are lathered in the muscle cream, while Sponge Bob's arms and back are lathered with the regular lotion.

Time	Patrick	SpongeBob
Initial Amount	18	5
After 1 week	24	9
After 2 weeks	33	17

Which person is in the control group?

What is the independent variable?

What is the dependent variable?

What should Larry's conclusion be?

4 – Microwave Miracle

Patrick believes that fish that eat food exposed to microwaves will become smarter and would be able to swim through a maze faster. He decides to perform an experiment by placing fish food in a microwave for 20 seconds. He has the fish swim through a maze and records the time it takes for each one to make it to the end. He feeds the special food to 10 fish and gives regular food to 10 others. After 1 week, he has the fish swim through the maze again and records the times for each.

Special Food Group
(Time in minutes/seconds)

Fish	Before	After
1	1:06	1:00
2	1:54	1:20
3	2:04	1:57
4	2:15	2:20
5	1:27	1:20
6	1:45	1:40
7	1:00	1:15
8	1:28	1:26
9	1:09	1:00
10	2:00	1:43

Regular Food Group
(Time in minutes/seconds)

Fish	Before	After
1	1:09	1:09
2	1:45	1:30
3	2:00	2:05
4	1:30	1:23
5	1:28	1:24
6	2:09	2:00
7	1:25	1:29
8	1:09	1:15
9	2:04	1:57
10	1:34	1:30

What was Patrick's hypothesis?

Which fish are in the control group?

What is the independent variable?

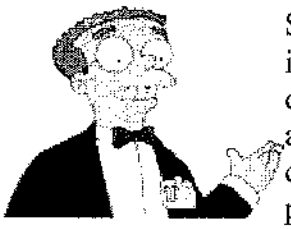
What is the dependent variable?

Look at the results in the charts. What should Patrick's conclusion be?

Sep 30, 2020 Wed

(1)

Identify the Controls and Variables



Smithers thinks that a special juice will increase the productivity of workers. He creates two groups of 50 workers each and assigns each group the same task (in this case, they're supposed to staple a set of papers). Group A is given the special juice to drink while they work. Group B is not given the special juice. After an hour, Smithers counts how many stacks of papers each group has made. Group A made 1,587 stacks, Group B made 2,113 stacks.

Identify the:

1. Control Group

2. Independent Variable

3. Dependent Variable

4. What should Smithers' conclusion be?

5. How could this experiment be improved?

Homer notices that his shower is covered in a strange green slime. His friend Barney tells him that coconut juice will get rid of the green slime. Homer decides to check this out by spraying half of the shower with coconut juice. He sprays the other half of the shower with water. After 3 days of "treatment" there is no change in the appearance of the green slime on either side of the shower.

6. What was the initial observation?

Identify the-

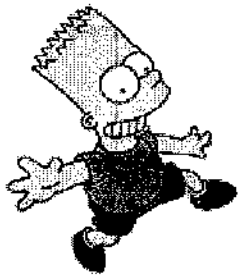
7. Control Group

8. Independent Variable

9. Dependent Variable

10. What should Homer's conclusion be?

Bart believes that mice exposed to microwaves will become extra strong (maybe he's been reading too much Radioactive Man). He decides to perform this experiment by placing 10 mice in a microwave for 10 seconds. He compared these 10 mice to another 10 mice that had not been exposed. His test consisted of a heavy block of wood that blocked the mouse food. He found that 8 out of 10 of the microwaved mice were able to push the block away. 7 out of 10 of the non-microwaved mice were able to do the same.



Identify the-

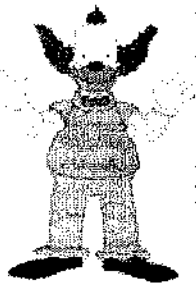
11. Control Group

12. Independent Variable

13. Dependent Variable

14. What should Bart's conclusion be?

15. How could Bart's experiment be improved?



Krusty was told that a certain itching powder was the newest best thing on the market; it even claims to cause 50% longer lasting itches. Interested in this product, he buys the itching powder and compares it to his usual product. One test subject (A) is sprinkled with the original itching powder, and another test subject (B) was sprinkled with the Experimental itching powder. Subject A reported having itches for 30 minutes. Subject B reported to have itches for 45 minutes.

Identify the-

16. Control Group

17. Independent Variable

18. Dependent Variable

19. Explain whether the data supports the advertisements claims about its product.

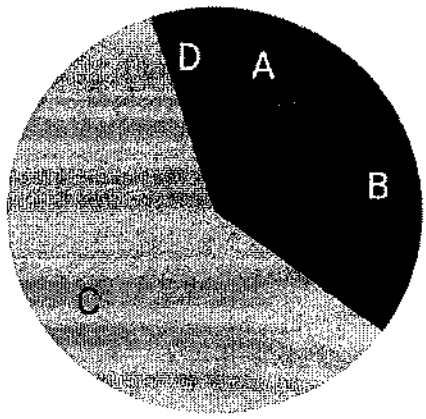
Lisa is working on a science project. Her task is to answer the question: "Does Rogooti (which is a commercial hair product) affect the speed of hair growth". Her family is willing to volunteer for the experiment.

20. Describe how Lisa would perform this experiment. Identify the control group, and the independent and dependent variables in your description.

Oct 1, 2020 Thur

Name: _____

Interpreting Graphs



1. Mr. M's class grades were graphed as a **pie graph**. Based on this graph:

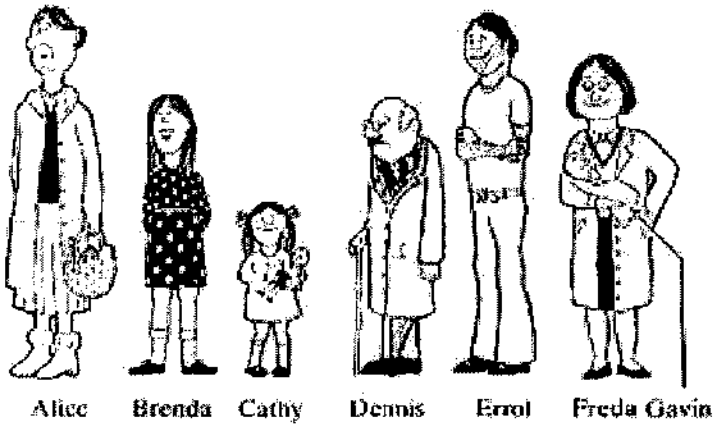
a) The largest percentage of students received what grade? ____

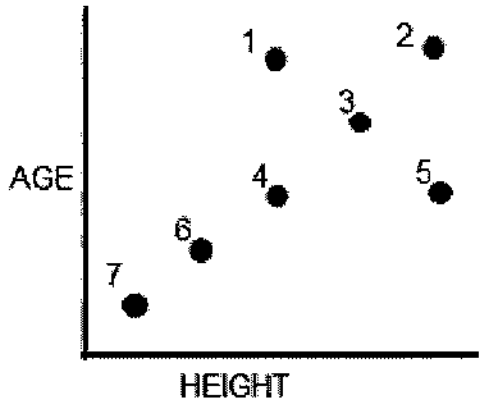
b) Estimate what percentage of the class received a B. ____

c) Estimate what percentage of the class received an A. ____

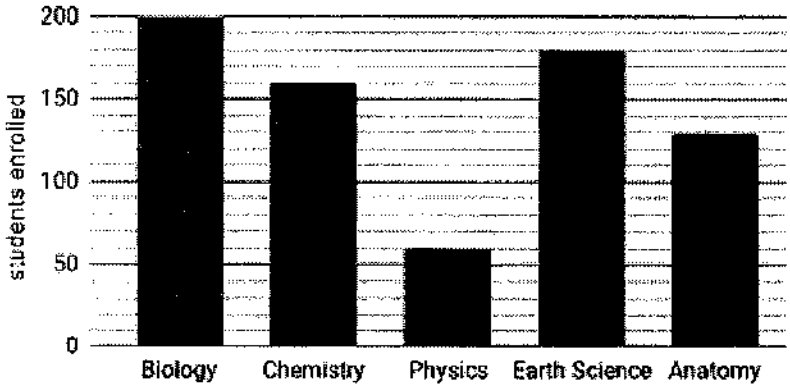
d) Based on the graph, do you think Mr. M's class is difficult? Why or why not?

2. The **scatter plot** shows a bus stop where those waiting at the bus are plotted by their height and by their age. Identify which dot goes with which passenger.





3. The **bar graph** compares the number of students enrolled in classes.



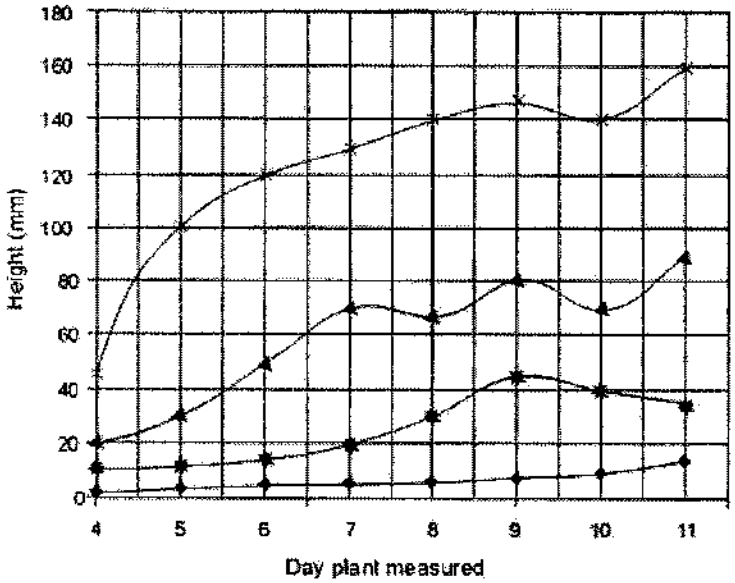
a) What class has the highest enrollment? _____

b) How many students are enrolled in Chemistry? _____ Anatomy? ____

c) Which course is the least popular? _____

d) A new course is added; forensic science has 160 students enrolled. Add this bar to the graph shown.

4. This **line graph** compares the growth of plants that were kept in the sun for different amounts of time.



a) On Day 7, the plants kept in the sun for 3 hours were how tall? _____

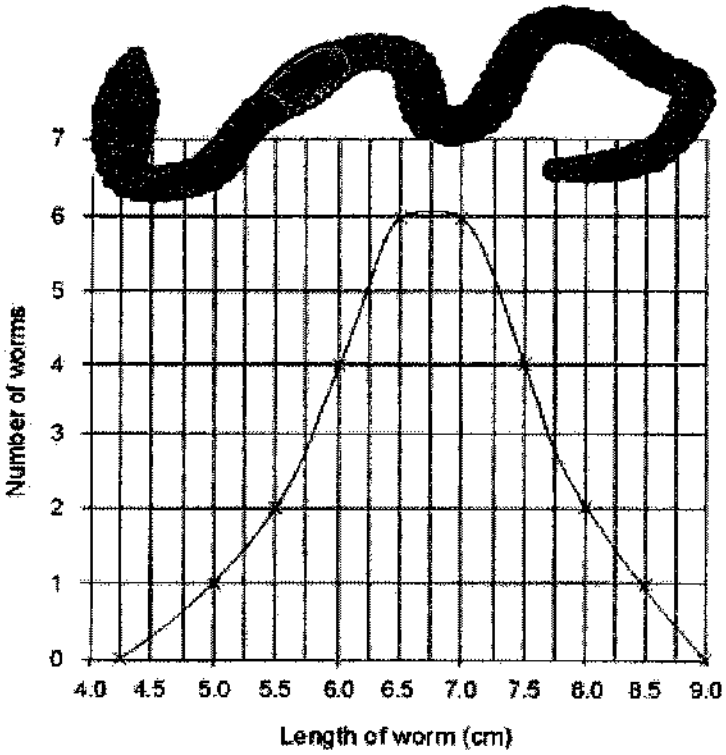
b) On Day 7, the plants kept in the sun for 6 hours were how tall? _____

c) On Day 10, the plants kept in the sun for 9 hours were how tall? _____

d) On Day 11, the plant that was grown with 1 hour of sunlight was how tall? _____

e) Based on the graph, the plant grows best in what amount of sunlight? _____

5. The line graph shows the number of worms collected and their lengths.



a) What length of worm is most common? _____

b) What was the longest worm found? _____

c) How many worms were 6 cm long? _____

d) How many worms were 7.25 cm long? _____

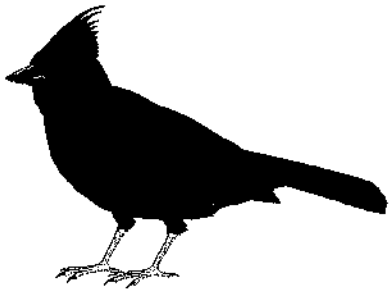
e) The peak of the curve represents the

[longest worms / average worms]

Oct 1, 2020 Thur

Name: _____ Date: _____

Data Nuggets: Deadly Windows (adapted from http://datanuggets.org/?s=window)



Have you ever accidentally run into a glass door or been confused by a tall mirror in a restaurant? Just like people, birds can mistake a see-through window or a mirrored pane for an opening to fly through. These **window collisions** can hurt the bird or even kill it. Window collisions kill nearly one billion birds every year!

Urban areas, with a lot of houses and stores, have a lot of windows. **Resident birds** that live in the area may get to know these buildings well and may learn to avoid the windows. However, not all the birds in an area live there year-round. There are also **migrant birds** that fly through urban areas during their seasonal migrations. During the fall migration, people have noticed that it seems like more birds fly into windows. This may be because migrant birds, especially the ones born that summer, are not familiar with the local buildings. It could also be that there are simply more window collisions in the fall because there are more birds in the area when migrant and resident birds co-occur in urban areas.

1. What is the difference between a migrant bird and a resident bird?

2. Why might more migrant birds fly into windows?

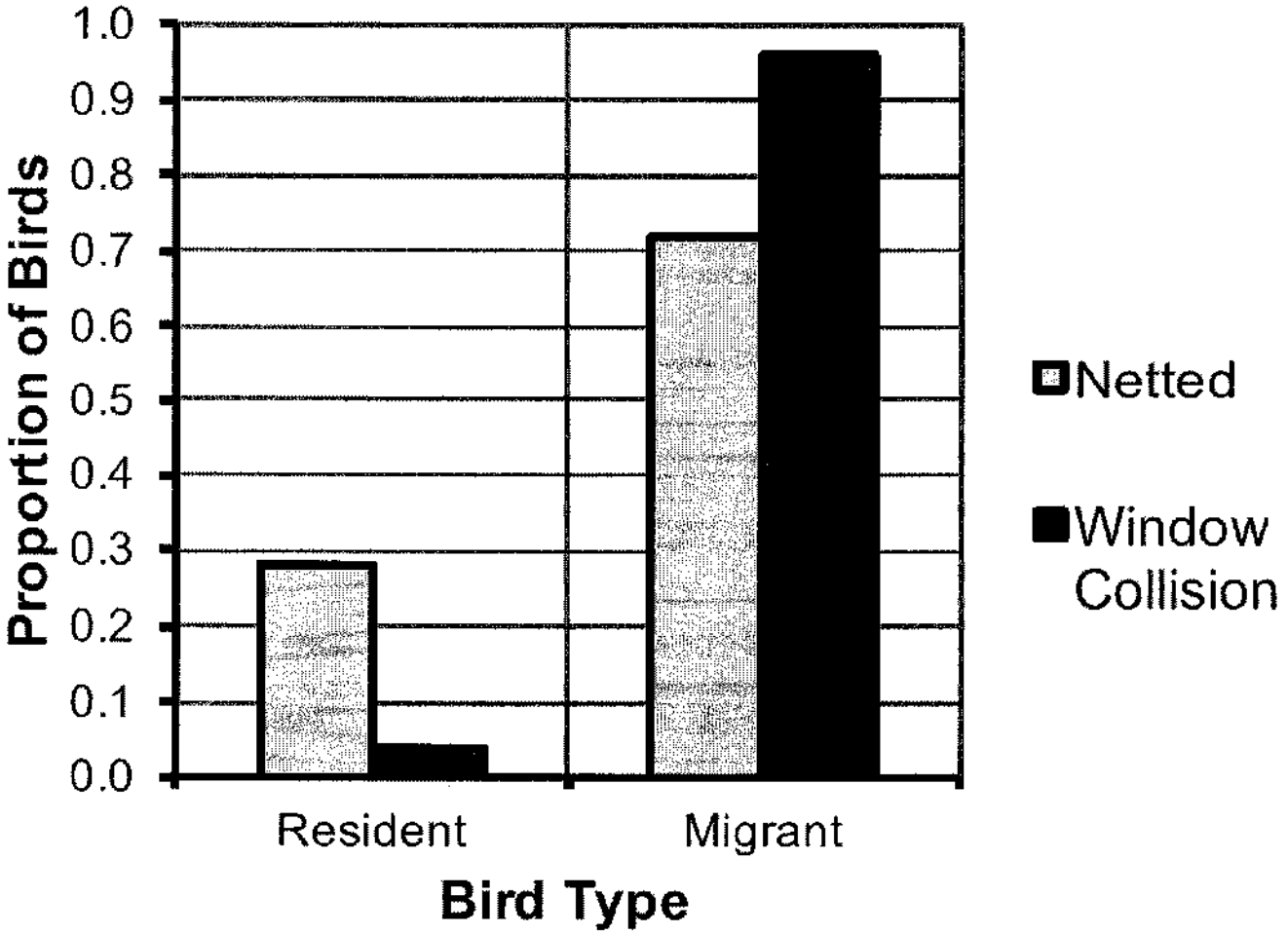
Zookeepers also noticed that birds were flying into exhibit windows. They wanted to find out if the birds that hit the windows were more likely to be migrant birds than resident birds. In order to answer this question, they developed a way to gather data on the number of birds in the area and the number of birds that flew into windows.

First, to count the total number of birds, nets were placed around the campus at about window height. Birds that flew into these nests were not harmed, and researchers could examine them to identify what kind of bird they were (resident or migrant). This information told them the total number of birds in the area that were flying at window height.

To count the number of birds that hit windows, researchers could simply count the number of dead or injured birds found on the campus near windows. **If window collisions are really more dangerous for migrants, researchers predicted that a higher proportion of migrants would fly into windows than were caught in the nets.**

3. The scientific question was: Do migrant birds collide with windows more frequently than expected by their population? What is the hypothesis proposed by the researchers.

4. Use the **I² strategy** to analyze the data below (annotate)

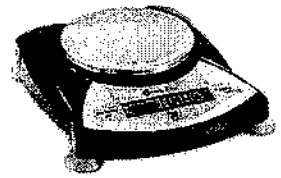
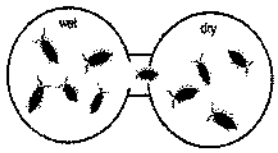
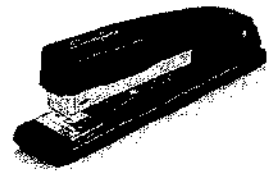


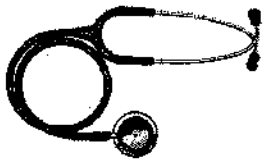
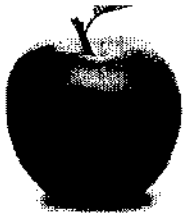
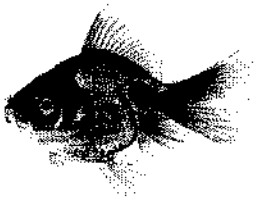
5. Create a caption for the graph, the caption to answer the experimental question. Be sure to write it in a complete sentence.

Oct 2, 2020 Fri

Name_____Date_____

Independent and Dependent Variables Scenarios
(Manipulated) (Responding)

Scenario		Independent	Dependent
1. A cow is given a growth hormone and then compared to another cow that was not given a growth hormone. Both cows were weighed at 2 years.			
2. Mosquito repellent is sprayed on one arm and the other arm is not sprayed. The number of mosquito bites is counted after 2 hours.			
3. One grape is placed in tap water and another grape is placed in salt water. The change in their mass is measured after a day.			
4. Two different cars are traveling at 60 mph. At a certain point, both cars slam on the brakes. The distance it takes for each car to stop is then measured.			
5. Pillbugs are placed in a container where they have a choice of a wet or a dry environment. Researchers record how much time was spent on each side.			
6. A stapler is used to staple 100 papers, it jams 5 times during the trial. A different brand of stapler performs the same test; it jams 22 times.			
7. Cockroaches are exposed to a pesticide. After 3 hours, 95% of the insects are dead.			
8. Two plants are grown using the same light and pots. One plant is given water			

that has been microwaved and the other plant is given regular tap water. Their height is measured after 2 weeks.			
9. The blood pressure of a soldier is measured while he is resting. The soldier is then exposed to a stressful environment and his blood pressure is measured again.			
10. An apple is cut into slices. Half of the slices are sprayed with lemon juice. All slices are stored in a sealed plastic bag. After 4 days, they are observed to see how brown they turned.			
11.The respiration rate of a goldfish is measured. The goldfish is then placed in cold water and the respiration rate is measured again.			
12. Bacteria are grown in a petri dish. One side of the dish is sprayed with an antibiotic. After a week, the number of bacteria colonies are counted on each side.			

Extension: Write your own scenario. Identify the independent and dependent variables.

Oct 2 Fri 2020

Lab Report

Name
Grade
Teacher

Use Household materials available to complete this lab.Create your own procedure for the lab.

Use Ice cubes of the same size to calculate the time it takes to melt on different surfaces.Use your cell phone as a timer.
Average = (Trial 1 + Trial 2 + Trial 3)/3

Sample data table -

Surface	Trial 1	Trial 2	Trial 3	Average time in Minutes
Wood				
Steel (metal)				
Aluminum Foil				
Plastic/polyethene				

Lab Report

Objective – (2.5 points)

Hypothesis (2.5 points)

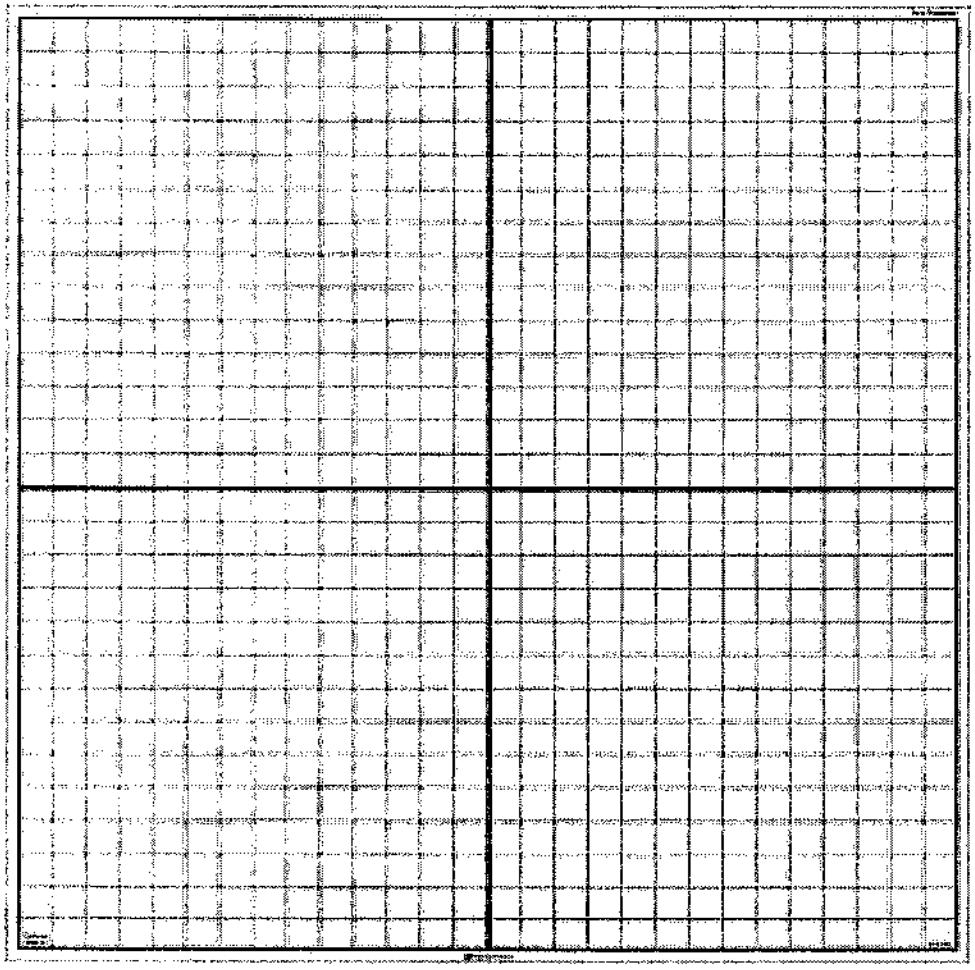
Materials –(5 points)

Procedure steps (5 points)

Data Table (10 points)

Variables (5 points)

Graph (10 Points)

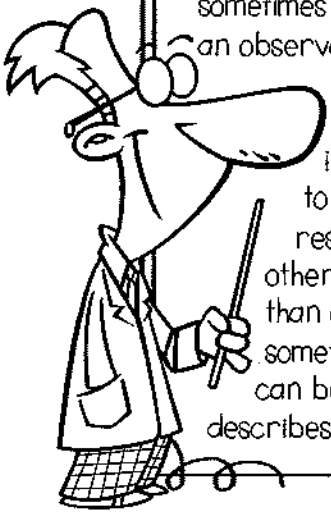


Conclusion (10 points)

Oct 5, 2020 Mon (1)

Name _____ Date _____ Section _____

Exploring the Scientific Method



The **scientific method** is a process that scientists use to better understand the world around them. It includes making observations and asking a question, forming a hypothesis, designing an experiment, collecting and analyzing data, and drawing a conclusion. This is sometimes also referred to as scientific inquiry. A **hypothesis** is a possible explanation for an observation. A good scientist will design a **controlled experiment** to test their hypothesis. In a controlled experiment, only one variable is tested at a time. It is called the manipulated or **independent variable**. The **experimental group** will test the independent variable. The **control group** will be left alone, so you have something to compare your results to. The variable that determines the data is the responding, or **dependent variable**. It responds to the manipulated variable. All other variables in the experiment should remain the same, because if you change more than one variable, you will not know which variable explained your results. Once something has been tested many different times by many different scientists, it can become a **scientific theory**. It is different from a **scientific law**, which describes what will happen every time under a particular set of conditions.

True or False

If the answer is true, write "true" on the line. **If the answer is false, replace the underlined word or phrase with one that will make the sentence correct.** Write the new word(s) on the line.

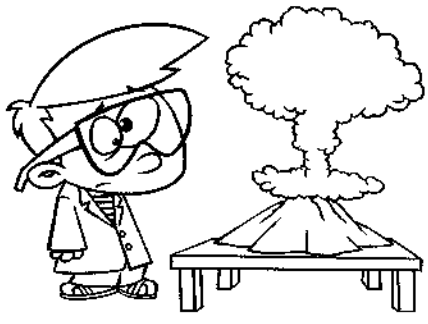
1. _____ Forming a hypothesis is the first step of the scientific method.

2. _____ A scientific law is different from a scientific theory because it describes something in nature without attempting to explain it.

3. _____ In order for a hypothesis to be testable, scientists need to be able carry out investigations that will either support or disprove it.

4. _____ The experimental group is the group that is left alone during the experiment.

5. _____ The manipulated variable is the same thing as the independent variable.



Matching

Match the word to the definition. Write the letter on the line.

6. _____ Scientific inquiry
7. _____ Hypothesis
8. _____ Control group
9. _____ Experimental group
10. _____ Independent variable
11. _____ Dependent variable
12. _____ Scientific theory
13. _____ Scientific law

A. This group shows the effect of the variable being tested
B. This is the one variable that is changed
C. A well-tested explanation for experimental results
D. The many ways in which scientists study the natural world
E. A possible answer to a scientific question
F. This describes an observed pattern in nature
G. This group is left alone and not experimented on
H. This is the variable that gets measured

Identifying

Read through the following scenarios. Identify the control group, the experimental group, the independent variable, and the dependent variable.

Scenario	Independent Variable	Dependent Variable	Experimental Group	Control Group
A company wants to test a new dog food that is supposed to help overweight dogs lose weight. 50 dogs are chosen to get the new food, and 50 more continue their normal diets. After one month, the dogs are checked to see if they lost any weight.	14.	15.	16.	17.
A new sunscreen has been developed that is supposed to be more effective at preventing sunburn. 30 participants spray one arm with the new formula, and spray the other arm with the leading formula. After 4 hours in the sun, their skin is evaluated for any redness.	18.	19.	20.	21.
A student wants to study the effect of sunlight on plant growth. In his experiment, 12 plants receive normal amounts of sunlight, but half of them are kept under bright sun lamps all night long. After 6 weeks, the plants' heights are measured.	22.	23.	24.	25.

Oct 6, 2020 Tue

Station 1

Which type of soil, Type A or Type B, will produce a taller plant?

Station 2

Does doing homework lead to higher test scores?

Station 3

Does hot water freeze faster than cold water?

Station 4

Do deer eat more food in winter or summer?

Station 5

When there are more coyotes are there fewer mice?

Station 6

When a person drives over the speed limit is he more likely to have a car accident?

Station 7

When it is a full moon do more animals get hit by cars?

Station 8

Do mothers who give birth after the age of 40 have an increased risk of giving birth to babies with birth defects?

Oct 6, 2020 Tue.

(2)

Station 9

Do people run faster on cement or grass?

Station 11

Do students lose fewer homework assignments if they use color-coded folders?

Station 10

Do people who graduate from high school make more money than people who drop out?

Station 12

Do teenagers get in fewer car accidents if they do not listen to music while they drive?

Station 13

Does mint gum or fruit gum keep its flavor longer?

Station 15

Will swimmers swim faster if they shave their legs?

Station 14

Do students who eat breakfast get higher test scores?

Station 16

Will football teams score more touchdowns if they weightlift twice a day?

Oct-7, 2020 ~~Tues~~ Wed (3)

Station 17

Will dogs live longer if they eat kibble or canned dog food?

Station 18

Does taking a vitamin C supplement reduce the chance of getting a cold?

Station

Station

Station 19

Do children who play violent video games commit more crimes as adults?

Station 20

Are children more likely to develop scoliosis if they carry a heavy backpack?

Scientific Method Stations: Individual Student Sheet

Name: **Date:** **Hour:**

1. Which type of soil, Type A or Type B, will produce a taller plant?
2. Does doing homework lead to higher test scores?
3. Does hot water freeze faster than cold water?
4. Do deer eat more food in winter or summer?
5. When there are more coyotes are there fewer mice?
6. When a person drives over the speed limit is he more likely to have a car accident?
7. When it is a full moon do more animals get hit by cars?
8. Do mothers who give birth after the age of 40 have an increased risk of giving birth to babies with birth defects?
9. Do people run faster on cement or grass?
10. Do people who graduate from high school make more money than people who drop out?

(4)

Scientific Method Stations: Individual Student Sheet

Name: Date: Hour:

11. Do students lose fewer homework assignments if they use color-coded folders?

12. Do teenagers get in fewer car accidents if they do not listen to music while they drive?

13. Does mint gum or fruit gum keep its flavor longer?

14. Do students who eat breakfast get higher test scores?

15. Will swimmers swim faster if they shave their legs?

16. Will football teams score more touchdowns if they weightlift twice a day?

17. Will dogs live longer if they eat kibble or canned dog food?

18. Does taking a vitamin C supplement reduce the chance of getting a cold?

19. Do children who play violent video games commit more crimes as adults?

20. Are children more likely to develop scoliosis if they carry a heavy backpack?