# PRINCIPLES OF AGRICULTURE

Things that I have collected, 'stolen', or created to make my life easier!!!

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#### -Notebooks

- -1<sup>st</sup> day of school get to know each other, do activities that students must tell the class facts about themselves, let them know what they will need for your class but don't bore them with syllabus!
- -About the 3<sup>rd</sup> day of school Start to set up notebooks This will take about a week Organization of the notebook is the key to making your life easier for the rest of the school year!
- -What is FFA? Powerpoint with notes in it for students to follow along, but every other slide is pictures of Columbus FFA members from the past year. This allows the freshman to see all of the activities that your chapter participates in for the entire year! Grab those students when they are fresh and impressionable!

#### -Creed Project -

\*Students have to memorize the FFA – I have them memorize it, one paragraph at a time. One paragraph a week, for five weeks. Counts as a major test grade. Each paragraph is also a portion of an ice cream sundae. Students have to pass that paragraph (70 or higher) to receive that part of the sundae.

Paragraph 1 – Bowl

Paragraph 2 – Ice Cream

Paragraph 3 – Topping 1

Paragraph 4 - Topping 2

Paragraph 5 – Spoon

-Parliamentary Procedure – It is very dry and hard to grasp for the average freshman student in your classroom. Find a way to liven it up!

\*I have six tables in my classroom. I break the students into six groups. I make each table draw a game out of the hat. (Jeopardy, Monopoly, Kahoot, CandyLand, Baseball, Group Choice) Students have to develop a game that they drew out of the hat with the motion purpose, how to state it and pertinent facts. Students have one week to develop the game then we rotate games your table has to play another team's game.

-People in Agriculture – Students draw names of influential people in Agriculture – They have to create a poster over their contribution to agriculture. I hang them on my classroom ceiling for the rest of the school year. Then I create a scavenger hunt. I get at least one fact that is specific to the poster and they have to find which person it belongs to. Some facts can be found on multiple posters and some facts are only on one poster.

-Agriculture Around the World – Each student chooses a different country of the world and creates a ¼ page poster of the agriculture products from that country. I hang these on the ceiling as well for the rest of the school year.

#### After Thanksgiving

-Shop Safety – Be sure to have a shop safety form signed by student and the parent. I make my students take a shop safety test... every student must make a 100 on the shop safety test... you don't want someone to be safe on 70% of the time! They can take it as many times as they need. Take time to go over tool ID. Talk about general shop safety rules (proper clothing, eye protection, colors of the shop, different type of fire extinguishers, etc.) Show eye injury pictures.

\*Stool plans -- show examples, partner up students - one will get to take it home.

\*Order #2 Pine 1"X12"12' boards (each board will make 2 stools)

\*We only use hand tools... Students must learn how to do it the hard way before the learn the easy way... they will never go backward if you try to do it opposite.

\*Each pair get 72 inches... their stool must have a top, two legs and some sort of middle support

\*Give examples and allow students to make plans before they start.

#### After Christmas Break

CDE Draft Day – I set up tables in my classroom of each CDE contest we train in Columbus with sample contest materials.

Wildlife - Techniques and Game Laws

Poultry – Parts ID, Exterior Eggs, Interior Eggs, Further Processed

Floral - Flower/ Plant ID

Vet Tech - Tool & Specimen ID

Milk Quality - Cheese ID, Dairy vs. Non

Food Science – Triangle Tests, Aromas

Livestock – Set up a class using pictures

- -Run it just like a contest; pass out group letters, clipboards and rotations. Give a *quick* overview of each of the contests then let the kids answer the questions.
- -The next day give out "awards" for top overall scores. Explain each contest in depth.

Food Science – Talk about conception to consumer. History of Food Science, regulations, FDA and Food Scientists.

- -New products pass out a new product that has hit the store shelves for the first time within the last year or so. Make students make a list of 10 new products that they can think of that are new to shelves within the last year. Then talk about if they could create a new product What would it be? Make a list of ideas. Share with their table and then the table has to come up with the three best ideas their table had combined. Share with the class... (In my food science class, we make the items.)
- -Dairy products dairy vs. non dairy items, cheese ID, some years we make ice cream in a bag.
- -Aromas Food Science CDE list.
- -Triangle Tests Food Science CDE

#### Soils

- -Soil Profiles in water bottles from soils around the school. OR Food Soil profiles... in a clear cup... Topsoil (chocolate pudding), Subsoil (vanilla or butterscotch pudding), Parent Material (crushed graham cracker), Bedrock (lightly broken up golden oreos). [color is important]
- -Soil Triangle color and mix colors to show how sand, silt and clay are mixed in the earth.

#### **Plants**

- -Importance of Plants in our lives essay (usually around the English 1 EOC test write a preparation essay, with the help of the English teacher write a prompt that would be similar to one they would see on the EOC test... English teachers love this ©)
- -Seed Germination Beginning stages of plant growth will begin faster in an environment that is warm and moist your mouth. Have the students place a lima bean seed (from the grocery store, dry bean isle) in their mouths for 10-15 minutes. They cannot talk or open their mouths. Tell them not to suck on it like a lollipop or chew it, just let it sit between their tongue and the roof of their mouths. Have something for them to do during this time period... my kids color a monocot and a dicot seed, each seed part a different color, the use the classroom iPads to look up the function of each seed part. During this time, also, place a few lima bean seeds in a cup of water (use cold water), for the same amount of time that the beans are in their mouths. At the end of 10-15 minutes have them take the lima bean out of their mouths and inspect the differences from when they started. Also take the beans out of the water in a cup and compare what they look like to the bean in their mouths. *Most*, some will end up being duds and not doing anything, will have increased in size and the seed coat will begin to ripple around the edges. There will significant changes from the beginning and from the ones in the cup of cold water.
- -Plant Carousel Activity Use it for basic plant terminology. You can you for any subject matter when you have lots of vocabulary terms. (I have attached mine for plants)
- -Plant parts and functions make a plant out of play-doh, each part a different color, write plant functions next to each labeled part. Just be sure to monitor students closely when working with play-doh.
- -We have planter boxes in Columbus, or somewhere around your Ag Building. Plant veggies or sunflowers, so kids have something to take home at times.

#### **Animal Science**

-Introduction to Breeds — Before class, mix regular m&ms, skittles and m&m crispy or jelly beans (be careful with peanut m&m due to allergies), in a large Ziploc. Give each kid a small scoop out of the bag. Each kid should have a plate then sent of a "fort" around their plate. Books or binders, so no one can see their work on their plate. Otherwise you will have almost every plate in the room look similar. Tell the students all the items on their plate is their "herd", it is the large group of animals. They need to break their large group of animals into smaller groups based on similar characteristics. (leave it as that... don't give them many instructions, allow them to get creative) After everyone is done, have them take down their forts. Everyone should just look at their neighbors... have the kids go around and say what characteristics they used in order to break up their herd. Explain that this is what a breed is... it allows up to break up large groups of animals (a species) into smaller groups based upon similar characteristics.

-Livestock Management \*Animal ID – Brands, ear notching, ear tags, tattoo, etc. \*Injections – practice with bananas or oranges \*Castration – types and methods

-Livestock Selection - Livestock Judging fundamentals

#### In May

-Welding – We review shop safety. Discuss hot metal safety. Take time to explain the welding process, how it works, process of stick welding. Sometimes do the different types of welds (butt joint, transverse fillet weld, edge joint, tee joint, corner joint) with Club crackers and can cheese.—All depending on the time of the year and what I have left to do. Then we all go out into the shop and the students watch me weld, from start to finish of setting up your work area until chipping and cleaning the weld. (Use an older student, in an ag mech class, if you do not feel comfortable welding or having the students watch you!) Then I break the class into groups based on how many welders we have. And they help each other and practice making a bead. Some students will have a really hard time just to keep an arc, others will pick it up quickly. After a week of practice, each student will get a 4X4 piece of plate... on one side of the plate they will have to make as many nice beads as they can (or you can tell them 8 lines)... on the back side they have to weld their initials. In my freshman class, we are not concerned with merging two pieces of metal, I just want them to make and keep an arc and to get the process of creating a bead down. They will learn how to merge metal once they get into the Ag Mech class.

#### Columbus High School Course Syllabus



Course Title: Principles of Agriculture,

Food and Natural Resources

Teacher: Ms. Roxanne Herbrich

Conference Period: 8th Period, 2:04pm-

2:56 pm

Contact Info: Call 732-5746 for an appointment or email me at herbrichr@columbusisd.org

#### **Course Description:**

This course is a general introductory class that deals with the Agriculture program, the FFA and many leadership aspects. The course includes agriculture history, agriculture and the environment and the scope and importance of agriculture. The course also includes basic plant and animal concepts, and basic woodworking skills and welding skills as an introduction to agricultural mechanics.

#### **Materials:**

Composition Notebook Pen or Pencil

Textbook: Official FFA Manual

#### **Class Rules and Expectations:**

- 1. All students will be seated with materials before the tardy bell rings.
- 2. The teacher will dismiss the class, not the bell.
- 3. No food, candy, gum, or drinks (except bottled water) are allowed.
- 4. Students will demonstrate respect at all times for fellow students and school staff.
- 5. Written or spoken profanity is NOT permitted.
- 6. Students will not sleep in class.
- 7. Follow all the rules established in the "Student Code of Conduct".

**Tutorials:** Must be scheduled by appointment with Ms. Herbrich.

#### **Homework Policy:**

Homework is due the following class day unless otherwise stated by the teacher. If a student does not have it that day, it may be brought to the teacher and follow the late work policy.

#### Late Work Policy:

Students will be given at least one opportunity to submit late work not related to an absence for a maximum grade of 75.

#### **Grading Policy:**

Major Grades

40% (Tests, Quizzes, Posters, etc.)

Minor Grades

50% (Worksheets, Daily grades, Notes, Leadership,

SAE, etc.)

Homework/Part.

10% (Classroom Leadership)

## \*\*I will be posting grade averages, in the classroom, once a week, by student ID number. \*\*

#### **Course Outline:**

Aug. 22	Introductions/ ID Cards/ "Who are you?"/ "What is FFA?"/
	SAE Opportunties/ FFA Stockshow Rules
Aug. 29	"What is FFA?" / FFA History
Sept. 5	FFA History/ FFA Manual
	1st Paragraph of the FFA Creed (7th) – Memorized
Sept. 12	Greenhand Week Festivities
	2 <sup>nd</sup> Paragraph of the FFA Creed(12 <sup>th</sup> ) – Memorized
Sept. 19	FFA History/ FFA Manual
	3 <sup>rd</sup> Paragraph of the FFA Creed(21 <sup>st</sup> ) – Memorized
Sept. 26	FFA Manual/ Scavenger Hunt/ Testing
	4 <sup>th</sup> Paragraph of the FFA Creed(29 <sup>th</sup> ) – Memorized
	End of the 1 <sup>st</sup> 6 Weeks

Oct. 3	Parliamentary Procedure (Main/ Subsidiary/ Incidental)		
	5 <sup>th</sup> Paragraph of the FFA Creed (6 <sup>th</sup> ) – Memorized		
Oct. 10	Parliamentary Procedure (Main/ Subsidiary/ Incidental)		
Oct. 17	Parliamentary Procedure (Incidental/ Unclassified)		
Oct. 24	Parliamentary Procedure (Privileged)/ TESTING		
Oct. 31	History of Agriculture/ Agriculturalists		
Nov. 7	History of Agriculture/ Agriculturalists		
	End of the 2 <sup>nd</sup> 6 Weeks		
Nov. 14	Agriculture Around the World		
Nov. 21	Careers in Agriculture/ Ag Research/ Biotechnology/		
	Personal Health Habits/ Appearance/ Professional Work		
	Habits/ Etiquette		
Nov. 28	Shop Safety/ Shop Plans/ Woodworking Projects		
Dec. 5	Woodworking Projects		
Dec. 12	Dec. 12 Woodworking Projects/ <b>Semester Finals</b>		
Dec. 19	ec. 19 Semester Finals		
	Christmas Holidays		
	End of the 3 <sup>rd</sup> 6 Weeks		

#### 4th Six Weeks Topics: Jan. 5th - Feb. 16th

Recordkeeping Systems,
Food Science and Technology,
Trends in world Food Production
Plants importance to Agriculture,
Components and Properties of soils,
Process of soil formations,
Structure and Functions of plant parts,
Plant germination, growth and development,
Reproduction genetics and breeding of plants

#### 5th Six Weeks Topics: Feb. 20th -Apr. 6th

Animal anatomy and physiology Breeds and classes of livestock Animal growth and development Animal selection, reproduction, breeding and genetics

#### 6th Six Weeks Topics: Apr. 10th-May 25th

Agricultural in the environment
Effects of Chemicals, Alternate Energy Sources
Fuel and Water Conservation
Safe & Appropriate lab procedures,
Basic Agricultural Construction – Stick Welding Procedures

\*\*Leadership days will be added as needed, in order to distribute important information out to all ag students.\*\*

\*\*It is not a requirement to join FFA or show a project in order to take this class, simply an opportunity available for each student.\*\*

## MOST IMPORTANTLY... To receive a QUALITY grade, you must do QUAILTY work!!!

## Ms. Herbrich's Rules for Success

Understand that respect is expected
Create a positive learning space
Come to class prepared to learn
Ensure that you are giving 100%
Stand out, but always be yourself

Strive to make each day better!

## MS. HERBRICH'S AGRICULTURAL 2DUCATION CLASSROOM RULES:

Learning to Do: Students are expected to participate in all class activities.

Doing to Learn: Students are required to be Prepared for all class activities. This is not Limited to a pencil or paper.

earning to Live: in this classroom everything is earned. This includes grades, privileges and respect.

LIVING TO SERVE: STUDENTS ARE EXPECTED TO RESPECT THEIR FELLOW CLASSMATES AND DISPLAY THE CHARACTERISTICS OF a LEADER.

Course: Principals of Agriculture	
Period:	
I have read and agree to follow the course	-
Student Printed Name	
Student Signature	Date
Parent/ Guardian Signature	 Date

Stay up to date with FFA Events and Activities...
Students and Parents can join the Remind Group
TEXT @msherbr TO 81010

Class reminders will be sent out occasionally...

Students and Parents can join the Principles of Ag

Class Remind Group

TEXT @cardprin TO 81010

#### My Interactive Notebook Rules

Scientists use a notebook to write down information about their observations and their questions. The following rules will help you create an interesting and informative journal to show what you have experienced and learned during this Agricultural Science course. Your journal should reflect your experiences yet be easily understandable to others.

#### ✓ PEN or PENCIL ONLY!!!

- ✓ All coloring should be done with pencil colors, or crayons. Occasionally a marker may be used but do not use a Sharpie or other bleed through markers.
- ✓ Writing must be **NEAT** and **LEGIBLE!**
- ✓ Pages are numbered in the TOP OUTSIDE CORNER of BOTH pages.
- ✓ Pages must NOT be torn out of your journal.
- ✓ **EVERY PAGE** has the date and unit title to help remind you of the concept experienced.
- ✓ NO staples!!! Use tape or glue sticks to attach papers to pages.
- ✓ Pages will be used for notes, assignments, worksheets, etc. NO random notes or wasting pages in your journal.
- ✓ Use complete sentences to communicate your observations, plans, explanations and conclusions.
- ✓ REMEMBER: Notebooks will be collected for a MAJOR TEST GRADE each six weeks, so make sure that you are keeping up and putting effort into your journal.
- ✓ Notebooks MAY NOT leave my classroom. All notebooks will be stored in the appropriate class period drawer.

NAME	CLASS PERIOD
I BELIEVE	IN THE FUTURE
OF AGRICULTURE,	WITH A FAITH
BORN	NOT OF WORDS

1 (
ACHIEVEMENTS WON
Admirtimentowork
, i
AND PAST GENERATIONS
! {
IN THE DOMISE
IN THE PROMISE

EVEN AS THE BETTER THINGS	WE NOW ENJOY
-	
HAVE COME TO US	FROM THE STRUGGLES OF FORMER YEARS.

## People in Agriculture Research Project

This project will be a visual presentation over the person you draw from a hat to research. *The poster is due on Friday, November 4<sup>th</sup> and will be a major grade.* The presentation will be made in front of the class with a poster display on a minimum of ½ sheet of poster board. You will receive a presentation grade and a poster grade. The poster will be completed during the Ag class period. The display should include the following information.

I	Personal Background -where and when they were born					
	-brothers, sisters, parents					
11	Picture of the Person					
	-may be drawn or printed					
	Occupation					
	-what they did for a living					
	-some had a variety of occupations and changed frequently					
IV	What was their major contribution to agriculture?					
	-what they invented, discovered or did					
V	How would our world be different if they had not made this contribution?					
VI	Other interesting facts about the person					
VII	Sources					
	-list books or internet sources that you used to gain your information on					
the b	ack of the poster (Must have at least 2 sources)					
I-IV-V	To promise output					
11-111-\	parties and					
Neatr	ness/ Creativity 15 points					
	may earn an extra 5 points on this project by having one of your					
paren	nts sign this paper and returning it by Friday, Nov. 4 <sup>th</sup> .					
l am a	am aware that my child has an agriculture project due on Nov. 4 <sup>th</sup> .					
Paren	nt's Signature					
Stude	nt Name					

## Agriculture around the World

1.	What are at least 5 (five) ag products produced in that country? (20)
2.	What are the two MOST common ag products? (20)
3.	How does agriculture affect their economy? (10)  a. Some countries rely on agriculture more than industrial products.
4.	Interesting facts about the country concerning agriculture. (20)
5.	Sources – listed on the back. (10)
6.	Neatness and creativity (10)
7.	Map of country AND outline & country's flag (10)

My country \_\_\_\_\_

Due: Tuesday, November  $17^{th}$  – At the end of the class period!

Names:	Names:
Prin. Of Ag Stools – Grading Rubric	Prin. Of Ag Stools – Grading Rubri
Sturdy (20)	Sturdy (20)
Straight Cuts (40)	Straight Cuts (40)
Nails (10)	Nails (10)
Overall Appearance (30)	Overall Appearance (30)
Nail Points Each (-2)	Nail Points Each (-2)
Not Sanded Edges Each (-5)	Not Sanded Edges Each (-5)
Names:	Names:
Prin. Of Ag Stools – Grading Rubric	Prin Of 4a Stools - Gradina Rubric
Prin. Of Ag Stools – Grading Rubric Sturdy (20) Straight Cuts (40)	Prin. Of Ag Stools — Grading Rubric Sturdy (20) Straight Cuts (40)
Sturdy (20)	Sturdy (20)
Sturdy (20)  Straight Cuts (40)  Nails (10)	Sturdy (20)  Straight Cuts (40)
Sturdy (20)  Straight Cuts (40)  Nails (10)	Straight Cuts (40)  Nails (10)  Overall Appearance (20)

Poultry				
Egg 1		Part 1		
Egg 2		Part 2		
Egg 3		Part 3		
Nugget Plate 1	<del></del>	Interio	or Egg 1	
Nugget Plate 2		Interio	or Egg 2	
<u>Livestock</u> – Market Swine Class				
	-			
Wildlife				
1	4			
2.	5			•
	J	·		
3				
Food Science				
Oreos: A B C	Crackers: A	В	С	
Aromas: 1	2	·		3
Milk Quality			Dairy vs. Non	
Cheese 1		1.	Dairy	Imitation
Cheese 2		2.	Dairy	Imitation
Cheese 3		3.	Dairy	Imitation
Cheese 4		4.	Dairy	Imitation
				1

<u>Floral</u>	
1.	
2	
3	
4	
5	
Vet Tech	
1	
2	
3	
4	
5	
<u>Horse</u> – Halter Class	

## <u>Floral</u>

Jade

Eucalyptus

Waxflower

## <u>Floral</u>

2. Name this tool.

**Anchor Tape** 

Floral Tape

Wrist Corsage Holder

## <u>Floral</u>

3. Identify this plant.

Gypsophila

Liatris

Croton

## <u>Floral</u>

4. Identify this tool used in floral shops.

**Bullion Wire** 

**Chenille Stems** 

#18 Florist's Wire

## <u>Floral</u>

1. Identify the pest on the underside of this leaf.

Scale

Spider Mite

**Aphid** 

Whippin	g Cr	eam					
Sample 1				Sample :	2		
Color	Color		<del></del>	Color			
Smell 1	2	3	4	5	Smell 1	. 2	
Taste 1	2	3	4	5	Taste 1	2	
Dairy Non-Dairy		1	Dairy				
Milk							
Sample 1	L				Sample :	2	
Color				<del></del>	Color		
Smell 1	2	3	4	5	Smell 1	2	
Taste 1	2	3	4	5	Taste 1	2	
Dairy		Non	ı-Dairy	1	Dairy		

Name\_\_\_\_\_\_ Date\_\_\_\_\_\_
Dairy vs. Non-Dairy Products

#### Cheese

### Sample 1

*Color*\_\_\_\_\_

#### Sample 2

Smell 1

Smell 1 2 3 4 5

Color \_\_\_\_\_

2

3

5

Taste 1 2 3 4 5

Taste 1 2 3 4 5

Dairy Non-Dairy

Dairy Non-Dairy

### Coffee Creamer

#### Sample 1

## Sample 2

Smell 1

Smell 1	2	3	4	5
omott 1	<b></b>	3	4	3

Color \_\_\_\_\_

Color\_\_\_\_\_

2

3

5

Taste 1 2 3 4 5

Taste 1 2 3 4 5

Dairy Non-Dairy

Dairy Non-Dairy

## Butter vs. Margarine

## Sample 1

## Sample 2

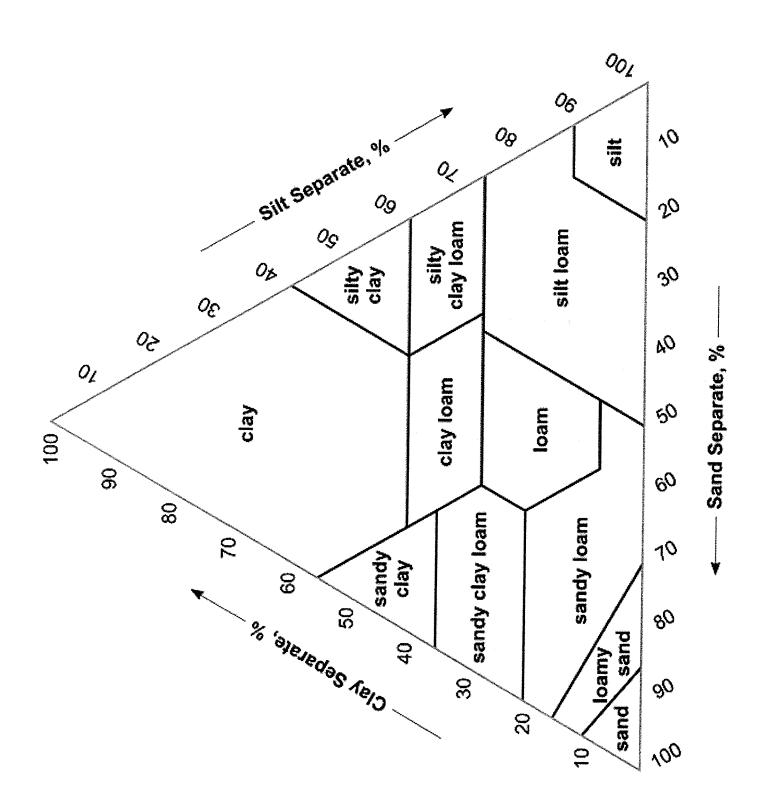
Color					Color				
Smell 1	2	3	4	5	Smell 1	2	3	4	5
Taste 1	2	3	4	5	Taste 1	2	3	4	5
Dairy		Non-Dairy			Dairy		Non	-Dairy	!

## Frozen Product

## Sample 1

## Sample 2

Color					Color				
Smell 1	2	3	4	5	Smell 1	2	3	4	5
Taste 1	2	3	4	5	Taste 1	2	3	4	5
Dairy		Non-Dairy		Dairy		Non	-Dairy	1	



## Keeping it Real

a time, students will go outside and find a "real life" example of the term. Students should then use the tape provided and attach their example to the group butcher paper. Label your example with the term and your name. Students will go in youngest to oldest order.

- Leaf part of a plant consisting of stipule, petiole and blade
  - → Simple leaf single leaf arising from a stem
  - Compound leaf two or more leaves arising from a common point on the stem
  - Leaf blade the wide portion of a leaf
- Petiole stem of the leaf
  - Axillary bud bed that occurs at the axil of the leaf
  - Axil angle above the leaf or flower bud
- Terminal bud bud at the end of a branch

  Vegetative bud bud that will produce the stem and leaf growth of the plant
  - Flowering bud bud that will produce flowers

## Tell it Like it Is

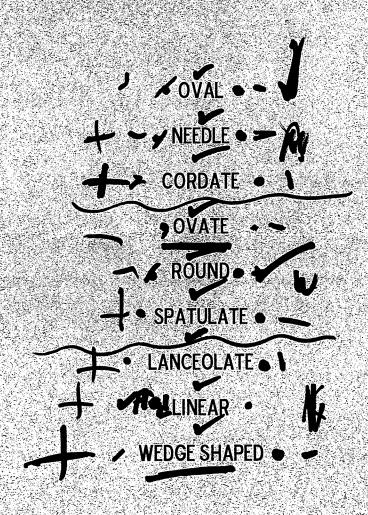
The group must write a story using **five** of the following vocabulary words correctly. The story must be written on the group butcher paper and be at least seven sentences long. Underline the five vocabulary words in the story. The student who has the nearest birthday going forward from now is the scribe.

- Xylem carries water and nutrients from roots to leaves
  Phloem carries food to places of storage
- Stem supports the leaves and conducts the flow of water and nutrients
- Woody hard, stiff, dark colored growth
- Herbaceous soft and succulent stem, does not turn woody
- Photosynthesis the use of light to manufacture sugar from carbon dioxide and water
- //Cuticle waxy protective covering of the leaf
- Epidermis surface layer of the leaf
- / Chloroplasts contains chlorophyll, providing food, gives plant green color

Guard cells – cells that surround the stoma

## Look it up!

Use the iPads that are provided on the table. Look up each leaf shape and draw that leaf shape on your group butcher paper. Be sure to label the leaf shape. The person with the largest shoe size goes first to smallest shoe size. Keep choosing leaf shapes until ALL terms are taken.



#### Ahhhh... A break for your brain!

The group should draw a square that is 10inches X 10inches. Each person must draw a part in a group picture that tells a story. Can be anything school appropriate, does not have to relate to this class. The person that just had the most recent birthday is designated as the group leader.

## Illustrate to Replicate

Draw a picture on the group butcher paper that represents the definition of the word on the slip of paper. Each member must choose one vocabulary term from the list. Put your name under your illustration.

- --- Adventitious roots -- branch of a primary root
- Taproot Main root of the plant
- Fibrous roots many fine hair-like roots
  - Root cap outermost part of the root
- Root hairs small microscopic roots
  - · Corms short, flattened underground stem
- Bulbs short, underground stem surrounded by fleshy leaves
  - Rhizomes horizontal underground stem
    - \*Tubers specialized food storage stem that grows underground
- Node portion of the stem that is swollen and where leaves and buds originate from

## Match it Up

Each group member will participate in matching all of the cards with their respective definition. When all of the cards have been matched, the student who is the oldest of the group should ask the teacher for the correct list in order to see your score. You get 10 points for each correct match. Write your score number on your butcher paper.

Pollen are small male \_\_\_\_\_, that are necessary for fertilization in the flower.

Petals

perfect Flower

The ovary is the portion of the flower that contains the ovules or

The anther is the portion of the male

Perfect Flower

Stamen

Flower

Sperm

pollen

Seeds

The \_\_\_\_\_\_is the reproductive part of the plant.

Rase

The is the female part of the flower consisting of stigma, style, ovary and ovule.

A \_\_\_\_\_ is a flower containing all parts; stamen, pistil, petals and sepals.

#### **Beef Cattle Breeds Project:**

- 1. Create a mobile out of two coat hangers (provided).
- 2. Research 5 cattle breeds. Only ONE person in the class can have each breed. Breeds can be found at: <a href="http://www.ansi.okstate.edu/breeds/cattle/">http://www.ansi.okstate.edu/breeds/cattle/</a>
- 3. Each breed will have its own string and should contain, at least 3 facts and a picture.
- 4. Facts should pertain to unique characters of the breed or color markings.
- 5. Pictures may be drawn or printed. But must have the correct coloration and color markings.
- 6. The mobile should be seen from all angles, therefore, facts and pictures should be two sided.
- 7. You will have Wednesday and Thursday to work on this project. It is due at the end of the class period on Thursday.

My 5 Cattle Breeds:	Facts:
1	a
	b
	с
2	a
	b
	C
3	a
	b
•	c
4	a
	b
	c
5	a
	b
	C

			4	