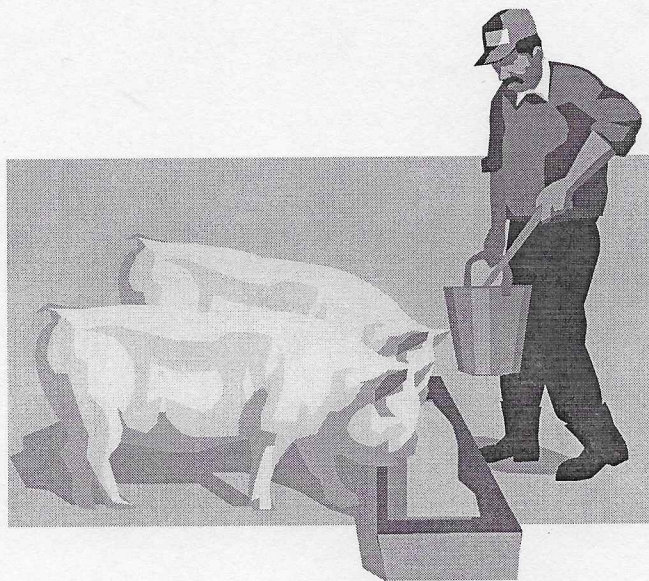


Vet Science
Animal Industry
Unit Handouts



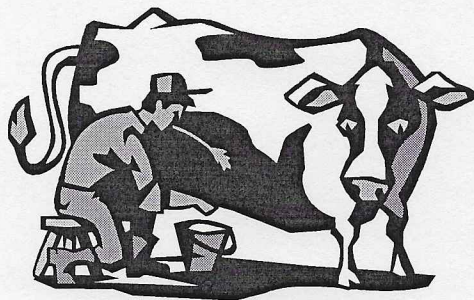
Livestock Terminology

	Cattle	Sheep	Swine	Goat	Poultry
Mature Female					
Young Female					
Mature Male					
Castrated Male					
Offspring/Young					
Animal Products					

Name: _____ Date: _____ Period: _____

What Do You Call It?

B	I	N	G	O



Name _____ Date _____ Pd _____

History of Animal Agriculture

1. What animals did humans begin domesticating first?
2. What is one possible reason that pigs were domesticated?
3. What traits did animals that were easier to domesticate have?
4. When is an animal considered domesticated?
5. Domestication allowed humans to have animals with the appropriate temperament and a steady food supply. What else were animals used for?

6. How did selective breeding take place?

7. In what order do you think animals were domesticated?

8. Complete the table below.

Species	Approximate date domesticated	Locations	Uses
Sheep			
Cattle			
Horses			
Pigs			
Goats			
Chickens			
Turkeys			

9. Draw a simple timeline illustrating the correct order in which animals were domesticated.

10. Define the following terms: Animal Science, Animal Husbandry, Biology, and the Scientific Method.

11. What sciences are included in animal science?

12. What happened on these dates?

1493

1519

1539

1641

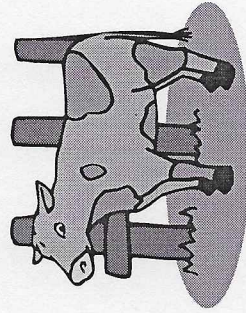
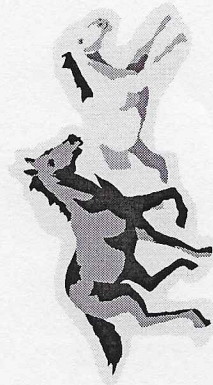
1760

Civil War changes

1862

1872

1914



13. List eight contributions animals make to society

a.

b.

c.

d.

e.

f.

g.

h.

Livestock Grazing in Northern California

Name: _____

Date: _____

Congratulations! Through a stroke of great fortune, you have been given 100 acres of prime grazing land in Northern California (Note: One acre is the area of land covered by 90 yards of a football field). Now you have the important task of figuring out which livestock to raise.

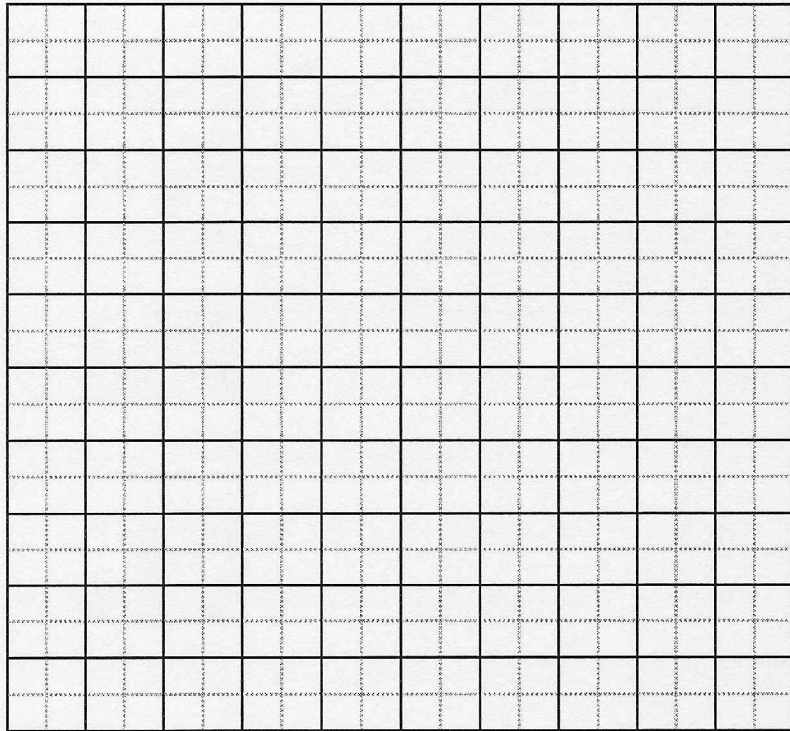
1. Choose your own combination of at least 3 different animals, and calculate how many of each you can have on your land. Each square on the grid represents one acre of land in Northern California.
 - a. Choose a symbol for each type of animal you've picked and write it in the legend to the right of the grid. By referring to the Food, Water and Space chart, include how many acres each one requires. (For example, a dairy cow requires 1.8 acres in Northern California, so you would mark 1.8 squares for each dairy cow on your land.)
 - b. Then, write the symbols in the grid squares used for each animal. Draw an outline around each individual animal's area so you can count them more easily.

Grid Legend			
Symbol	Animal	Acres	Total #
<div style="border: 1px solid black; display: inline-block; padding: 5px;"> = 1 acre </div>			

Report your business plan. How many of each animal did you choose? Why did you choose them? What will they provide to you?

2. My Sustainable Northern California Ranch Plan

Welcome to year two of ranching. Has all or almost all of the grass been eaten? Can you come up with a better plan for using your land more thoughtfully, so that it will be sustainable and can produce grass year after year? (Hint: Try "rotational grazing.")



<u>Grid Legend</u>					
Symbol	Animal	Acres	Total #		
<table border="1" style="margin: auto;"> <tr> <td style="text-align: center;"></td> <td>= 1 acre</td> </tr> </table>					= 1 acre
	= 1 acre				

How is this plan different than what you did in your first ranching plan? Why is it important to think ahead?

3. My Sustainable Arid Rangeland Ranch Plan

Because you have created a sustainable plan in the temperate rangelands, ranchers in Kenya want to hire you to come up with a sustainable plan for their ranch.


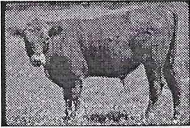





Refer to the Food, Water and Space chart in Kenya to design an appropriate and successful plan for that area. Hint: Many ranchers in Kenya are switching to camel milk and meat for their products. Can you guess why?

	Grid Legend					
	Symbol	Animal	Acres	Total #		
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px; text-align: center;"> </td> <td style="padding: 5px;">= 1 acre</td> </tr> </table>					= 1 acre
		= 1 acre				

How did your California plan differ from the plan you came up with in Kenya? Why was it different?

Sustainable Livestock Chart

How much food, water, and space do grazing animals need to survive?

Livestock Animal	Average Animal Weight	Drinking Water* per day (per year)	Food (Vegetation)* per day (per year)	Northern California required grazing area	Kenya, Africa required grazing area
Dairy Cow 	540 kg (1200 pounds)	65 L (2375 L)	15.8 kg (5767 kg)	1.75 acres	15 acres
Beef Cattle 	680 kg (1500 pounds)	59 L (21535 L)	11.3 kg (4125 kg)	1.25 acres	11 acres
Horse 	450 kg (1000 pounds)	60 L (21900 L)	10 kg (3650 kg)	1 acre	10 acres
Pig 	90kg (200 pounds)	17 L (6205 L)	4.2 kg (1533 kg)	0.5 acres	4 acres
Camel 	500-600 kg (1300 pounds)	Highly variable (can go weeks without drinking if plants are moist)	3.5 kg (1278 kg)	0.5 acres	3 acres
Goat 	22kg (50 pounds)	5 L (1825 L)	2.5 kg (913 kg)	0.25 acres	2 acres
Sheep 	80kg (175 pounds)	11 L (4015 L)	1.7 kg (620 kg)	0.25 acres	2 acres

* This is the amount an individual animal needs in order to survive.

Animal Agriculture
Housing Livestock and Changes in Farming

- The Five Freedoms

- All animals are entitled to freedom:

- from _____ and _____
 - from _____
 - from pain, _____, and disease
 - to express _____ behaviour
 - from _____ and distress

- Good Animal Housing

- This needs to be:

- _____ – to prevent foot rot and spread of fungal diseases
 - Well ventilated – to remove any air borne disease organisms
 - _____ free – to prevent animals losing too much heat
 - _____ – to enable animals to move around and prevent spread of disease
 - _____ – to prevent cross infection

- Other Considerations

- _____ is rarely required because animals will generate their own heat through respiration.
 - _____ conditions encourage the spread of disease.
 - Housing is often kept _____ to prevent fighting amongst the animals
 - There are strict regulations and _____ to ensure adequate housing
 - Adequate _____ and water must be supplied

- Agriculture has Changed

- _____ farms
- Profitability
- Increased _____
- _____ technologies
- _____ food system
- Increased productivity
- Environmentally-friendly
- Ethical commitment _____

- Then and now

- **1950**
 - U.S. population was _____ million
 - 5.6 million farms
 - 1 farmer fed _____ people
- **Today**
 - U.S. population is _____ million
 - 2 million farms
 - 1 farmer feeds _____ people

Suggested Space and Housing Guidelines for Fully Mature Farm Animals

Animal Unit	Horse	Beef Cow	Dairy Cow	Dairy Goat	Pig	Sheep	Hen	Broiler	Turkey
Enclosed Housing Area/Animal	1 horse - Tie stalls 45 sq. ft.; 5' x 9' - Box stall 12' x 8' or 10' by 10'	1 cow 75-100 sq. ft.	1 cow 75-100 sq. ft.	1 goat 20-25 sq. ft.	1 pig 48 sq. ft. with exercise yard; 100 sq. ft. without exercise yard	1 sheep 20-25 sq. ft.	1 hen 3-4 sq. ft.	1 broiler 3-4 sq. ft.	1 turkey 6 sq. ft.
Exercise Yard Area /Animal	200 sq. ft.	100-125 sq. ft.	100-125 sq. ft.	50 sq. ft.	200 sq. ft.	50 sq. ft.	10 sq. ft.	-----	20 sq. ft.
Pasture Area /Animal	1-2 acres	1-2 acres	1-2 acres	0.2-0.3 acres	12-14 sows/acre/ rotational pasture	0.2-0.3 acres	-----	-----	100 sq. ft.
Type of Housing and Boundary Setback	Enclosed ventilated barn or open 3-sided barn Setback 50 ft.	Open front 3-sided barn Setback 50 ft.	Open front 3-sided barn, free-stall or enclosed stanchion barn Setback 50 ft.	Enclosed barn with removable side panels or windows Setback 50 ft.	Enclosed barn, huts, shed, hutches or lean-to Setback 50 ft.	Open front 3-sided shed Setback 50 ft.	Enclosed barn Setback 50 ft.	Enclosed barn Setback 50 ft.	Enclosed barn Setback 50 ft.
Fencing	Electric Wooden rail Woven wire	Barbed wire Electric Woven wire	Barbed wire Electric Woven wire	Electric Woven wire	Electric Plank rail	Electric Woven wire	Chicken wire	-----	Chicken wire
Family Needs	1 horse per family member	½ - 1 beef animal/year; raise 2 animals/yr to provide cont. supply	1-2 cows	2-3 goats	2 pigs per yr.	6 sheep	6 hens	24 broilers	12 turkeys



Livestock Management Practices

Management Practice & Definition	Cattle	Sheep	Goats	Swine	Poultry
Castration- _____ _____					
Dehorning- _____ _____					
Vaccination- _____ _____					
Identification- _____ _____					
Docking- _____ _____					
Teeth Clipping- _____ _____					
Debeaking- _____ _____					
Shearing- _____ _____					

Name: _____ Date: _____ Pd: _____

Animal Terminology

Match the **Mature Male** to their **Castrated Male** partner

- | | |
|------------------|-------------------|
| _____ 1. Boar | a. Barrow |
| _____ 2. Buck | b. Capon |
| _____ 3. Bull | c. Steer |
| _____ 4. Ram | d. Wether (Goat) |
| _____ 5. Rooster | e. Wether (Sheep) |
- _____ 6. You are eating a tender, pork chop. What animal produced the meat?
- a. Barrow
 - b. Capon
 - c. Steer

Name: _____ Date: _____ Pd: _____

Animal Terminology

Match the **Mature Male** to their **Castrated Male** partner

- | | |
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- _____ 6. You are eating a tender, pork chop. What animal produced the meat?
- a. Barrow
 - b. Capon
 - c. Steer

7. List 2 Mature Females

a.

b.

8. List the animal that will eventually have a calf and produce milk.

9. List one animal product produced by a Ewe.

7. List 2 Mature Females

a.

b.

8. List the animal that will eventually have a calf and produce milk.

9. List one animal product produced by a Ewe.

7. List 2 Mature Females

a.

b.

8. List the animal that will eventually have a calf and produce milk.

9. List one animal product produced by a Ewe.

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b.

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9. List one animal product produced by a Ewe.