Introduction to
ANIMAL SCIENCE

Objectives:
A. List 5 functions of domestic animals
B. Describe and define what considers an animal to be domesticated
C. Define common terminology used in animal science
D. Categorize & distinguish animals by breeds, species, and types
E. List major types & uses of each species of livestock
F. List & describe benefits of animal agriculture

Introduction to Animal Science...

A. List 4 functions of domestic animals

Why do we CHOOSE to have animals?

A. List 4 functions of domestic animals

Functions of domestic animals:
1-Food

- Meat

- Eggs

- Milk

- Honey

A. List 4 functions of domestic animals

Functions of domestic animal
2- Clothing

- Wool

- Leather

- Hair/Fur

- Feathers

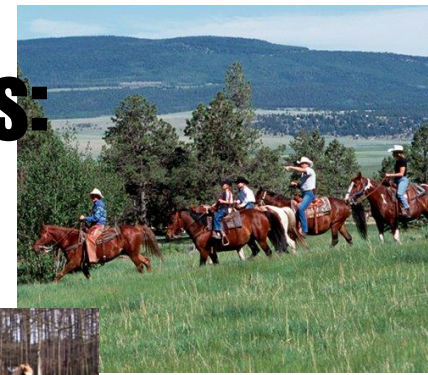A. List 4 functions of domestic animals

Functions of domestic animals:
3-Power

- Horses, Mules, Donkeys, Burros

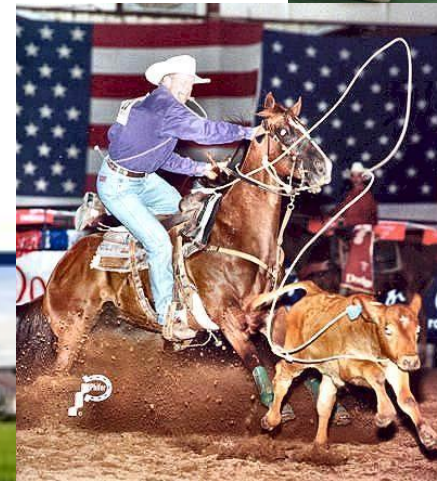- Llamas, Alpacas

- Oxen, Water buffalo, reindeer, yak, camels

Introduction to Animal Science...

Functions of domestic animals:
4- Recreation & Companionship

- Pleasure Horses

- Purebred Herds and Flocks

- Livestock Exhibitions, Shows, Rodeos

- Horse Racing

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A. List 4 functions of domestic animals

Functions of domestic animals:
5- Service

- Guide dogs for blind
- Police Dogs
- Rescue Dogs
- Therapy animals

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B. Describe and define what considers an animal to be domesticated

What is a domesticated animal?

B. Describe and define what considers an animal to be domesticated

Requirements for animals to be "domesticated"

1. The animal is **VALUED** and has a **PURPOSE**

2. The animal's **BREEDING** is subject to human control.

3. The animal's **SURVIVAL** depends upon humans.

4. The animal's **BEHAVIOR** (psychology) is changed in domestication.

5. **STRUCTURAL** characteristics have appeared which occur rarely if at all in the wild.

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B. Describe and define what considers an animal to be domesticated

Terms:
Wild Animal

Exists without **human intervention**
of any type (feeding, breeding selection, shelter, etc.)

– Genetically: Wild
– Behaviorally: Wild

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Terms:

Domestic Animals

Rely on humans for food & shelter, bred through artificial selection to choose and perpetuate desired traits

- Genetically Domestic
- Behaviorally= domestic

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B. Describe and define what considers an animal to be domesticated

Terms:

Tame Wild Animal

A wild animal that has adapted **behaviorally** to be useful to humans.

Example: bottle feeding a baby raccoon

– Genetically=Wild

– Behaviorally=Domestic

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Terms:
Feral Animal

A **previously domestic** animal that returned to the wild

Example: Feral Cat
- Genetically=Domestic
- Behaviorally= Wild

History of Animal Domestication Group Assignment

1. In groups, research the domestication of the animal you are assigned. Prepare a 2-3 minute explanation answering the questions on your worksheet for the class on your assigned species.

2. Answer the questions found on your worksheet
   - Cattle
   - Swine
   - Sheep
   - Goats
   - Horses
   - Poultry
   - Dogs
   - Cats
   - Rabbits

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B. Describe and define what considers an animal to be domesticated

Domesticate an Animal

Choose an animal that is currently wild and domesticate it to benefit humans…

**Remember that physical appearance AND behavior changes in the process of domestication!

C. Define common terminology used in animal science

What is binomial nomenclature?

A system used in science to
give plants and animals a name

Binomial Nomenclature

Canis familiaris

- **Genus**
  - Family Name
  - Capitalized & italicized

- **Species**
  - Individual species name
  - Lower case & italicized

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European Cattle (Bovine)

*Genus/Species: *Bos Taurus*

*Baby: Calf

*Young Male: Bullock

*Young Female: Heifer (until 1st calf is born)

*Castrated Male: Steer

*Mature Male: Bull

*Mature Female: Cow

*Group: Herd

Introduction to Animal Science...

Indian Cattle (Bovine)

*Genus/Species: *Bos Indicus*

*Baby: Calf

*Young Male: Bullock

*Young Female: Heifer (until 1st calf is born)

*Castrated Male: Steer

*Mature Male: Bull

*Mature Female: Cow

*Group: Herd

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Sheep (Ovine)

*Genus/Species: *Ovis aries*

*Baby: Lamb

*Young Male: Ram Lamb

*Young Female: Ewe Lamb

*Castrated Male: Whether

*Mature Male: Ram

*Mature Female: Ewe

*Group: Flock

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Pigs (Supine)

*Genus/Species: *Sus scrofa domestica*
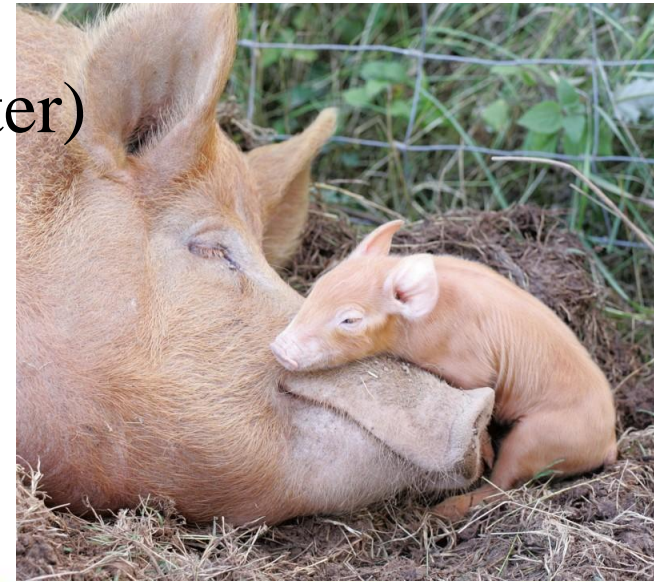
*Baby: Piglet

*Young Male: Shoat

*Young Female: Gilt (until 1st litter)

*Castrated Male: Barrow

*Mature Male: Boar

*Mature Female: Sow

*Group: Herd, Drove, or Mob

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Goats (Caprine)

*Genus/Species: *Capra hircus*

*Baby: Kid

*Young Male: Ram Kid

*Young Female: Doe Kid

*Castrated Male: Whether

*Mature Male: Billy

*Mature Female: Doe

*Group: herd or tribe

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Horses (Equine)

*Genus/Species: *Equus caballus*

*Baby: Foal

*Young Male: Colt

*Young Female: Filly

*Castrated Male: Gelding

*Mature Male: Stallion

*Mature Female: Mare

*Group: Herd

Introduction to Animal Science...

Chicken

*Genus/Species: *Gallus domesticus*

*Baby: Chick

*Young Male: Cockerel

*Young Female: Pullet

*Castrated Male: Capon

*Mature Male: Rooster

*Mature Female: Hen

*Group: Chickens: Brood, Flock, Peep

**FYI:

Turkeys: Rafter, Gobble, Gang

Geese: Gaggle (if they are in flight=Skein)

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Cat (Feline)

*Genus/Species: *Felis catus*

*Baby: Kitten

*Young Male: (None)

*Young Female: (None)

*Mature Male: Tom

*Mature Female: Queen

*Group: Clowder or Clutter

[Video Clip](#)

Introduction to Animal Science...

Rabbits

*Genus/Species: *Oryctolagus cuniculus*

*Baby: Bunny

*Young Male: (None)

*Young Female: (None)

*Mature Male: Buck

*Mature Female: Doe

*Group: Colony, Nest, Herd

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Dog (Canine)

*Genus/Species: *Canis familiaris*

*Baby: Puppy

*Young Male: (None)

*Young Female: (None)

*Mature Male: Stud

*Mature Female: Dam or Bitch

*Group: Pack

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D. Categorize & distinguish animals by breeds, species, and types

What is the difference?

Species

Breed

Type

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Species

A group of closely related animals that can **interbreed** and produce **fertile** offspring.

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Species

Example:

Equine

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Breed

Animals of common **origin** with characteristics that distinguish them from other groups within the same **species**

D. Categorize & distinguish animals by breeds, species, and types

Breed

Example:

Equine Breeds

Quarter Horse:

Runs ¼ mile exceptionally fast, medium build, common for ranch work, solid color

Clydesdale:

Draft horse, white feet with feathering, bay in color, usually 16-18 hands tall

Paint:

Similar to quarter horse, but distinguished by color pattern

Arabian:

Distinguished by arched neck, dished forehead, and raised tail

Type

Animals of the same **species** that are grouped together based on the **products** they produce

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D. Categorize & distinguish animals by breeds, species, and types

Type

Example:

Cattle

Some produce **MEAT** exceptionally well

Some produce **MILK** exceptionally well

Types of Livestock

Each species of livestock has specific breeds that perform best for each purpose:

- **Meat Type:** Produce meat efficiently

- **Dairy Type:** Produce milk efficiently

- **Dual Purpose:** Produce meat & milk efficiently

- **Ornamental:** Don't produce milk or meat efficiently, chosen for beauty

- **Performance:** Chosen for performance traits

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E. List major types & uses of each species of livestock

Cattle

- Beef Type

- Dairy Type

- Dual Purpose

E. List major types & uses of each species of livestock

Sheep

- Wool type

- Meat type

- Dual Purpose

FYI: Though they aren't common, there are dairy type sheep. Some specialty cheeses are made from sheep milk

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Pigs

- Meat Type

Introduction to Animal Science...

E. List major types & uses of each species of livestock

Goats

- Meat Type

- Dairy Type

Chickens

- Eggs (Layers)

- Meat (Broilers)

- Ornamental

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Horses

• Performance Type

o Draft Type

o Racing

o Ranch Work/Stock Horse

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F. List & describe benefits of animal agriculture

How does animal based agriculture benefit humans?

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What are the benefits of Animal Agriculture??

- Animals convert feed that humans CAN'T eat to food humans CAN eat
    - (poor hay, corn stalks, straw, etc.)

- Helps maintain fertility of the land

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What are the benefits of Animal Agriculture??

- Personal satisfaction of working with domesticated animals

- May more fully utilize capital, machinery and wasteland (range).

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What are the benefits of Animal Agriculture??

- ## Food Value:
  - Animal proteins are superior to vegetable proteins for humans

  - Animal proteins have improved amino acid balance over vegetable protein

  - Milk -- approximately 90% of milk for human consumption in the world comes from cattle

  - Over 85% of the world population desires food of animal origin

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Bell Quiz

Objective A & B

1. List 2 out of 5 qualifications to consider an animal "domestic"

2. Name 5 reasons why we have domestic animals.

3. Name 1 reason that animals have been domesticated

4. Give 2 examples of animals that can be used for power

5. Give 1 example of a service animal

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Bell Quiz
Objective C & D

1. What is a young, female horse called?
2. What is the definition of a "gilt?"
3. Define a "breed."
4. What is the definition of a "species?"
5. What term describes a group of animals within the same species that produce similar products.

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Bell Quiz
Objective E & F

1. Name 2 TYPES of cattle

2. Name 2 products produced from the sheep industry.

3. In the U.S., what TYPE of animals are horses?

4. Describe in a few sentences 2 benefits of animal agriculture.

5. What benefits do animal based foods have over plant based foods?

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