**Directions:**
Fill in the blanks.

**Word Structure Segment**

1. **Medical Terminology**
   - Is based on the following:
     - Greek and Latin *origins*
     - *eponyms* (i.e., words formed from a person’s name)
     - modern language terms
   
   Clinic Corner: Bang’s disease now known as Brucellosis, is named after Danish veterinarian Bernhard Lauritz Frederik Bang when he discovered the disease in 1897.

2. **Medical Vocabulary**
   - Is primarily based on Greek and Latin
     - Latin is the universal language of *medicine*
     - Greeks were the *founders* of modern medicine

3. **Word Structure**
   - Is important for veterinarians to *comprehend* in order to understand and learn medical *terminology*
   - Includes:
     - root words
     - prefixes
     - suffixes
     - compound words
     - combining forms

4. **Root Words**
   - Are the *foundation* of most medical terms
   - Gives a word *meaning*
   - May contain one or more roots

   Clinic Corner: The letter “o” is often used as a combining vowel at the end of most words allowing the term to be pronounced more easily.
5. Common Root Words
   • Examples include:
     – cardi/o - heart
     – cephal/o - head
     – dent/o - teeth
     – ophthalm/o - eye
     – steth/o - chest
     – nas/o - **nose**
     – ot/o - ear
     – derm/o, dermato/o - skin

6. Prefixes
   • Come before the **root** word
   • Modify the meaning of the root word
   • Often qualify the following:
     – number
     – measurement
     – position or direction
     – **negatives**
     – color
   Clinic Corner: Prefixes are not complete words without the rest of the word parts.

7. Prefixes
   • As number qualifiers include:
     – uni (one)
     – bi (two)
     – tri (**three**)
     – quadra (four)
     – quinta (five)
     – sexta (six)
     – octo (eight)
     – **nona** (nine)
     – deca (ten)
Veterinary Medical Terms & Terminology
- Teacher Notes

8. Prefixes
• As measurement qualifiers include:
  – hyper (excessive)
  – hypo (less than normal)
• for example:
  – hypothermi

9. Prefixes
• As position or direction qualifiers include:
  – sub (under)
  – peri (around)
  – supra (above)
• for example:
  – supracostal

10. Prefixes
• As negative qualifiers include:
  – an (without)
  – anti (against)
• for example:
  – antioxidant

11. Prefixes
• As color qualifiers include:
  – cyan/o (blue)
  – jaund/o (yellow)
  – erythr/o (red)
• for example:
  – erythrocyte

12. Prefixes
• Often have opposites which can be beneficial to learn common opposite prefixes include:
  – pre (before)
  – post (after)
  – hypo (high, above normal)
  – hyper (low, below normal)
13. Suffixes
- Come after the root word or words
- Modify the meaning of the root word
- Can be grouped together by meaning, which include:
  - pertaining to
  - surgical
  - procedural
  - double R
  - conditional and structural

Clinic Corner: The suffix used will determine the speech classification of the word. (e.g., anemia (noun); anemic (adjective))

14. Common “Pertaining to” Suffixes
- Examples include:
  - ic
  - al
  - ine
  - ary
  - an
  - ar
  - ous
  - tic
  - eal
  - ac
- for example:
  - cardiac

15. Common Surgical Suffixes
- Include:
  -ectomy - removal of
  - tomy – cutting, incision
  - plasty – surgical repair
  - centesis – surgical puncture to remove fluid or gas
  - pexy – suture to stabilize
  - scope – instrument or exam
- for example:
  - endoscope
16. Common Procedural Suffixes
   • Include:
     – **gram** – record of
     – **graphy** – procedure which records
     – **scopy** – procedure to visually examine
     – **logy** – study of
     – **therapy** – treatment
       • for example:
         – hydrotherapy

17. Common Double R Suffixes
   • Include:
     – **rrhagia** or **rrhage** – bursting forth
       • for example:
         – hemmorhage – bursting forth of blood from the vessels
     – **rrhaphy** – to suture
       • for example:
         – enterorrhaphy – suturing of the intestine
     – **rrhexis** – rupture
       • for example:
         – myorrhexis – rupture of the muscle

18. Common Conditional & Structural Suffixes
   • Include:
     – **rhexis** – rupture
     – **itis** – inflammation
     – **osis** – abnormal condition
     – **pathy** – disease
     – **algia** or **dynia** – pain
       • for example:
         – myalgia
19. Common Conditional & Structural Suffixes
   • Include:
     – um – structure
     – al (as in renal) – pertaining to kidney
     – ic (as in enteric) – pertaining to the intestines
     – an (as in ovary) – pertaining to the **ovary**
     – ac (as in cardiac) – pertaining to the heart
       • for example:
         – cardiac

20. Compound Words
   • Have two or **more** roots
     – roots may or may not be joined by a combining vowel
       • for example:
         – **backache** (back-ache)
         – **smallpox** (small-pox)

21. Combining Forms
   • Is an **incomplete** word containing a root word, prefix or suffix with a combining vowel
   • Help connect the parts of the word **together**
     – for example:
       • electrocardiogram

**Anatomical Terms Segment**
1. Anatomical Terms
   • Describe the locations of structures in relation to **other structures** or locations in the body
   • Are used in veterinary medicine in the following ways:
     – directional terminology
     – **positional terminology**
     – anatomical planes terminology
     – muscle and joint actions terminology
2. Directional Terminology
   - Include the following:
     – distal - away from the body
     – proximal - near the center of the body
     – caudal - near the tail
     – cranial - relating to the skull
     – ventral - relating to the underside of the animal
     – rostral - situated near the nose and mouth
     – plantar - relating to the sole of the foot

3. Directional Terminology
   See Anatomical Labeling Activity for slide graphic

4. Positional Terminology
   - Includes the following:
     – recumbent - lying down
     – dorsal recumbency - lying on the back
     – ventral or sternal recumbency - lying on the belly
     – left lateral recumbency - lying on the left side
     – right lateral recumbency - lying on the right side

5. Anatomical Planes Terminology
   - Is also important when describing locations of wounds or producing radiographs
   - Divides the animal into four planes
   - Include the following:
     – median plane
     – sagittal planes
     – dorsal plane
     – transverse plane
6. **Median Plane**
Divides the body into **equal** right and left halves

7. **Sagittal Planes**
Are any planes to the right or left, which lie **parallel** to the median plane
8. Dorsal Plane
Divides the animal into **dorsal** and ventral

9. Transverse Plane
Divides the trunk of the animal or the **extremities**
10. Muscle & Joint Actions Terminology
   - Is used to describe the movements of both muscles and joints
   - Includes:
     - extension
     - flexion
     - abduction
     - adduction
     - supination
     - pronation

11. Extension & Flexion
   - Are defined as the following:
     - extension is when the joint angle increases
     - flexion is when the joint angle decreases

12. Abduction & Adduction
   - Are defined as the following:
     - abduction is when the joint moves away from the body
     - adduction is when the joint moves towards the body
13. Supination & Pronation
- Are defined as the following:
  - supination is when the palm faces **upward**
  - pronation is when the palms face downward

14. Veterinary & Human Terms
- Are common in most **directional** terms and have the same meaning, however there are a few differences in directions and **planes** due to anatomy
- Differences include the following:

<table>
<thead>
<tr>
<th>Human Term</th>
<th>Veterinary Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Superior</td>
<td>Cranial</td>
</tr>
<tr>
<td>Inferior</td>
<td>Caudal</td>
</tr>
<tr>
<td>Anterior</td>
<td>Ventral</td>
</tr>
<tr>
<td>Posterior</td>
<td>Dorsal</td>
</tr>
</tbody>
</table>

**Body Systems Terms Segment**

1. Body Systems
- Are complex structures made up of **millions** of cells
- Each work together to carry out a special job
- Are highly affected by pathogens which disrupt **normal** cell functions which sometimes results in the death of cells and tissues
Veterinary Medical Terms & Terminology
- Teacher Notes

2. Body Systems
   • Include:
     – circulatory
     – respiratory
     – digestive
     – endocrine
     – immune
     – integumentary
     – nervous
     – skeletal
     – reproductive

3. Circulatory System
   • Is designed to pump and deliver blood to the body’s tissues
   • Is made up of the heart, arteries, veins and blood
   • Common conditions or diseases include:
     – heartworm
     – heart disease
     – hypertension

4. Circulatory System

![Diagram of the circulatory system](image.png)
Veterinary Medical Terms & Terminology
- Teacher Notes

5. Heartworm
- Is a parasitic worm transmitted by mosquitoes which lives in the heart and arteries of an infected animal
- Is an often serious and fatal disease
- Harms arteries and vital organs

6. Heart Disease
- Is any condition of the heart or blood vessels which inhibits the normal function of the heart and delivery of blood to the body
- Is often heritable in animals and can be acquired over time

7. Hypertension
- Is a condition which elevates the animal’s normal blood pressure
- Is usually caused by an underlying disease
Clinic Corner: Blood pressure is the force which is generated within the body’s blood vessels by the beating of an animal’s heart.

8. Respiratory System
- Provides the body with the exchange of oxygen and carbon dioxide
- Is made up of the nose, mouth, trachea, bronchi and lungs
- Common conditions or diseases include:
  - canine distemper
  - equine influenza
  - bovine respiratory disease

9. Respiratory System

[Diagram of the respiratory system]
10. Distemper
- Is a virus which is passed to animals through direct contact with fresh urine, blood or saliva
- Causes the following:
  - sneezing
  - coughing
  - nasal and eye discharge
  - fever
  - **lethargy**
  - vomiting
  - diarrhea
  - depression

11. Equine Influenza
- Is one of the most common infectious diseases of the respiratory tract in horses
- Damages the lining and mucous membranes of the respiratory tract
- Causes the following:
  - coughing
  - nasal discharge
  - fever
  - depression
  - loss of appetite

Clinic Corner: Equine Influenza is commonly seen in young horses around two to three years of age.

12. Bovine Respiratory Disease
- Is the most common disease affecting the North American beef cattle industry
- Causes the following:
  - rapid, shallow breathing
  - coughing
  - **salivation**
  - nasal and eye discharge
  - fever
  - depression
  - loss of appetite
13. Digestive System
- Breaks down food into simple substances which can be absorbed by the body
- Absorbs digested parts of food into the blood stream
- Includes four basic types of systems:
  - monogastric (simple)
  - ruminant (polygastric)
  - hindgut-fermenter
  - avian

14. Monogastric Digestive System
- Contains a single-chambered stomach
- Stomach is very muscular and stores ingested food and moves it into the small intestine
- Is found in humans, swine, dogs and cats

15. Monogastric Digestive System
See Anatomical Labeling Activity for slide graphic

16. Ruminant Digestive System
- Is also known as Polygastric
- Contains one large stomach which is divided into four compartments:
  - rumen
  - reticulum
  - omasum
  - abomasum
- Is found in cattle, sheep and goats

17. Ruminant Digestive System
18. Hindgut-Fermenter Digestive System
- Is found in animals who eat large amounts of roughage
- Is similar to ruminants, however does not have stomachs with several compartments
- Is found in horses, rabbits, guinea pigs and hamsters

19. Hindgut-Fermenter Digestive System

20. Avian Digestive System
- Differs highly from the previous digestive systems because bird have no teeth
- Is made up of the esophagus which empties directly into the crop, where the food is stored and then grinded by the gizzard with stones or grit
- Is a very fast process

21. Avian Digestive System
22. Digestive System
• Common conditions or diseases include:
  – colitis
  – colic
  – gastroenteritis

23. Colitis
• Is an acute or chronic inflammation of the membrane lining the colon
• Is most commonly caused by parasites, tumors, a change in food, allergies or swallowing of foreign objects

24. Colic
• Is defined as abdominal pain and causes problems to the digestive system
• Is the number one cause of death in horses
• Is caused by different types of conditions, such as gas or impaction

25. Gastroenteritis
• Is the infection or inflammation of the stomach and intestines
• Causes diarrhea, nausea, vomiting and cramping abdominal pain

26. Endocrine System
• Produces hormones which regulate metabolism, growth and development, tissue and sexual function, reproduction, sleep and mood
• Is made up of the pituitary gland, thyroid gland, parathyroid glands, adrenal glands, pancreas, ovaries and testicles
27. Endocrine System

28. Endocrine System
   - Common conditions or diseases include:
     - hyperfunction or hypofunction
     - hyperthyroidism
     - fatty liver disease

29. Hyperfunction or Hypofunction
   - Is caused by an imbalance in an animal’s hormone levels
     - glands which produce too much hormone are known as “hyper”
     - glands which do not produce enough hormone are known as “hypo”

30. Hyperthyroidism
   - Is caused by a tumor of the thyroid gland which produces excess thyroid hormone
   - Causes abnormal bone development and young animals to grow at an irregular rate
     - most affected animals will not survive through adulthood

31. Fatty Liver Disease
   - Occurs when cattle break down too much fat for the liver to process properly
   - Causes fat which is broken down to convert back to fat in the liver which then becomes toxic to the animal and decreases the cattle’s body condition
32. Immune System
- Defends the body against infectious organisms and other invaders
- Attacks organisms and substances which invade an animal’s system and causes diseases
- Is made up of lymph nodes, cells, proteins, tissues and organs
- Common condition or disease includes:
  - autoimmune disease

33. Immune System

34. Autoimmune Disease
- Occurs when the immune system fails to recognize itself and begins to attack and reject the body’s own tissue as a foreign object
- Causes:
  - soreness
  - itching
  - flaky skin
  - inflamed ears
  - excessive licking
  - swelling

35. Integumentary System
- Protects the animal’s body from disease by providing a barrier to viruses and bacteria
- Protects the body from dehydration, overheating or freezing
36. Integumentary System
• Is the **largest** organ in the body and includes the following:
  – hair
  – feathers
  – scales
  – nails
  – hooves
  – **horns**
  – skin

37. Integumentary System
• **Common** conditions or diseases include:
  – mange
  – rainrot
  – **ringworm**

38. Integumentary System

39. Mange
• Is a skin disease which is caused by **parasitic mites**
• Causes:
  – severe itching
  – hair loss
  – scabs and **lesions**
40. Rainrot
- Is a bacterial infection which **multiplies** in a moist environment
- Causes **scabby crusts** which form raised bumps on matted hair

41. Ringworm
- Is a highly contagious and **infectious** skin disease caused by fungi
- Causes:
  - grey-white areas of skin
  - raised circular outlines
  - lesions

42. Nervous System
- Transmits **signals** to different parts of the animal’s body and operates basic body functions like breathing and digestion
- Includes:
  - the central nervous system, which is the brain and spinal cord
  - the **peripheral** nervous system, which is made up of the nerves and ganglia

43. Nervous System

44. Nervous System
- Common conditions or diseases include:
  - peripheral neuropathy
  - equine protozoal **myeloencephalitis** (EPM)
  - listeriosis
45. Peripheral Neuropathy
- Is a nerve disorder which affects the peripheral nerves
- Causes loss of electrical signals in the nerves, impairs function and causes degeneration and deterioration

46. Equine Protozoal Myeloencephalitis (EPM)
- Is caused by horses ingesting feces of opossums which contain protozoa
- Causes lesions on the spinal cord and brain stem and neurologic damage
- Causes:
  - loss of coordination
  - stumbling
  - soreness
  - muscle atrophy
  - weakness
  - head tilt

47. Listeriosis
- Is a bacterial disease which causes uncoordinated movements, leaning against objects and paralysis
- Can result in death within two to three days after the onset of symptoms

48. Skeletal System
- Protects and supports the body tissues and internal organs
- Is made up of bones and other connective tissues
- Common conditions or illnesses include:
  - osteochondrosis
  - hip dysplasia
  - fractures

49. Skeletal System
See Anatomical Labeling Activity for slide graphic
50. Osteochondrosis
- Is a **disease** which can affect a variety of joints of a young, growing animal
- Causes **irregular** bone growth which can lead to painful lesions within the joints

51. Hip Dysplasia
- Is an **inherited** condition which is caused by a hip joint which has not formed properly
- Causes a joint to be loose and allows the leg bone to move too much which results in **painful** deterioration

52. Fractures
- Are also known as a **break** in bones
- Often occur due to accidents or incidents such as falls
- Require **immediate** care to reduce pain and proper healing

53. Reproductive System
- Consists of sex organs within animals which work together for the purpose of sexual **reproduction**
- Female anatomy includes:
  - ovaries
  - uterus
  - vagina
  - **vulva**
  - utter
- Male anatomy includes:
  - penis
  - testes
54. Male Reproductive System

55. Female Reproductive System

56. Reproductive System

- Common conditions or diseases include:
  - infertility
  - dystocia

57. Infertility

- Is the inability to conceive or carry a pregnancy
- Can affect animals of all ages but tends to more commonly affect older animals
58. Dystocia
• Is defined as difficult birthing
• May occur because of maternal difficulties or the position of the fetus within the uterus

**Common Veterinary Terms & Abbreviations Segment**

1. Common Veterinary Terms
• Can be grouped in the following categories:
  – species specific terms
  – physical examinations
  – animal handling
  – injections
  – blood sampling
  – laboratory procedures

2. Common Veterinary Terms
• Can be grouped in the following categories:
  – hospital procedures
  – surgical procedures
  – veterinary medical equipment
  – pharmacology
  – common veterinary abbreviations
  – common veterinary symbols

3. Species Specific Terms
• Include the following:
  – cat terms
  – dog terms
  – horse terms
  – swine terms
  – cattle terms
  – sheep terms
  – goat terms
4. Cat Terms
   • Include:
     – tom - intact male
     – neutered - castrated male
     – queen - intact female
     – spayed - sterilized female
     – kitten - young cat
     – queening - giving birth
     – litter - a group of offspring born at the same time

5. Dog Terms
   • Include:
     – dog/stud - an intact male dog
     – neutered - castrated male dog
     – bitch - an intact female
     – spayed - sterilized female
     – whelp or puppy - a young dog
     – whelping - giving birth
     – pack - a group of dogs
     – litter - a group of offspring born at the same time

6. Horse Terms
   • Include:
     – stallion - an intact male more than four years old
     – colt - an intact male less than four years old
     – mare - an intact female more than four years old
     – filly - an intact female less than four years old
     – gelding - a castrated male
     – foal - a young horse
     – foaling - giving birth
7. Swine Terms
   • Include:
     – boar - an intact male
     – sow - an intact female
     – barrow - a male who is castrated when young
     – gilt - a young female which has not given birth
     – pig or shoat - a young pig
     – farrowing - giving birth
     – herd - a group of pigs

8. Cattle Terms
   • Include:
     – bull - an intact male
     – cow - an intact female
     – steer - a male bovine castrated when young
     – heifer - a young female bovine which has not given birth
     – calf - a young bovine
     – herd - a group of cattle
     – calving or freshening - giving birth

9. Sheep Terms
   • Include:
     – ram - an intact male
     – ewe - an intact female
     – wether - a castrated male
     – lamb - a young sheep
     – flock - a group of sheep
     – freshening or lambing - giving birth

10. Goat Terms
    • Include:
     – buck - an intact male
     – doe - an intact female
     – wether - a castrated male
     – kid - a young goat
     – herd - a group of goats
     – freshening or kidding - giving birth
11. Physical Examinations
- Are used to identify any **abnormalities** associated with the animal in an effort to make informed judgments about its **health**

12. Physical Examination Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vital Signs</td>
<td>assess an animal’s health; includes pulse, respiration and temperature</td>
</tr>
<tr>
<td>Pulse</td>
<td>number of times the heart beats per minute</td>
</tr>
<tr>
<td>Respiration</td>
<td>breaths per minute</td>
</tr>
<tr>
<td>Temperature</td>
<td>degree of heat of a living body</td>
</tr>
<tr>
<td>Lymph Nodes</td>
<td>gland masses of tissue which contain cells</td>
</tr>
<tr>
<td>Capillary Refill Time</td>
<td>time it takes for blood to return to the tissue</td>
</tr>
<tr>
<td>Abnormalities</td>
<td>opposite of normal</td>
</tr>
<tr>
<td>Lethargic</td>
<td>not alert or active</td>
</tr>
<tr>
<td>Tartar</td>
<td>plaque build up on teeth</td>
</tr>
</tbody>
</table>

13. Physical Examination Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaque</td>
<td>growth of bacteria on teeth</td>
</tr>
<tr>
<td>Ophthalmoscope</td>
<td>instrument used when examining the eye</td>
</tr>
<tr>
<td>Palpate</td>
<td>examine by touching and feeling the area</td>
</tr>
<tr>
<td>Auscultation</td>
<td>listening with a stethoscope or other instrument</td>
</tr>
<tr>
<td>Murmur</td>
<td>abnormal sound within the heart</td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>irregular rhythm in the heart</td>
</tr>
<tr>
<td>Diagnostics</td>
<td>identifying, characterizing or diagnosing a problem</td>
</tr>
<tr>
<td>Femoral Pulses</td>
<td>pulse found inside the thigh of the hind leg</td>
</tr>
<tr>
<td>Inflammation</td>
<td>redness, swelling or pain on an area of the body</td>
</tr>
</tbody>
</table>
14. Physical Examination Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesion</td>
<td>wound which causes pain or a change in the body</td>
</tr>
<tr>
<td>Orthopedic Exam</td>
<td>examining the skeletal system, structures, muscles and ligaments</td>
</tr>
<tr>
<td>Range of Motion</td>
<td>how far a joint may move freely and painlessly</td>
</tr>
<tr>
<td>Dehydration</td>
<td>loss of water from the body</td>
</tr>
<tr>
<td>Gut Motility</td>
<td>ability to pass material through the gut</td>
</tr>
<tr>
<td>Ambulating</td>
<td>to walk</td>
</tr>
<tr>
<td>Defecation</td>
<td>to have a bowel movement</td>
</tr>
</tbody>
</table>

15. Animal Handling

- Is a term used to describe the way veterinarians and staff work with, respond to and interact with animals in a **clinical** or field setting
- Is **crucial** to the safety of the handler, owner and animal

16. Animal Handling

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>state of mental or emotional strain</td>
</tr>
<tr>
<td>Abnormal Behavior</td>
<td>acting differently from normal or typical behavior</td>
</tr>
<tr>
<td>Adverse Behavior</td>
<td>behavior which is preventive or harmful</td>
</tr>
<tr>
<td>Submissive</td>
<td>passive, obedient or conforming</td>
</tr>
<tr>
<td>Slip Lead</td>
<td>rope or tether which is attached around the neck of the animal to help control and restrain</td>
</tr>
<tr>
<td>Muzzle</td>
<td>guard or strap which is fitted over an animal’s nose and jaw to prevent biting</td>
</tr>
<tr>
<td>Twitch</td>
<td>device used to distract horses during exams or procedures</td>
</tr>
</tbody>
</table>
17. Animal Handling

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Pole</td>
<td>device used for very aggressive dogs</td>
</tr>
<tr>
<td>Halter</td>
<td>form of restraint used to control large animals</td>
</tr>
<tr>
<td>Shoot</td>
<td>form of restraint used for cattle</td>
</tr>
<tr>
<td>Stocks</td>
<td>form of restrain used for horses</td>
</tr>
<tr>
<td>Fractious</td>
<td>irritable or angered</td>
</tr>
<tr>
<td>Tranquilizer</td>
<td>medicinal drug used to reduce tension or stress</td>
</tr>
<tr>
<td>Net</td>
<td>used for fractious cats or wild animals</td>
</tr>
</tbody>
</table>

18. Injections
- Are used to administer medication and **vaccinations**
- Techniques differ based on the dosage and administration statements describing directions for use

19. Injections Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intramuscular (IM)</td>
<td>injection of a substance directly into the muscle</td>
</tr>
<tr>
<td>Subcutaneous (Sub Q)</td>
<td>injection used to implant a drug into the tissue layer between the skin and the muscle</td>
</tr>
<tr>
<td>Intravenous (IV)</td>
<td>injection of a substance directly into the vein</td>
</tr>
<tr>
<td>Syringe Barrel</td>
<td>part of the syringe which holds the medicine</td>
</tr>
<tr>
<td>Syringe Plunger</td>
<td>placed tightly inside the barrel of the syringe; allows the applicator to push the medication through the syringe</td>
</tr>
<tr>
<td>Syringe Needle</td>
<td>mechanism through which the fluid is injected into the animal</td>
</tr>
<tr>
<td>Gauge</td>
<td>thickness, size or measure of an object</td>
</tr>
</tbody>
</table>
20. Injection Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vaccinations</td>
<td>medicines which contain weakened or dead bacteria and/or viruses which are injected into an animal to allow their body to create antibodies against the disease</td>
</tr>
<tr>
<td>Antibodies</td>
<td>cells of the immune system which kill foreign objects in the body</td>
</tr>
<tr>
<td>Occlude</td>
<td>to close, shut or stop</td>
</tr>
<tr>
<td>Jugular</td>
<td>any of the three large veins in the neck</td>
</tr>
<tr>
<td>Lateral Saphenous</td>
<td>two large veins near the thigh on the hind leg</td>
</tr>
<tr>
<td>Cephalic</td>
<td>vein located on the front leg</td>
</tr>
</tbody>
</table>


- Is used in the **diagnosis** and monitoring of disease and infection in animals
- Obtains an initial overview of the animal’s health, **functionality** of an organ or tests for a certain disease
- Requires special equipment and training

22. Blood Sampling Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Blood Count (CBC)</td>
<td>determines the number and type of blood cells present</td>
</tr>
<tr>
<td>Blood</td>
<td>specialized bodily fluid which performs many primary functions, including transportation, protection and regulation</td>
</tr>
<tr>
<td>Plasma</td>
<td>liquid portion of blood</td>
</tr>
<tr>
<td>Red Blood Cells</td>
<td>erythrocytes which carry oxygen from the lungs to the rest of the body</td>
</tr>
<tr>
<td>White Blood Cells</td>
<td>defends the body from invading organisms</td>
</tr>
<tr>
<td>Packed Cell Volume (PCV)</td>
<td>determine the portion or percentage of the whole volume of blood occupied by red blood cells</td>
</tr>
<tr>
<td>Hematocrit (HCT)</td>
<td></td>
</tr>
</tbody>
</table>
23. Blood Sampling Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia</td>
<td>deficiency of hemoglobin, reducing the number of red blood cells; causes body weakness</td>
</tr>
<tr>
<td>Red Count</td>
<td>number of red blood cells in a unit volume of blood; can be used to detect a problem with red blood cell production</td>
</tr>
<tr>
<td>Polycythemia</td>
<td>decreased blood flow</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>carries oxygen to the red blood cells and helps move them to other tissues</td>
</tr>
<tr>
<td>Bevel</td>
<td>small hole on the needle which allows the blood to blow into the syringe</td>
</tr>
<tr>
<td>Blood Clotting</td>
<td>prevents bleeding when a blood vessel is injured</td>
</tr>
<tr>
<td>Platelets</td>
<td>thrombocytes are responsible for clotting and increase with injury</td>
</tr>
</tbody>
</table>

24. Laboratory Procedures

- Are a routine part of veterinary medicine and are conducted to establish baseline or “normal” values for healthy animal
- Determine the presence of illness or disease in an animal
- Help monitor a sick animal’s response to treatment
- Determine the risks of complications before surgery

25. Laboratory Procedures

- Commonly include:
  - blood examinations
  - fecal examinations
  - urine examination
  - culture and sensitivity tests
26. Laboratory Procedure Terms

<table>
<thead>
<tr>
<th>Test</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNAP®</td>
<td>quick convenient blood tests which detects multiple diseases</td>
</tr>
<tr>
<td>Complete Blood Count (CBC)</td>
<td>determines the number and type of blood cells present</td>
</tr>
<tr>
<td>Chemistry Profile</td>
<td>gives information on the electrolytes in the animal and organ functions</td>
</tr>
<tr>
<td>Microfilaria Smear</td>
<td>detects the microscopic version of heartworms</td>
</tr>
<tr>
<td>Fecal Flotation</td>
<td>detects internal parasites</td>
</tr>
<tr>
<td>Urinalysis</td>
<td>gives information on kidney function and detects urinary tract infections</td>
</tr>
<tr>
<td>Culture and Sensitivity Tests</td>
<td>identify the strain of bacteria or other pathogen and the most effective drug to inhibit the growth of the problem</td>
</tr>
</tbody>
</table>

27. Hospital Procedures

- Are other common **procedures** performed within the clinic by veterinary medical staff
- Include the following:
  - clinic protocol
  - emergency protocol and first aid
  - animal care skills
  - therapeutic care
  - reproductive and **genetic** evaluation
  - newborn, orphan and recumbent care
# Veterinary Medical Terms & Terminology

- Teacher Notes

## 28. Hospital Procedures Terms

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiopulmonary Resuscitation (CPR)</td>
<td>emergency procedure used to keep the heart pumping and oxygen flowing</td>
</tr>
<tr>
<td>Control of Bleeding</td>
<td>requires applying pressure and bandages to the wound and finding the source of the bleeding</td>
</tr>
<tr>
<td>Hypovolemic Shock Treatment</td>
<td>occurs when an animal’s blood volume is low; is treated by inserting IV fluids to keep the blood pressure up</td>
</tr>
<tr>
<td>Shock Treatment from Pain</td>
<td>requires administering medication to the animal to relieve pain</td>
</tr>
<tr>
<td>Clinic Protocol</td>
<td>guidelines which are followed by all veterinary staff to ensure safety within the clinic at all times</td>
</tr>
<tr>
<td>Dental Prophylaxis</td>
<td>procedure performed to clean an animal’s teeth</td>
</tr>
<tr>
<td>Zoonotic Diseases</td>
<td>are diseases which are communicable between humans and animals</td>
</tr>
</tbody>
</table>

## 29. Hospital Procedures Terms

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial Insemination</td>
<td>inserting sperm into a female’s uterus or cervix in order to achieve pregnancy</td>
</tr>
<tr>
<td>Morphology</td>
<td>study of the form of living organisms</td>
</tr>
<tr>
<td>Embryo Transfer</td>
<td>placing embryos into the uterus of a female in order to establish pregnancy</td>
</tr>
<tr>
<td>In Vitro Fertilization</td>
<td>process by which an egg is fertilized by sperm outside of the body before implantation</td>
</tr>
<tr>
<td>Enema</td>
<td>procedure which injects liquid into the rectum</td>
</tr>
<tr>
<td>Hydrotherapy</td>
<td>washing a wound with water</td>
</tr>
<tr>
<td>Neonate</td>
<td>newborn animal</td>
</tr>
<tr>
<td>Recumbent</td>
<td>laying down on the back or either side</td>
</tr>
</tbody>
</table>
30. Surgical Procedures
- Are complex operations performed by veterinarians and are used to benefit an animal’s health
- Most commonly performed within the veterinary clinic include:
  - spaying
  - surgically removing a female’s ovaries and uterus
  - neutering
  - surgically removing a male’s testicles

31. Surgical Procedures Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excise</td>
<td>to cut out</td>
</tr>
<tr>
<td>Incise</td>
<td>to cut into</td>
</tr>
<tr>
<td>Ligate</td>
<td>to tie or bind with a ligature</td>
</tr>
<tr>
<td>Inversion</td>
<td>turning inward or inside out</td>
</tr>
<tr>
<td>Eversion</td>
<td>turning outward or inside out</td>
</tr>
<tr>
<td>Transect</td>
<td>to sever or cut across</td>
</tr>
<tr>
<td>Dissect</td>
<td>to cut apart or separate</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>medication used primarily during surgery to minimize pain, discomfort and shock</td>
</tr>
</tbody>
</table>

32. Veterinary Medical Equipment
- Is used to perform surgical procedures, the determination of health in animals and to administer medication
- Includes:
  - common electronic technology
  - common imaging equipment
  - common surgical instruments
  - common medication administration instruments
33. Common Electronic Technology
- Is used daily in veterinary clinics to help determine illness and the overall health of animals

<table>
<thead>
<tr>
<th>Electronic Technology</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centrifuge</td>
<td>separation of fluids by spinning a vessel holding material at a high speed</td>
</tr>
<tr>
<td>Autoclave</td>
<td>decontaminates and sterilizes surgical instruments</td>
</tr>
<tr>
<td>Microscope</td>
<td>analyze blood, fecal, urine and sperm microscopically</td>
</tr>
</tbody>
</table>

34. Common Imaging Equipment
- Has revolutionized veterinary medicine by allowing veterinarians to determine disease, illness and overall health of animals easily

<table>
<thead>
<tr>
<th>Imaging Equipment</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiography</td>
<td>examine the body for injury or disease</td>
</tr>
<tr>
<td>Ultrasonography</td>
<td>creates images of body structures from a pattern of echoes reflected from the structures being imaged</td>
</tr>
<tr>
<td>Endoscopy</td>
<td>exams the esophagus, stomach, upper intestines, colon, cecum, large bowel and rectum</td>
</tr>
<tr>
<td>Electrocardiography (ECG or EKG)</td>
<td>records electrical activity of the heart over a period of time</td>
</tr>
</tbody>
</table>

35. Common Surgical Instruments
- Are specially designed tools or devices which perform specific actions while performing surgery or an operation on animals

<table>
<thead>
<tr>
<th>Surgical Instrument</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scissors</td>
<td>cut tissue, sutures and hard material</td>
</tr>
<tr>
<td>Forceps</td>
<td>grasp, cut, compress and pull tissues</td>
</tr>
<tr>
<td>Scalpels</td>
<td>sharp surgical knives used to make incisions</td>
</tr>
<tr>
<td>Tubes</td>
<td>are used during operations and wound healing</td>
</tr>
</tbody>
</table>
36. Common Medication Administration Instruments
• Are used to inject medication into an animal in order to diagnose, treat or prevent illness

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syringe</td>
<td>administering a liquid medication into the animal via mouth, intramuscularly or intravenously</td>
</tr>
<tr>
<td>Hollow Needle</td>
<td>attached to a syringe and used for injected medications</td>
</tr>
<tr>
<td>Multi-dose Hypodermic Syringe</td>
<td>inject or draw fluids into/or out of the body</td>
</tr>
</tbody>
</table>

37. Common Medication Administration Instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypodermic Syringes and Needles</td>
<td>very small syringes which are used with hollow needles for injections into or under the skin</td>
</tr>
<tr>
<td>Drench Guns</td>
<td>administer de-wormers, niacin, calcium and other drenchers</td>
</tr>
<tr>
<td>Balling Guns</td>
<td>administer oral medication capsules or boluses into an animal</td>
</tr>
</tbody>
</table>

38. Pharmacology
• Is the study of medicine which focuses on the uses, effects and modes of actions in drugs
• Is divided into the study of pharmacokinetics and pharmacodynamics
### 39. Pharmacology Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacodynamics</td>
<td>study of the biochemical and physiological effects of drugs and their actions</td>
</tr>
<tr>
<td>Pharmacokinetics</td>
<td>physiological movement of drugs within the body and how drugs move into, through and out of the body</td>
</tr>
<tr>
<td>Drug</td>
<td>substance used to treat, cure, prevent or diagnose a condition</td>
</tr>
<tr>
<td>Diagnostic Drug</td>
<td>part of a test in order to identify and label a condition</td>
</tr>
<tr>
<td>Therapeutic Drug</td>
<td>treatment of a condition</td>
</tr>
<tr>
<td>Preventive Drug</td>
<td>prevent a condition</td>
</tr>
</tbody>
</table>

### 40. Pharmacology Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary Feed Directive</td>
<td>intended for use in animal feeds</td>
</tr>
<tr>
<td>Over-the-Counter Drug</td>
<td>available to anyone without a prescription</td>
</tr>
<tr>
<td>Controlled Substance</td>
<td>drugs considered to be dangerous due to potential human abuse or misuse</td>
</tr>
<tr>
<td>ADME</td>
<td>process of absorption, distribution, metabolism and excretion of drugs</td>
</tr>
</tbody>
</table>

### 41. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad lib</td>
<td>freely, as wanted</td>
</tr>
<tr>
<td>AG</td>
<td>anal glands</td>
</tr>
<tr>
<td>AL</td>
<td>left ear</td>
</tr>
<tr>
<td>AD</td>
<td>right ear</td>
</tr>
<tr>
<td>ASAP</td>
<td>as soon as possible</td>
</tr>
<tr>
<td>AU</td>
<td>each ear</td>
</tr>
<tr>
<td>BAR</td>
<td>bright, alert, responsive</td>
</tr>
</tbody>
</table>
### 42. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid</td>
<td>twice daily</td>
</tr>
<tr>
<td>BM</td>
<td>bowel movement</td>
</tr>
<tr>
<td>BW</td>
<td>body weight</td>
</tr>
<tr>
<td>C</td>
<td>with</td>
</tr>
<tr>
<td>CAP</td>
<td>capsule</td>
</tr>
<tr>
<td>CBC</td>
<td>complete blood count</td>
</tr>
<tr>
<td>CNS</td>
<td>central nervous system</td>
</tr>
</tbody>
</table>

### 43. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPR</td>
<td>cardiopulmonary resuscitation</td>
</tr>
<tr>
<td>DOA</td>
<td>dead on arrival</td>
</tr>
<tr>
<td>DSH</td>
<td>domestic short hair</td>
</tr>
<tr>
<td>DLH</td>
<td>domestic long hair</td>
</tr>
<tr>
<td>Dq</td>
<td>diagnosis</td>
</tr>
<tr>
<td>FS</td>
<td>female spayed</td>
</tr>
<tr>
<td>HBC</td>
<td>hit by car</td>
</tr>
</tbody>
</table>

### 44. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCT</td>
<td>hematocrit</td>
</tr>
<tr>
<td>HW</td>
<td>heartworm</td>
</tr>
<tr>
<td>HWP</td>
<td>heartworm preventative</td>
</tr>
<tr>
<td>ICU</td>
<td>intensive care unit</td>
</tr>
<tr>
<td>IM</td>
<td>intramuscular</td>
</tr>
<tr>
<td>IN</td>
<td>intranasal</td>
</tr>
<tr>
<td>IP</td>
<td>intraperitoneal</td>
</tr>
</tbody>
</table>
## 45. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>intravenous</td>
</tr>
<tr>
<td>MN</td>
<td>male neutered</td>
</tr>
<tr>
<td>NPO</td>
<td>nothing by mouth</td>
</tr>
<tr>
<td>OD</td>
<td>right eye</td>
</tr>
<tr>
<td>OL</td>
<td>left eye</td>
</tr>
<tr>
<td>OU</td>
<td>both eyes</td>
</tr>
<tr>
<td>per os</td>
<td>orally, by mouth</td>
</tr>
</tbody>
</table>

## 46. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>prn</td>
<td>as necessary</td>
</tr>
<tr>
<td>q</td>
<td>every</td>
</tr>
<tr>
<td>q2h</td>
<td>every 2 hours</td>
</tr>
<tr>
<td>q6h</td>
<td>every 6 hours</td>
</tr>
<tr>
<td>qd</td>
<td>every day</td>
</tr>
<tr>
<td>qh</td>
<td>every hour</td>
</tr>
<tr>
<td>QID</td>
<td>four times a day</td>
</tr>
</tbody>
</table>

## 47. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>qod</td>
<td>every other day</td>
</tr>
<tr>
<td>RBC</td>
<td>red blood cell</td>
</tr>
<tr>
<td>R/O</td>
<td>rule out</td>
</tr>
<tr>
<td>Sc/SQ/SubQ</td>
<td>subcutaneous</td>
</tr>
<tr>
<td>SR</td>
<td>suture removal</td>
</tr>
<tr>
<td>SID</td>
<td>once a day</td>
</tr>
<tr>
<td>Tab</td>
<td>tablet</td>
</tr>
</tbody>
</table>
### 48. Common Veterinary Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>TID</td>
<td>three times a day</td>
</tr>
<tr>
<td>TNT</td>
<td>toenail trim</td>
</tr>
<tr>
<td>TPR</td>
<td>temperature, pulse, respiration</td>
</tr>
<tr>
<td>TX</td>
<td>treatment</td>
</tr>
<tr>
<td>UA</td>
<td>urinalysis</td>
</tr>
<tr>
<td>ung</td>
<td>ointment</td>
</tr>
<tr>
<td>WBC</td>
<td>white blood cell</td>
</tr>
</tbody>
</table>

### 49. Common Veterinary Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>°</td>
<td>degree</td>
</tr>
<tr>
<td>/</td>
<td>per</td>
</tr>
<tr>
<td>%</td>
<td>percent</td>
</tr>
<tr>
<td>~</td>
<td>approximately</td>
</tr>
<tr>
<td>=</td>
<td>equals</td>
</tr>
<tr>
<td>&gt;</td>
<td>greater than</td>
</tr>
<tr>
<td>≥</td>
<td>greater than or equal to</td>
</tr>
<tr>
<td>&lt;</td>
<td>less than</td>
</tr>
<tr>
<td>≤</td>
<td>less than or equal to</td>
</tr>
<tr>
<td>±</td>
<td>plus or minus</td>
</tr>
</tbody>
</table>