

Equine Anatomy & Physiology

Media Type: Microsoft® PowerPoint® Presentation

Duration: 65 slides

Goal: To gain a basic understanding of equine anatomy and body systems.

Description: Information on the equine anatomy includes external parts of the horse, external and internal parts of the hoof and parts of the horse's mouth. Additionally, body systems are discussed and include the circulatory, respiratory, digestive, endocrine, immune, integumentary, nervous, skeletal, muscular and reproductive systems.

Objectives:

1. To describe the anatomy and physiology of horses including the anatomical parts of the horse, hooves and mouth.
2. To describe the circulatory, respiratory, digestive, endocrine, immune, integumentary, nervous, skeletal, muscular and reproductive systems of horses.

Horizontal Alignment

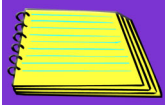
Core-Subject Area	Foundation Concept	Basic Understanding
Language Arts	<i>Application of Writing Skills</i>	<ul style="list-style-type: none">• Composition mechanics• Descriptive, informative, creative and persuasive writing• Brainstorming• Utilizing reference materials• Enhancing grammatical mechanics• Vocabulary enhancement
	<i>Analysis of Text & Information</i>	<ul style="list-style-type: none">• Drawing inferences and generalizations• Reading/content literacy• Critical thinking• Creative thinking• Expression of thoughts and ideas• Communication skills• Developing listening and comprehension skills• Creating visual representations
	<i>Technology Applications in Literature</i>	<ul style="list-style-type: none">• Utilizing presentation processing software• Internet-based research

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Horizontal Alignment

Core-Subject Area	Foundation Concept	Basic Understanding
Science	<i>Scientific Thinking & Investigating</i>	<ul style="list-style-type: none">• Critical thinking and scientific problem solving• Real-world investigations and applications• Analytical skills• Technology-based research• Compare/contrast findings• Classification/organization skills
	<i>Scientific Laws & Principles</i>	<ul style="list-style-type: none">• Cycles, structures and processes• Principles of biology, chemistry, anatomy, physiology or psychology

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Lesson Plan

Student and Teacher Notes are available to print in outline format. You can access these documents under the “Printable Resources” section. If student licenses have been purchased, an interactive version of the Student Notes is available in the “Interactive Activities” section. If printing the full PowerPoint® is desired, you may download the file and print the handouts as needed.

Class 1: Distribute the *Equine Anatomy & Physiology Vocabulary Handout* for students to use as reference materials. Hand out the *Common Structural Issues Student Handout*. Show slides 1 to 19 of the *Equine Anatomy & Physiology - Equine Anatomy* segment. Hand out *The Equine Hoof Project* and allow the remainder of the class for groups to work.



Slides
1-19

Class 2: Remind students to continue using the *Vocabulary Handout* as reference materials. Show slides 20 to 28 of the *Equine Anatomy & Physiology - Equine Anatomy* segment. Allow the remainder of the class for groups to work on their *Projects*.



Slides
20-28

Class 3: Remind students to continue using the *Vocabulary Handout* as reference materials. Distribute the *Tooth Eruption Schedule Student Handout*. Show slides 29 to 37 of the *Equine Anatomy & Physiology - Equine Anatomy* segment. Students should complete the corresponding *Assessment*. Hand out the *External Parts of the Horse Activity* and allow the remainder of the class for students to complete it. If student licenses have been purchased, an interactive version of this *Activity* is available in the “Interactive Activities” section.



Slides
29-37

Class 4: Remind students to continue using the *Vocabulary Handout* as reference materials. Show slides 38 to 51 of the *Equine Anatomy & Physiology - Equine Body Systems* segment.



Slides
38-51

Class 5: Remind students to continue using the *Vocabulary Handout* as reference materials. Show slides 52 to 65 of the *Equine Anatomy & Physiology - Equine Body Systems* segment. Students should complete the corresponding *Assessment*. Hand out the *Body Systems Activity* and allow the remainder of the class for students to complete it. If student licenses have been purchased, an interactive version of this *Activity* is available in the “Interactive Activities” section.



Slides
52-65

Class 6: Distribute the *Effects on the Body Systems Project* and allow the entire class for groups to work.

Class 7: Distribute the *Equine Anatomy & Physiology Final Assessment* and allow time for students to complete it. Allow the remainder of the class for students to work on their *Projects*.

Class 8: Lead the class discussion so students can share their findings from *The Equine Hoof Project* with the class. Allow the remainder of the class for students to work on their *Projects*.

Class 9: Students should share their *Projects* with the class.



Lesson Links

**United States Department of Agriculture-
Agriculture Research Service**

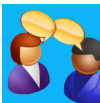
- <http://ars.usda.gov>

The Horse

- www.thehorse.com/topics/diseases-and-conditions

America's Horse Daily

- www.americashorsedaily.com



Career & Technical Student Organizations

FFA

- Agricultural Communications
- Prepared Public Speaking

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Career Connections

Using the *Career Connections Activity*, allow students to explore the various careers associated with this lesson. See the *Activity* for more details. *If student licenses have been purchased:* Students will select the interviews to watch based on your directions. *If only a teacher license is purchased:* Show students all the career interviews and instruct them to only complete the interview form for the required number of interviews.

- iCEV50680, James Rietkerk, Ranch Manager
- iCEV50855, John Pipkin, Ph.D., Professor Animal Science, West Texas A&M University
- iCEV50708, Kris Wilson, Horse Manager, Bell Ranch
- iCEV50669, Thad York, Ranch Manager, Bell Ranch



Lab Activities

External Parts of the Horse

Directions:

Students will label a diagram of the external parts of a horse. An *Answer Key* has been provided. If student licenses have been purchased, an interactive version of this *Activity* is available in the “Interactive Activities” section.

Body Systems

Directions:

Students will label diagrams of various body systems located in a horse. An *Answer Key* has been provided. If student licenses have been purchased, an interactive version of this *Activity* is available in the “Interactive Activities” section.



Projects

The Equine Hoof

Directions:

Divide the class into groups of two or three. Using the Internet, library or any other available resources, students will research and select a hoof problem or disease which affects horses. Groups should notify you of your choice so no two groups select the same problem/disease. Groups will then conduct additional research and locate the following: name of problem or disease, how it is transmitted, how it can be prevented, what is the recommended treatment, photos or diagrams illustrating the issue and any other information you deem necessary. Students will create a quick reference guide detailing their findings. Remind students to attach a citation sheet listing all sources used. Groups should share their findings with the class and be prepared to answer questions.

Affects on the Body Systems

Directions:

Divide the class into nine groups and assign each a body system to research. Using the Internet, library or any other available resources, groups should research and select a specific disease or illness which affects the body system assigned and gather the following information: name of disease or illness, body system which it affects, affects on the body system and the body as a whole, symptoms, diagnosis, transmission, treatment, prevention and photos, diagrams or drawings which help with understanding. Using the research, students will develop a script for a news segment in which the information will be shared with the public. Segments must include at least two main participants and a location interview. Remind students to attach a citation sheet listing all sources used to your script. Groups will present their news segments to the class.