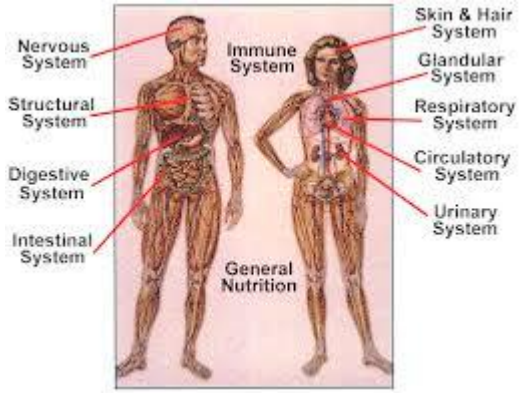


Team 3 Pork-folio

By Adam, Jun-Jie, Cameron, and Matthew

Warning!

There are pictures of dissection in this slideshow; feel free to leave this presentation if you feel uncomfortable.

INTRODUCTION

Purpose: The purpose of this project is to learn more about taxonomy, humans, and grasshoppers. Also, this will improve our dissection skills for future projects.

EU: Although humans grasshoppers, and pigs are all different species, they all still have similar and different organ systems.

(Enduring Understanding)

Mission

We want to find out how each of the species are similar or different to each other. We also want to out how big or small each species is compare to our body in ratio. We found out some interesting parts of each species that we don’t have.

Key Terms

Digestive System: The process of taking in nutrients from food and turning it into waste.

Cardiovascular: The process that focuses on the transport of resources to and from the cells.

Skeletal: The process that describes the materials inside the bone and the focus on the bone structure.

Reproduction: The process of new offsprings are produced from their parents.. Its a fundamental feature to all known life. each individual organism exists as the result of reproduction.

Key Terms

Ovaries- the part of the female's and female pig's reproduction system that stores the eggs
Testicles- the part of a male's and male pig's reproduction system that produce sperm
Tracheal System- the respiratory system of a insect
Hemolymph- a fluid in the body cavities and tissues of invertebrates
Appendix- the extra piece of organ that is located at the side of a human digestive system
Ovaries- a female's organ that is used to reproduce

Key Terms

Testicles- a male's organ used for reproduction
Multicellular- organisms that are composed with two or more cells
Unicellular- organisms that are composed with only one cell (ex. bacteria)
Gizzard- a muscular pouch that is located in the lower stomach

MCFROGGS	**Human**	**Grasshopper**	**Earthworm**
Movement	Contractive Muscles	2 Winged Legs	Contracting Muscles
Cells	Multicellular	Multicellular	Multicellular
Food	Heterotroph	Heterotroph	Heterotroph
Respiration	Breathe Through Lungs	Breathe Through Tracheae	Breathe Through Skin
Reproduction	Sperm, Eggs Gestation 9 Months	Sperm, eggs Gestation 3-4 Weeks	Sperm, Eggs Gestation 4-6 Weeks
Organization (Complexity)	Teeth	Mandibles	Gizzard
Growth	18-F (Years) 21-M	60 Days	Visible sex parts 60-90 Days
Stimulus - Response	Light (eyes, hands, heat)	Sheds exact replica on grass	Contracts and Expands body

Reproductive System

Similarities	***Differences***
Ovaries in a Grasshopper are about as large as a humans ovaries.	A humans testicle averages 9-10cm and a grasshopper averages 1.5-3cm.
Pigs have the same reproductive organs as us. (ex. ovaries, testticles, etc.)	

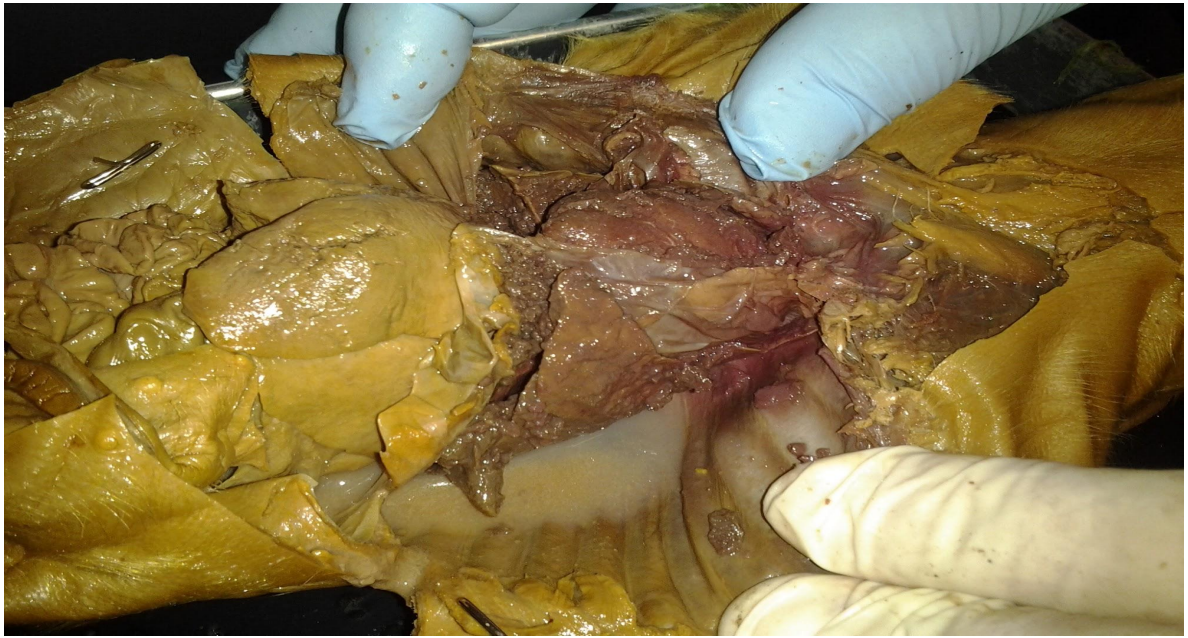
Digestive System: Human vs. Pig

Similarities	Differences
Both of the species have the same intestines in the digestive system	The structure of the pig's colon is spiral
The way we digest our food is the same way the pigs digest theirs	We have four lobes in our liver. In the other hand pigs have five.
	Pig don't have a appendix; we do.
	Pigs have a coiled large intestine

Digestive System: Human vs. Grasshopper

Similarities	Differences
The grasshopper also has a bladder and a anus to exclude waste out of their body	Grasshoppers only have one intestine, as for us we have 2
The grasshopper's digestive system is a lot smaller than ours	Grasshopper have something call tubules to clean their blood instead of kidneys

Pig’s Digestive System



As you can see, the pig’s digestive system is a lot similar to ours.

Cardiovascular System: Human vs. Pig

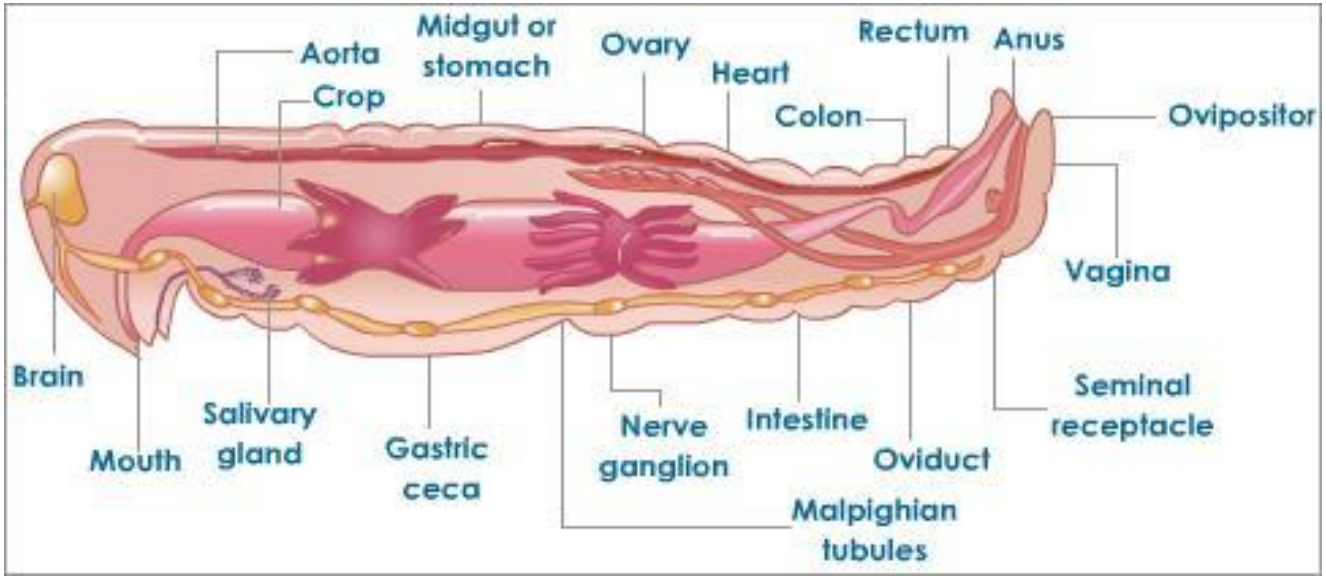
Similarities	Differences
The pig's cardiovascular system has the same organs as ours.	The pig's heart is more centered and our heart is located more to the left.
Both the heart of the pigs and humans have four tubes in their heart	We have a Illiac arteries; pigs do not

This is the pigs heart. Its heart has 4 closed chambers in the heart. It has many veins (to the heart), and also arteries (away from the heart)

Cardiovascular System: Human vs. Grasshopper

Similarities	Differences
Both of the species have a heart	Grasshoppers have a loop shaped heart. We have a fist sized heart protected by our rib cage
Both of the species have blood vessels for the blood to transport throughout the body	Unlike our heart, grasshopper's heart transfer food and waste instead of oxygen and carbon dioxide
	Instead of the exchange process of carbon dioxide and oxygen happening in the circulatory system, it happen in the grasshopper's tracheal system.

Grasshopper's Body Systems



Systems Comparison

https://docs.google.com/a/scienceleadership.org/document/d/1NX4gfKtc6bcLPl3No4-zqCyTzT4MGDh81IbchTwtHI0/edit

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By: Adam, Junjie, Matt, Cameron