

# Physical Anthropology and Bioarchaeology

*This module is a great tie-in with our zooarchaeology module!*

## Standards Covered in this Module

### **NGSS:**

4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

5-PS1-3. Make observations and measurements to identify materials based on their properties.

5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

MS-PS1-2. Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

MS-LS3-1. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

MS-LS4-1. Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships

## **Common Core:**

MP.2 Reason abstractly and quantitatively.

6.EE.C.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

6.SP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.

### **Guiding Question**

What can scientists learn about a civilization by studying human bones are found in a dig site?

### **Word wall**

Biology – The study of life

Anthropology – The study of how humans have developed and cultures have changed over time

### **Procedure**

Video : Dr. Sherry Fox – Physical Anthropologist

Read about the different areas anthropologists study

Look at this map. What dig sites are around you?

Junior Archaeologist Assignment

Interactive Homework

## **Junior Archaeologist Assignment**

Click on the link above that shows what dig sites are around where you live (hint-you can zoom in by double clicking on the map). These are places that offer you the chance to excavate when you get into high school and college!

Choose one of the sites that is near your location. Read about the project description of the dig site and the periods of excavation. Based on the period of excavation, you will be researching the people who lived in that area in the past. From your research, you will be creating a Prezi presentation, PowerPoint, or movie that answers the following questions. Use your log book to help you keep track of all the information you find along the way.

- What is the location you are studying?
- What is the time period called that this civilization lived there?
- What are the years that people lived in that civilization?
- What was the religion of this civilization?
- What was the diet of this civilization?
- Did this civilization have any form of art?
- What was the reason that this civilization migrated to or away from this site?
- What types of tools did this civilization use?
- Did your civilization have a certain type of jewelry they wore?
- Was there any type of education in your civilization?
- Did your civilization have any interaction with other civilizations in the area?
- What language did your civilization speak?
- What were the burial customs of your civilization?
- What artifacts have archaeologist found that allowed them to answer the questions above?

## **Interactive homework**

If one of these dig sites is close to you, go visit the site with your parent! Even if it is not the dig season, many times the sites will have information posted explaining things they have found in the area. If there is not a dig site close to you, visit a history museum in your area that tells about how people near you used to live. Many cities look different because of the natural resources that are near them (like mountains, oceans, or lakes), so look at how these resources shaped the way people lived in your area and discuss with your parent if these resources still play a role in your life today.