

## Dolphin Soil Unit Project - 2019

Goal: Working as a team with class partners, you will research then teach your class about an assigned soil unit topic, through a team-made video. This project will count toward your Test/Project average.

Teams: Teams must have 3 to 4 students, and students will select their own teams. Choose your team carefully: once you have selected your team members, you will not be able to change them!!

Topics: Ms. McKnight will assign one of the following topics with required questions that project must answer:

- Weathering Part 1: Definition of Weathering and Types of Physical Weathering
  - What is weathering?
  - What is the difference between physical weathering and chemical weathering?
  - Describe the 5 types of physical weathering
  
- Weathering Part 2: Types of Chemical Weathering, Rates of Weathering and Erosion
  - Describe the 5 types of chemical weathering
  - Describe the factors that affect the rate of weathering
  - What is the difference between weathering and erosion?
  
- Soil: Definition, Composition and Textures
  - Define soil
  - Describe the composition of soil
  - Describe soil texture and how particle size affects soil texture
  
- Soil Formation and Types of Soil
  - Describe the process of soil formation
  - Describe how scientists classify the different types of soil
  - What type of soil do we have in the Raleigh/Durham area?
  
- Soil Properties and Quality Testing
  - Describe the key soil properties used to determine the quality of soil
  - How are those properties tested
  - How can soil quality be improved?
  
- Soil Profile
  - What is a soil profile?
  - Describe each of the soil horizons in order, including what might be found in each one
  - What are decomposers and what is their role in soil?
  
- Value of Soil, Soil Damage and Loss of Soil
  - Why is soil important?
  - Describe ways soil can be damaged (Be sure to include nutrient loss in soil as 1 way)
  - Describe ways soil can be lost
  
- Soil Conservation and Soil Stewardship
  - Describe ways different types of plowing can prevent soil loss
  - Define soil stewardship
  - Describe how the actions of humans can have negative impacts on soil and positive impacts on soil

Class Time: From Friday, 10/18 on, you will have the majority of each class period to work on your project

Requirements:

- **Due Date:** Projects must be submitted/turned in from Google Classroom to the teacher by Friday, 10/25 at 5 pm. Students who do not have internet access at home may email their video to Ms. McKnight at [nmcknight@wcpss.net](mailto:nmcknight@wcpss.net) by Friday, 10/25 at 5 pm.
- **Research:** Students must use at least 3 sources in their research of their topic. One of the resources must be our red science textbook, "Science Explorer." A list of more resources you might want to use is in your Science Google Classroom. It is called "Soil Project Resources."
- **Information:** Students must answer the 3 questions listed with their assigned topic. Students may include additional information if they choose.
- **Research Notes:** Students must submit their research notes using the "Soil Video Inquiry Charts" in their Science Google Classroom. Paper copies will be available from Ms. McKnight for students who do not have home access to the internet. **Research notes must be submitted to me by Wednesday, 10/23 at 5 pm, either by submitting through Google Classroom or giving paper copies to Ms. McKnight..**
- **Presentation:** Students must present the information in a video format which will then be uploaded to a secure site for viewing by their classmates. Videos must not exceed 5 minutes. A digital learning expert from WCPSS is coming on Tuesday, 10/22, to teach students some methods to make their videos.
- **Citations:** Students must include a list of citations (the resources they used to prepare their project.) The citations must include the name of the source (book, video, website, etc.), author if there is one, publisher if there is one, copyright date or for websites, the date students accessed the information from that website. Please note: Wikipedia will not be accepted as a reliable source and may not be used in the citations.
- **Team Evaluations:** **Students must submit a self-evaluation and peer evaluation of their teammates by Friday, 10/25 at 5 pm..** A form will be provided for that in my Google Classroom by Monday, 10/21.

Grading: Students will be graded using the following points schedule:

- Meeting Deadlines (Research Sheets submission; Video submission, Self and Peer Evaluation Submission) - up to 20%
- Effectiveness of Team (division of work, resolving conflicts, use of class time) - up to 20%
- Project Quality
  - Completeness (all questions answered thoroughly) - up to 20%
  - Accuracy (information was correct) - up to 20%
  - Teaching Value (information in presentation was well-organized, visuals were neat and easy to understand) - up to 20%

Project Schedule:

- Assignment of team member research roles/tasks by: Friday, 10/18 (suggested)
- Research and Research Notes complete and submitted by: 10/23 at 5 pm (required)
- Presentation method decision and presentation roles assignment by: Wednesday, 10/23 (suggested)
- Preparation of materials for use in video presentation complete by: Thursday, 10/24 (suggested)
- Video rehearsal complete by: Friday, 10/25 (suggested)
- Finished video project complete and submitted by: Friday, 10/25 at 5 pm (required)
- Self and Peer Evaluations complete and submitted by Friday, 10/25 at 5 pm (required)

A few words of wisdom:

- If you are having problems with any part of this project, be sure to notify Ms. McKnight as soon as possible. Do not wait until it is too late to get the help you need.
- Do not wait until the last minute to submit your project. Build some leeway into your project planning schedule so you can be certain your materials are submitted on time. You don't want to be trying to submit your project at 4:59 pm on Friday, 10/25 and have your internet go out so you miss your deadline. Always plan for the unexpected!
- Have fun! I am really excited to see your work!

