**LESSON PLAN TEMPLATE WITHOUT INSTRUCTIONS**

THIS CAN BE COPIED AND PASTED TO START YOUR LESSONS

**Title for Lesson Plan:** Virtual Field Trip **Your Name:**

Date of Lesson (if appropriate/relevant):

Approximate (Amount of) Time Required for Lesson: 42 minutes

Grade Level/Subject(s): 9-12

Central Focus of the Learning Segment: Students will be identifying and making observations of different geologic features to determine origin, occurrence and age of each

Related Prior Learning:

- Rock Cycle,

- Coal Ash Ponds

- Glaciations in Illinois’ History

- Bedrock of Illinois

- Stratigraphy and Age of Rocks

- Types of Rock and What They Mean/Where they come from

-Some strata and faults

-Rock formation and some rock identification

Illinois Standards



Materials/Instructional Resources:

Chromebooks, projector, question sheet

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| Objectives-Students will be able to analyze fossils and sediment to predict what occurred in Earth’s history to create landforms visible today-Students will be able to explain how glaciers form and melt, releasing sediment when they melt and how that affects erosion, moraines, and glacial till   | Assessment-Answering questions along the way of the virtual field trip-Collecting their observations-the “do now” |

Instructional Strategies and Learning Tasks (Procedure)

Introduction (15 minutes):

First students will receive a “do now” in which they will silently fill out the half worksheet. Once they are done, they are to flip their papers over until everyone has finished. Once everyone has finished, we will discuss 2-3 key questions from the sheet so that I can see what students remember and what they do not. (Go over questions 1 and 3). After the brief discussion, students will pass their sheets up to the front so that they can be viewed after class.

Tell students that a short video will be played about how glaciers work. Go over the process of what a glacier does and tell students to keep in mind what a glacier does and what can cause erosion of large quantities of material. <https://www.youtube.com/watch?v=loI584OFVpE>

Ask students:

What would you expect to see the most of in this area/midwest? What do you see most of from glaciers?

Do you expect to see igneous rocks in either of these field trips?

 -Are there volcanoes around us?

 -How could an igneous rock be in our vicinity? - called an erratic

Higher level thinking: You saw in the video that as the glacier melts, it drops off it’s sediment. It creates things called moraines which are large deposits of leftover sediment. What do you think would happen if there was melt water behind the moraine and the moraine broke?

Once all papers are brought to the front, remind students that they we will be doing a “pre-field trip,” which is something that I have been doing research on at U of I.

Let them know that the main focus of these virtual field trips is to see sedimentary rock processes and results. (Weathering/erosion, transportation, deposition, lithification – cementation and compaction).

Activity: (20 minutes)

Students should pull out their chromebooks and go to the website that will be listed on the board. As they do this, a worksheet with directions as well as questions to be answered along with the activity will be passed out. Once all students have pulled up the website and the worksheet is passed out, the teacher will go through the instructions with the students whilst guiding them through the website. Their first activity is, once on the website, to click on Turkey Run State Park and to practice moving around on the site. Once a minute is up, guide them through their first question.

Have students scroll down to click on “click to see fossils in the bank deposit.” As all students have the same page up, guide them back to their worksheet. Have them look at question one and read it aloud: “Do you see any water right where this fossil was sitting?” “How could it have gotten there?” Tell students to go ahead and answer those questions whilst reminding them of what was talked about at the beginning of class about transportation of sedimentary rocks. Tell students that they will keep working up until 4 minutes left in the period.

Conclusion:

What was the main source of transport here in these field trips? What are most of you going to see tomorrow? What types of rock should you be keeping your eye out for because it is the most common in this area? Can you see igneous and metamorphic rocks around though? How would they have been brought there?

Instructional Materials

<https://www.youtube.com/watch?v=loI584OFVpE> (Glacier video)

[www.geology.illinois.edu/virtualfieldtrip](http://www.geology.illinois.edu/virtualfieldtrip) (Virtual Field Trip)

