## Lesson Plan: Self-Guided Tour of the Tate Geological Museum

**Standards: 7th Grade: Science Standards: A, ET ST 8.1.8 & 9, A 8.2.2**

**Objectives**-Students will:

* make connections regarding fossil evolution
* Discover answers to earth science questions
* Write up a summation of what they learned

**Materials: Worksheet with Tour Questions, Transportation to and from the Tate Geological Museum**

**Procedure:** Students will go to the Tate Geological Museum and look at the exhibits. Below are attached questions to answer as the students peruse the exhibits.

Following the museum visit:

In the classroom, students will share what they learned in groups and group grade their worksheet answers. Finally, students will write and turn in a summary of their visit including:

* What were you fascinated with the most?
* What surprised you?
* What did you learn?
* What will you further research regarding any of the Tate’s exhibits?

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Questions to answer during Tate visit:**

1. First stop: Dee the mammoth- When did Dee roam the earth?
2. How do Columbian mammoths compare to current day African elephants? Similarities? Differences?
3. What do you think caused the mammoth extinction?
4. How do mammoths and mastodons differ?
5. Dee is a digitigrade? What does this mean? **Extra Credit: What are humans? (Need to Google)**
6. Name two differences between invertebrates and vertebrates.
7. What was *Helicoprion* and in what geologic period did they exist?
8. What was “Deep Sheep 148”? Why was it named this? Where in Wyoming was the fossil found?
9. Why do you think the ammonites changed some much over time? What environmental pressure or natural selections pressures could have attributed to these changes?
10. What modern day organisms most closely resemble the ammonite?
11. When you walk through the W*alk through Time Exhibit* starting at the Precambrian what do you notice happening as the Earth and its species evolved? First, are there animals during the Precambrian period? In what geologic period do you start seeing complex creatures? If it’s true that organisms change over time, older creatures should differ from current creatures. Write down 5 examples of this being the case.
12. What type of rock is Hogadon Ski Resort on?
13. Look at the exhibit over human evolution of skulls. Describe the similarities and differences.
14. What is Wyoming’s state gemstone? Name three locations where it can be found?
15. How many cleavage plains does muscovite have? Halite? Fluorite?
16. Ask a question of the museum educational specialist regarding any exhibit to include in your written summary.
17. Look at the periodical exhibit, what element is 78?
18. Name a time that Wyoming was at the bottom of the sea.

Source: Dr. Robinson of Casper College, Patti Finkle, Russell Hawley