

Homework: The Science of Pictured Rocks I



Depicted above is part of a 15-miles long sandstone cliff near Munising, Michigan commonly called “**Pictured Rocks**”. It gets its name from vertical red, green, blue, black and brown streaks in the sandstone along its cliff. Scientists have a very good understanding of where these colors come from, but let’s pretend for now that we don’t know.

Suppose you ask somebody where these colors come from, and they says:

“Every full moon, the roots of the trees above Pictured Rocks shed colored tears, which seep into the ground, flow underground towards the cliff and runs down its edge, coloring the sandstone and creating the vertical streaks.”

Discuss the following points in a short paper (aim for one page or less).

- Is the statement above a **scientific hypothesis**, i.e., is it a question that can in principle be disproven by doing an experiment? Why or why not? If not, can you “repair” the statement so it becomes a scientific hypothesis?
- **Design an experiment** which proves or disproves the above statement. To do so, first read the statement carefully, take it apart, and think what you should observe if the hypothesis is true and what you should observe if it is not true.
- Create a step-by-step list of things and/or drawings of what exactly to do in your experiment.

Please bring **two copies** of your paper with you.