

2013 WHIPPLE HILL GEOLOGY FIELD TRIP AT A GLANCE



Logistics

- When** At the end of the Rocks and Minerals unit
- Walk time** Allow 40 minutes to travel from school to Whipple Hill and back plus **1 1/2 hours** for program
- Groups** 6 students
- Materials** Kit for each group available at the hill on the day of the walk (labeled rocks, popsicle sticks, ruler, clipboard, magnifiers, and compass. Binoculars (optional))
- Clipboards, pencils, and student sheets from the classroom

Objectives

By the end of the walk, each student will have the opportunity to:

1. Describe some rocks and tell how they are different from each other
2. Identify a few minerals and rocks by comparing them to named samples
3. Recognize evidence that rocks change over time
4. Use a map and compass to find the trail. and to locate landmarks
5. Find out how rocks, soil, and plants are related to each other
6. Form a reasonable explanation (not necessarily correct) about what has happened to a Whipple Hill rock in the past based on what it looks like or where it is
7. Begin to get a sense of the scale of time and space in Earth's history
8. Appreciate our role in the care of Whipple Hill's environment

Activities

1. Introduction to Whipple Hill/Parking Area Explorations (20 minutes)

- A. Examine rocks in the rock wall (color, presence of crystals, rounded or sharp edges)
- B. Measure depth of soil near entry sign; observe type and height of trees
- C. Discuss respect for plants, animals, and the non living environment in a Conservation Area
- D. Orient map with compass and find summit trail

2. Walking up trail (10 minutes)

- A. Look for signs of weathering and erosion
- B. Describe properties of rocks along trail (color, crystal size)

3. Top of Whipple Hill (30 minutes)

- A. Identify a few rocks and minerals (match to samples); note smooth surface of hill
- B. Speculate on how rock formed miles underground, could now be at the surface
- C. Note glacial grooves and "alien" rock (pink granite) just north of the top of hill
- D. Find the direction of landmarks using compass
- E. Locate the peak of Whipple Hill, use the map to tell how high it is above sea level. Measure soil depth, observe height of trees

4. On the way down (20-30 minutes)

- A. Observe the large boulder and speculate on how it got there
- B. Speculate on the bent tree
- C. Note the valley with the pond
- D. Observe rock being broken by tree roots and trees being bent by rocks in cliff beyond pond

Wrap Up - Review all the changes in rocks observed or interpreted during the hike: formation from melted rock, weathering due to air, water, earth movement, the action of plants, and erosion due to liquid water and glacial ice. New rock from elsewhere deposited by a glacier. Look at rock wall in parking area again!

Return to Parking Lot - Return magnifiers and compass to plastic bag. Place soiled craft sticks in separate marked bag. Kits will be collected.

Thank you for helping to make this experience memorable for students!

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