



Energy All Around Us: Discovery Hike

Grade: 5th

Setting: Pineridge or other natural area with a variety of habitat/landscapes

Theme (Bottom Line): Examples of how energy is stored and functions in nature are all around us. While some examples are human made, others are found naturally in the processes that shape our landscapes and create the environment around us.

Description: Students hike around Pineridge to learn about some interesting transfers of energy and discover how these systems affect the lives of the plants and animals around this Natural Area.

Recommended Time- 30 minutes

Recommended Group Size: 15

State Standards: **Life Science Grade 5.2.2** Matter cycles between air and soil and among plants, animals and microbes as these organisms live and die. **Earth and Space Science 5.3.5** Societal activities have had major effects on land, ocean, atmosphere and even outer space

Materials List: This will vary depending on what aspects of the hike you focus on. You could use any of the following or provide different teaching tools of your choice.

- Pictures of Horsetooth Reservoir and Dam (historical photos of construction etc.)
- Pictures of plants and animals that call Pineridge home
- Historical photos of Pineridge area
- Magnifying glasses
- Binoculars
- Scat ID book
- Plant ID book

Getting Ready:

Walk your route ahead of time so that you know the most interesting places to stop or not stop if you notice hazards! Refer to the Interesting Points List below. Be sure to think about how you can let the students explore independently and use their prior knowledge.

Welcome students and introduce yourself and any other volunteer. Encourage Adults to participate by giving them each a task. Remind them of the difference between a Natural Area and a Park. Explain the theme of the lesson and begin.

Nature Hike Points of Interest (Possible Topics):

- Horsetooth Reservoir and Dams- specifically Dixon Canyon Dam above Dixon Reservoir- the one you see to the north west! (History, function and use, dimensions, engineering specs etc.)
<https://coloradoencyclopedia.org/article/horsetooth-reservoir>;
<https://coyotegulch.blog/2022/01/21/history-of-horsetooth-reservoir-from-stone-quarry-to-quenching-thirst-of-fields-cities-the-fortcollins-coloradoan/>;
https://publiclands.colostate.edu/digital_projects/dp/poudre-river/moving-storing/horsetooth-reservoir-and-the-c-bt/;
<https://www.usbr.gov/projects/index.php?id=79>
- Dixon Reservoir purpose, history, etc.
<https://www.fcgov.com/naturalareas/finder/pineridge>
- Nutrient cycling- scat found around reservoir (Food in the form of plants and animals is consumed by other animals and cycled through the body to leave scat around the reservoir. This scat provides more nutrients for soil to begin the cycle again. - identify and discuss)
- Plant variety and ID
- Animal variety and ID