

Living Map -- Life Zones of Boulder County

One class; 50 to 60 min. program

Theme: Boulder County has incredible plant and animal biodiversity because of its many altitudinal life zones.

Activity: Life zones, vegetation, and wildlife in Boulder County

Activity Set-up

- Unfold Living Map (12 X 16 feet) and place on floor, north edge to whiteboard or mountains, if visible.
- Place town labels on map: Longmont, Louisville, Lafayette, Boulder, & Nederland.
- Place landmark labels on map: Flatirons, Longs Peak, Continental Divide, Heil Valley Ranch, and Mud Lake
- Place drainage labels on map: Coal Creek, Boulder Creek, Lefthand Creek, St. Vrain Creek and Boulder Reservoir

Introduction (VNs) 15 to 20 min.

- Presenters stand at north side of map.
- Arrange students around the remaining three sides of map
- **Question:** What is this a map of? (Boulder County)
- **Question:** Where is north on this map? (Place north arrow on map and have students identify which sides they are standing on) Add N, S, E, W labels.
- **Question:** What do the different colors on this map represent?
- **Question:** Where are we today? (school location; orient kids to the map: towns, drainages, landmarks, etc.) “We Are Here” label.
- The lowest elevation in BoCo is the east edge of map where St. Vrain Creek leaves BoCo [just under 5,000 feet], and the highest elevation is the northwest corner of map at Longs Peak [over 14,000 feet]).
- **Question:** What is the difference in altitude between these two locations?
- Generally, average temperatures go down and precipitation goes up as you go move from lower to higher altitude.

Life Zones are identified by the main kinds of plants/trees living in each zone. Many plants and trees can live in more than one life zone.

- There are 5 life zones in Boulder County. VNs will name each life zone, place a life zone label on the map, and give a brief description of each life zone.
- We know that wild animals (or wildlife) live everywhere in BoCo, in all life zones.
Question: What do you call anyplace that wildlife lives? (habitat)
- **Question:** What do all animals need in their habitat to survive? (food, water, shelter, and space)

Life Zones Activity 25 to 30 min. (5 min/group)

Students should remove their shoes before walking on the map.

Divide the class into 5 groups.

1. Give each group a life zone packet.
2. Each packet will contain pictures of 1 or 2 plants and 2 animals commonly found in that life zone.
3. Packets will be numbered 1 through 5, but will **not** have the name of the life zone.
4. Each group of students will work together to decide in which life zone their packet belongs.
5. When called upon - a group will stand on the map in their life zone, hold up their pictures and give reasons for choosing that life zone, then place their pictures on the map.

Contents of the Life Zone packets:

Below are suggestions for the plants and animals which could be included each packet.

- Prairie: cottonwood or blue gramma grass; black-tailed prairie dog and red-tailed hawk or Western rattlesnake
- Foothills: ponderosa pine and prickly pear cactus; mountain lion (or mule deer) and Abert's squirrel
- Montane: Douglas fir or lodgepole pine; moose and porcupine
- Subalpine: Subalpine fir or Engelmann spruce; snowshoe hare and yellowbelly marmot
- Alpine: moss campion or alpine forget-me-not; pika and white-tailed ptarmigan

Conclusion (VNs)

There are lots of places in Boulder County to explore our many life zones and an incredible variety of plants and animals that live all around us.

Some suggestions:

1. Ask the teacher to divide the class into 5 groups **before** the program.
2. When making up life zone picture packets include plants and animals that are commonly found in that life zone (what may seem obvious to a VN is not obvious to a 3rd grade child). Be aware of when you include animals that travel between life zones (like a coyote or elk) this may confuse the kids.
3. 3 or 4 pictures per packet is sufficient for a 50 min. program.
4. Mix up the order of the life zones when giving out the life zone picture packets.
5. VNs should circulate among groups and answer student questions about their packets.