Douglas Fir Tree

Rock without lichen

Milk Thistle

Magpie or other bird

Three pinecones together on a Ponderosa Pine

Purple or blue wildflower

White or yellow wildflower

A rock that looks like two bears snuggling

Bird Habitat

Heart Shaped rock with stratification

Boulder Flatirons

Ponderosa w/ trunk that forks

Bear Peak

Rock with weathering or erosion

Geocache

Ponderosa w/ trunk that forks
Installed in July 1997, it was inspired by a similar trail at the Swiss Meteorological Institute in Gstaad and is believed to be the first interpretive trail in North America devoted to weather and climate.

### Scavenger Hunt

Find all the signs on the Walter Orr Roberts Weather Trail. Fill in the Blanks below with the following words:

- Flooding & Erosion
- Brown Cloud
- Snow
- Wind
- Climate Zones
- Plant Life & Climate
- Thunderstorms
- Fire (& Drought)
- Mountain Waves
- Cold Fronts
- Sunshine & UV Light

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>_____________</strong> This forms <strong>during an inversion</strong>, a shallow pool of relatively cool air near the ground, separated from warmer air aloft, that traps pollutants</td>
<td>2. <strong>_____________</strong> Between the NCAR mesa and the highest Front Range peaks (13,000 feet or 4,000 meters) to the West, the climate undergoes a drastic change as it passes through these</td>
<td>3. <strong>_____________</strong> This is the leading edge of a relatively cold air mass moving in to replace warmer air, and if shallow, temperatures may be warmer in the mountains than they are in town</td>
<td>4. <strong>_____________</strong> Though it may threaten life, this is a normal, healthy part of forest and grassland ecosystems, as it recycles nutrients stored in old growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. <strong>_____________</strong> Much of our rainfall occurs in heavy Spring and Summer storms that can dump several inches of rain in less than an hour; &lt; 18 inches (46 cm) is able to make a typical vehicle float</td>
<td>6. <strong>_____________</strong> These beautiful clouds are caused by Westerly winds blowing over the Front Range, with lenticular (lens-shaped) clouds tending to form above or just east of the peaks</td>
<td>7. <strong>_____________</strong> Sunshine and moisture interact with a variety of land forms and elevations to create at least 5 separate ecosystems on the NCAR mesa</td>
<td>8. <strong>_____________</strong> Boulder in a typical Winter receives about 80 inches (200 cm) of this in town, with even more, near 100 inches, on the NCAR mesa due to its higher elevation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. <strong>_____________</strong> The Boulder area is prone to this damaging downslope phenomenon, therefore, trees and wildlife are well adapted to this, however, this can break car windows and even unroof homes in the area</td>
<td>10. <strong>_____________</strong> At higher elevations, there is less atmosphere between you and the sun, with the light less filtered, the damaging ultraviolet (UV) light is more intense, with an increased risk for skin cancer to develop</td>
<td>11. <strong>_____________</strong> Driven by the heating of low-level air on late Spring and Summer days, this creates instability in the atmosphere with the possibility for supercells to produce large hail, lightning and tornadoes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

©2012 University Corporation for Atmospheric Research