

## **Lesson Plan – Local Climate Change and Adaptation**

*50-minute Interactive Learning Activity, with:*

**Zion Klos, PhD Candidate, University of Idaho**  
**Lucy Holtsnider, Studio Artist, Moscow, Idaho**

### **Learning Objectives:**

*Tell Students what you hope they can take away (at the beginning):*

- Introduction to local/regional climate change impacts (historic changes/ future projections)
- Activity for envisioning the future of local areas and adaption options for preserving aspects of those areas important to us
- Introduction to the global science behind climate change
- Final discussion about global climate change impacts and adaptation, locally and globally

### **Equipment Needed:**

Coloring pencils, markers, or something similar for drawing

### **Methods for teaching in-class activities:**

**0 min.** – Introduction of Course Instructors

-Zion Klos (call me Zion), Phd Student (studying to be a research scientist and college professor), University of Idaho, Moscow - then, my partner:

-Lucy Holtsnider, studio artist, enjoyment of teaching

**1 min.** – Brief introduction and explanation on why we came to talk to the class, **provide learning objectives** as a justification for why they should care. Build trust with the students through a PowerPoint slide show showing pictures of my past and how it transitions into my current career, highlight life experiences as a way to better define my own interests and goals through service to others (while still having a great time).

**6 min.** - Introduction to local/regional climate change impacts

- historic changes: temp, precip, snowpack, streamflow, fire
- future projections: snowpack, streamflow, floods, fire

**20 min.** – *Local Impacts/Adaptation: Brainstorming*, have students brainstorm impacts to things important to them locally, divide these into 3 or 4 categories or topic areas (we will facilitate this)

**25 min.** - *Local Impacts/Adaptation: Hands-on Activity*, on the worksheets have student groups summarize and draw the scene (ski hill, farm, lake, etc.) that is important to them. They will draw both how it looks now and how it may look into the future considering climate change and adaptation options. We will provide worksheets; students will need coloring pencils/markers.

**35 min.** – Global climate change PowerPoint showing

- Climate change is not new, historic/geologic climate change
- But as a globe we can control the future - future predictions
  - Global circulation models (GCMs)
    - combine to make projections of the future
  - Greenhouse gasses (emissions scenarios)
    - currently exceeding our estimates for global CO<sub>2</sub>

**43 min.** - Facilitate conclusion discussion:

- What do you think, will we be able to adapt locally?
- Ask student groups about what they drew and ask them to summarize the present to future changes and adaptation options; how much will it cost?
- Then change the discussion to talk about other (less wealthy) parts of the world, do we think they will have similar impacts from climate change? Will they be able to adapt?