Colville Tribes Climate Vulnerability Assessment – Youth Activity

Objective

After completing this activity, youth should have a basic understanding of how projected changes in climate and species sensitivities to these changes interact to determine how plant and animal species important to the Colville Tribes may be vulnerable to (i.e., negatively affected by) climate change. They should also have a basic understanding of actions that could reduce species vulnerability, and how they themselves could help promote climate resilience.

Rationale

Climate change is affecting global environmental conditions through changes in temperature and precipitation. These changes affect animals and plants both directly (e.g., through heat and water stress) and indirectly (e.g., through loss of suitable habitat and disturbances such as fire, drought and floods).

The Climate Impacts Group at the University of Washington undertook a climate vulnerability assessment in partnership with the Colville Tribes, which summarized the climatic changes expected across the Colville Tribes' Traditional Territory, and estimated the climate change vulnerability of 72 plant and animal species identified as important to the Tribes.

Conveying the findings of this report is important to all Tribal members, but especially youth. By understanding the effects of a changing climate in the context of animals and plants they know, youth will build intimate mental models of future conditions and what they can do to promote the resilience of their natural and cultural resources.

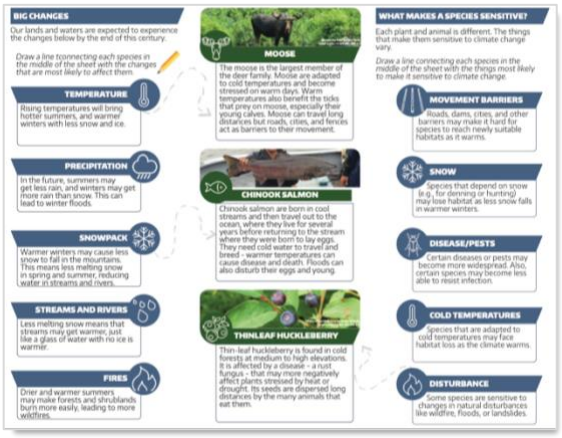
Materials

Activity materials consist of a double-sided, single page pamphlet. To ensure the pamphlet pages are correctly oriented, select 'Flip on short edge' and 'actual size' when printing. The pamphlet's inside and outside sheets are depicted below.

"Outside"

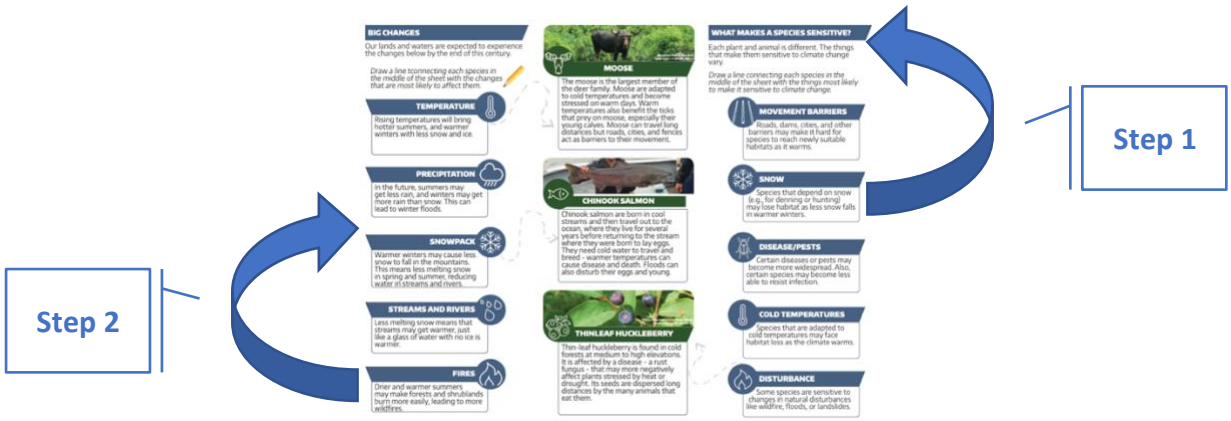
Inside Flap | Back Cover | Front Cover

"Inside"



Inside Left | Inside Center | Inside Right

To fold the pamphlet, orient the paper so the inside sheet is facing you. Fold the Inside Right section so that it covers the Inside Center section with the Inside Flap section. Then fold the Inside Left section so it covers the Inside Flap section. The Front Cover should be facing you:

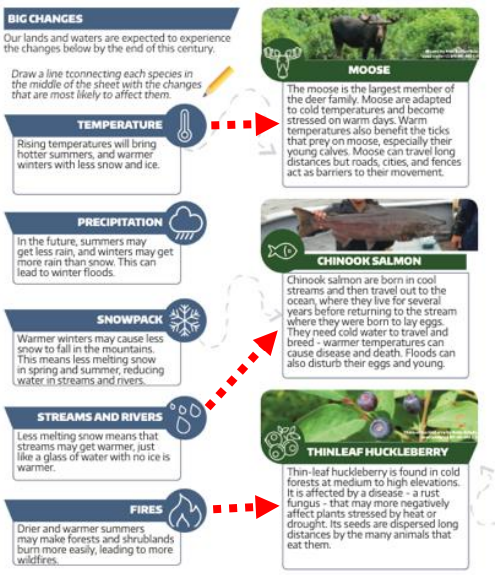


Procedure

Before the pamphlet is distributed to youth, some priming discussion should take place. Facilitated questions of the youth are recommended, similar to the following:

- What plants and animals are important to you and your community? How do you and your family use them (e.g., subsistence, cultural, or economic uses)? Is there anything you or your family does to help support the health and wellbeing of the plants and animals that are important to you?
- How do you think climate change might affect our plants and animals? What if the summers were really hot? What if winter was rainy but there was no snow? What other kinds of changes can you imagine?
- How do you think plants and animals could adapt to these kinds of changes?
- How do you think we could help them adapt?

The pamphlet can then be distributed. Prior to opening the pamphlet, youth may read aloud the cover to further prime their analytical skills and frame the exercise.



The pamphlet should be opened so the full inside sheet can be revealed. Youth should take turns reading aloud the species descriptions (Inside Center). These descriptions highlight habitat and life-history characteristics that may affect the species' climate change vulnerability. Then youth should read aloud the "Big Changes" section (Inside Left). The big changes column highlights some of the projected changes in climate that are expected by the end of the 21st century. The facilitator should then instruct youth to draw lines from the Big Changes on the left to the

species they think would be most affected by each change (see dotted red arrows at right for example). Note that some changes may affect more than one species.

Once this is completed, the youth should then read aloud the "What Makes a Species Sensitive" section (Inside Right). Once read, a similar matching exercise should be undertaken, matching each sensitivity to the species most likely to experience that sensitivity. The facilitator can periodically ask students to share their thinking, or facilitate through an example.

The facilitator should then ask some of the youth to share their arrows and explain their thinking. Following this, the youth should then fold the Inside Right panel over to show the "What can we do to help?" section (Inside Flap). They can then write one or two ideas of what kinds of actions (taken by the youth, the community, and/or land or wildlife managers) could be taken to help each species adapt to these projected changes in climate. Actions could help reduce big changes (e.g., planting trees to cool hot streams) or address a sensitivity (e.g., removing fences to help species move across the landscape to track suitable habitat). Youth should share their ideas, and may work in teams or groups to complete this section.

Some ideas can be shared, after which the facilitator should review the "Other Things You Can Do" section on the Back Cover.

Closure

To close, the facilitator should review the main areas of discussion and "best ideas" suggested for what the youth can do to help. Some follow-on exercises are depicted in the "Other Things You Can Do" section, namely:

- Set up a follow-on citizen science experience (Christmas Bird Count, etc.)
- Volunteer in habitat restoration activities (e.g., with the Colville Tribes' Natural Resources Department).
- Create art depicting conservation efforts, favorite species, etc.

Additional Resources

There are a few additional resources that may be offered, including:

- BIA Youth Tribal Resilience Resources: https://biamaps.doi.gov/tribalresilience/resourceguide/youth/index.html
- Audubon Christmas Bird Count: https://www.audubon.org/conservation/science/christmas-bird-count

For more information about the Colville Tribes Vulnerability Assessment, please see:

- Krosby, M., and H. Morgan. 2018. Colville Tribes Natural Resources Climate Change Vulnerability Assessment. Climate Impacts Group, University of Washington.
- Krosby, M., Morgan, H., Raymond, C., and Z. Bloomfield. 2018. Climate Change and the Colville Tribes. Climate Impacts Group, University of Washington.

Suggested citation for youth activity:

- Krosby, M., Morgan, H., and Z. Bloomfield. 2018. Colville Tribes Vulnerability Assessment – Youth Activity. Climate Impacts Group, University of Washington.