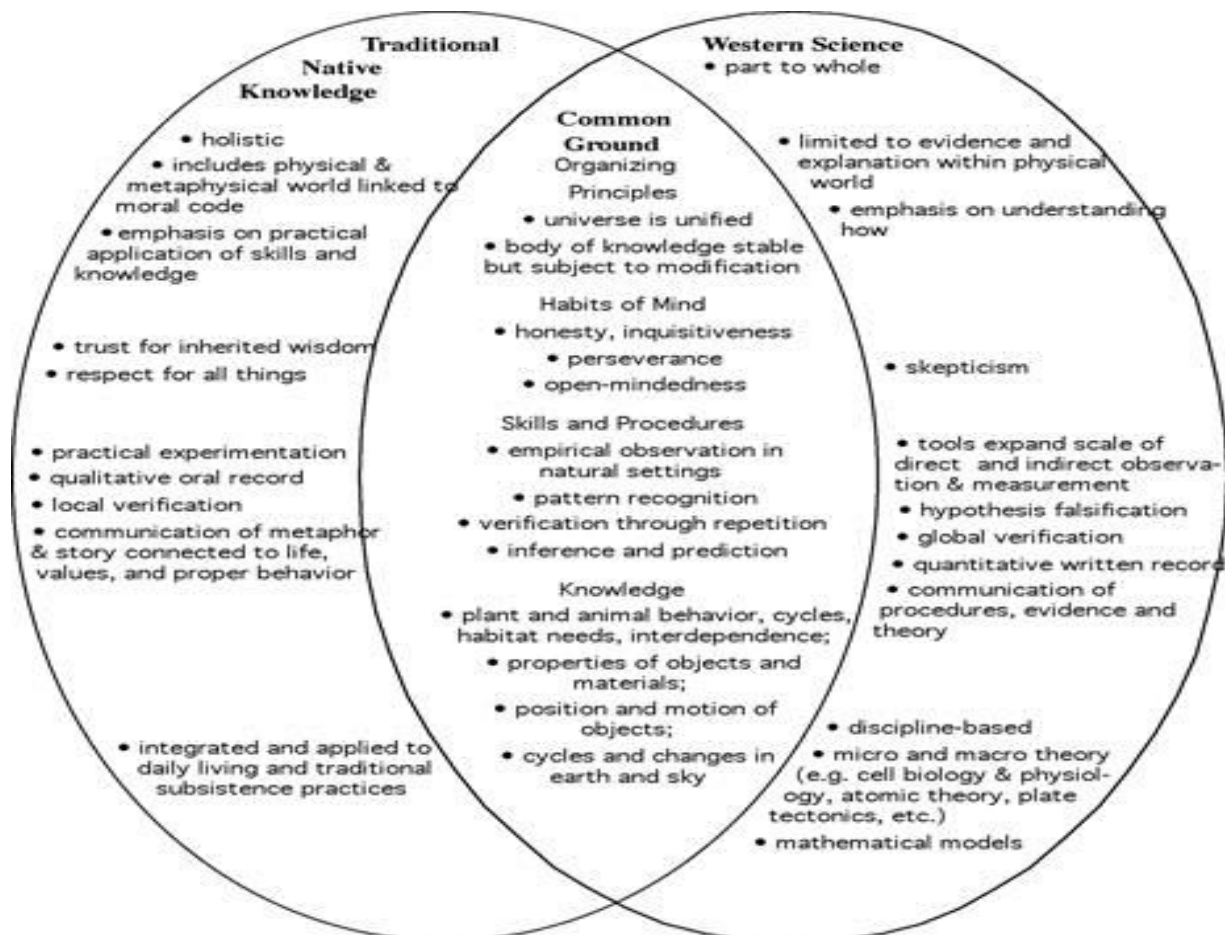


## HERITAGE KIT – TEK SCIENCE POSTER PROMPTS

Students can be assigned to design a poster that represents their topic of traditional ecological knowledge (TEK) research and correlate their findings with western science. Posters may be virtual or analog, reviewed by the teacher and peers or submitted to the larger world for feedback. There are various platforms for poster display and review: classrooms and school hallways, local libraries and museums, scholastic and social events, or submitted for regional/ state competitions, conferences, and/or symposia.

### Traditional Ecological Knowledge and Western Science Defined

A review of the definitions and overlapping areas of traditional ecological knowledge (TEK) and western science can clarify what the poster should include. The Glossary from <https://alaskapublic.pbslearningmedia.org/resource/ean08.sci.ess.earthsys.lpnativeways/alaska-native-ways-of-knowing/#.WylYfqdKiUk> defines *traditional ecological knowledge* as knowledge and information that is accumulated through generations of careful observations and direct interaction with the environment on a frequent basis while *western science* is an approach to understanding the natural world objectively, using the scientific process.



Venn Diagram from Alaska Native Knowledge Network

[http://ankn.uaf.edu/curriculum/Articles/BarnhardtKawagley/Indigenous\\_Knowledge.html](http://ankn.uaf.edu/curriculum/Articles/BarnhardtKawagley/Indigenous_Knowledge.html)

## Poster Creation

The Alaska Climate Adaptation Science Center (AK CASC) identifies the mechanics of creating a professional research poster (<https://casc.alaska.edu/resource/research-poster-template-ak-csc-projects>) for projects it supports. These projects include the development of methods to assess the vulnerability of species, habitats, and human communities which encompasses the protection of Native American cultural resources and the health of indigenous people. Note the final comment on the need for illustrations with captions: captions are read more frequently than text.

This research poster template was created so that AK CASC researchers and projects could easily share their results at meetings and conferences. The document is set up with preferred AK CASC colors, fonts, and some commonly used logos. It is in the Microsoft PowerPoint format and is a 3x4 foot poster.

### Here are guidelines:

- Open up the poster template link.
  - ✓ <https://casc.alaska.edu/resource/research-poster-template-ak-csc-projects>
- Check the poster size guidelines for the conference submission. Change the size of this poster file by clicking on the “themes” tab, and clicking on “slide size” on the far left.
- The light blue lines are “guides” – they will not show up on the final poster. Move them around to make clean columns and line things up.
- Hold the “alt” key and drag the mouse over a guide to create more guide lines. Use the guides to make sure that the various elements of your poster lines up with other elements.
- Even if the columns are different widths – having elements line up in the columns will make your poster look professional.
- Resize the blue “title boxes” or the white “text boxes” to fit the content that you would like to share.
- Think about adding text in three layers – the titles, subtitles or catchy statements, and then the body text.
- Roughly, titles are size 60 text, subtitles and photo captions are size 40 text, body text is size 30 text, do not make your body text smaller than about 22 point.
- For headings or bold statements, use different varieties (Bold, caps, etc.) of the Gill Sans font.
- For bodies of text, use the Minion Pro font.
- People are drawn to the photos and illustrations – don’t forget to add some! Research shows that captions are much more likely to be read than text, so make sure you include captions for every photo or graphic.

## Programmed or Open-ended Poster Creation

There may be individualized criteria for in class displays (i.e., Food from the Sea 35 Salmon Life Cycle 4.2 - Classes 2 & 3 – Research, Poster Creation) or aided by teacher guidelines students may generate their own research or science experiment project.

Poster topics may be geared toward conferences or competitions.

Conferences such as:

- Alaska Marine Science Symposium <https://www.alaskamarinescience.org/>
- Kachemak Bay Science Conference <https://kbayscience.org/>

-OR-

Competitions like the:

- Alaska Science Fair <https://alaskasciencefair.org/>

NOTE: Process of creating poster with TEK <http://ankn.uaf.edu/media/videos/funquick.html> (2001) offers a video overview of the process of creating an Alaska Science Fair poster with an emphasis on quantitative examinations of topics of interest to villagers, often inspired by interviews with Elders.

## Poster Abstracts

Many scientific conferences require that potential participants submit an abstract of their poster project. An abstract is a concise summary of the research project in a format like that described by the Alaska Geophysical Union's guidelines (<https://education.agu.org/virtual-poster-showcase/>)

- **Context/Purpose:** One to two sentences explaining why you studied this particular topic and what is significant about it. Has past research been done? How does your research add to existing knowledge?
- **Methods:** One to two sentences outlining the methods you used to conduct your research. How did you collect your data? How did you process your data?
- **Results:** Three to four sentences about what you found through your research.
- **Interpretation:** Up to four sentences discussing those findings. What do the results mean?
- **Conclusion:** One sentence summarizing what you have learned from your research and why it is significant.”

<b>Science Poster Assessment</b>
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**Judging Criteria Project # Team or Individual Name** \_\_\_\_\_

1. The presentation by the student and his/her display maintain or reflect many of the Sugpiaq or Eyak cultural values:

Needs more work	Somewhat Good	Excellent
1	3	5
7	8	

2. This project reflects knowledge and the understanding of something that is of significance to the Sugpiaq or Eyak culture or this region of Alaska:

Needs more work	Somewhat Good	Excellent
1	3	5
7	8	

3. This project is a study of something that is significant to the student’s family or village/rural community. The student has shared that significance:

Needs more work	Somewhat Good	Excellent
1	3	5
7	8	

4. This project contributes to the understanding of the land and assets of the village/rural community and/or the Alaska Native corporations:

Needs more work	Somewhat Good	Excellent
1	3	5
7	8	

5. The student has shared evidence of consulting with one or more community Elders or other cultural resources:

Needs more work	Somewhat Good	Excellent
1	3	5
7	8	

Judge’s comments or suggestions: \_\_\_\_\_

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**Please note:** In addition to individualized grading rubrics and peer review, Elders may be invited to assess the TEK and cultural content of the poster information.

The following website provides an Elder’s Judging Criteria Evaluation adapted here for Chugach Regional use:

<https://alaskapublic.pbslearningmedia.org/resource/ean08.sci.ess.earthsys.lpnativeways/alaska-native-ways-of-knowing/#.WylYfqdKiUk>