Infusing Native Language in the Science Curriculum

The *Aurora Alive* Introductory and Advanced curricula illustrate a variety of ways indigenous knowledge can be infused into classroom science instruction. *Aurora Alive* Advanced Curriculum includes vocabulary from five different Alaska Native languages. Incorporating Native language terminology into science lessons helps students make connections between Traditional Native Knowledge and Western Science.

Traditional Introductions

Aurora Alive encourages Elder involvement in the classroom. Inviting Elders into the classroom helps students see how traditional knowledge and cultural practices relate to current scientific research. Elders and other cultural knowledge providers also help students identify Native language terms related to science.

In the lesson "Traditional Introductions" (p. 223, Advanced Curriculum) students learn how to introduce themselves in a traditional manner as a display of respect for Elders or other cultural knowledge providers visiting the classroom. Other lessons that involve Elders or culture knowledge providers include:

> "Elders Speak About the Aurora" (p. 9, Introductory Curriculum)
> "Native Aurora Vocabulary" (p. 7, Advanced Curriculum)
> "Navigational Methods" (p. 49, Advanced Curriculum)
> "Spectrum in Alaska Native Languages" (p. 118, Advanced Curriculum)

Data

Aurora Alive illustrates how Native language terms can be used in science class when students observe and record data. It includes Native language vocabulary and activities that address aurora observation and data collection terminology, such as colors, numbers, days of the week, and months.

- Color
  Cultures view color in a variety of ways. Some languages have words for colors that do not have an English equivalent. Conversely, some languages do not have a word for a color represented in English. The lesson, "Spectrum in Alaska Native Languages" (p. 118, Advanced Curriculum) shows students how to use Native language when addressing color in the aurora. Other lessons that could use Native language to address color include:

  > "Colors Here and Colors There" (p. 95, Introductory Curriculum)
  > "Diamante" (p. 116, Introductory Curriculum)
  > "Aurora Shapes" (p. 133, Introductory Curriculum)
  > "Identifying Aurora Shapes" (p. 143, Introductory Curriculum)
  > "An Aurora Cinquain" (p. 106, Advanced Curriculum)
  > "Create a Pastel Aurora" (p. 117, Advanced Curriculum)
  > "Write to an Imaginary Pen Pal" (p. 129, Advanced Curriculum)

- Numbers
  Because counting systems vary greatly across languages (and even within some languages), an information sheet listing numbers from 1 to 20 in several Alaska Native languages is found on page 225, Advanced Curriculum. Because the *Aurora Alive* curriculum often uses large numbers associated with great sizes and distances, teachers may want to seek out native language speakers to add more vocabulary. The information sheet provides blank space so students can add vocabulary related to numbers from their local culture and language. Numbers from the information sheet may be infused into the following lessons:

  "Making Predictions About Invisible Force" (p. 45, Introductory Curriculum)
  "The Kp Index and the Aurora" (p. 166, Advanced Curriculum)
  "Forecast" (p. 170, Advanced Curriculum)

- Days of the Week
  The lesson "Days of the Week" (p. 226, Advanced Curriculum) contains vocabulary that may be infused into the following lessons:

  "Identifying Aurora Shapes" (p. 143, Introductory Curriculum)
  "Write to an Imaginary Pen Pal" (p. 129, Advanced Curriculum)
  "Forecast" (p. 170, Advanced Curriculum)

- Months
  The lesson "Native Languages: Months" (p. 231, Advanced Curriculum) contains vocabulary that may be infused into the following lessons:

  "Identifying Aurora Shapes" (p. 143, Introductory Curriculum)
  "Write to an Imaginary Pen Pal" (p. 129, Advanced Curriculum)
  "Forecast" (p. 170, Advanced Curriculum)