**Evaluating Data Visualizations: A Template for Teachers**

When evaluating the effectiveness of a data visualization, consider both its basic design and your intended instructional use. Use these questions to guide your evaluation.

**Grade level:**

For what grade level is this visualization appropriate?

**Instructional role:**

What big and subsidiary ideas in Earth science will this visualization help students understand?

**Accuracy:**

Is this visualization scientifically accurate? Which person or agency created this visualization? What is the underlying data, and how was it collected and processed to create this visualization?

**Background knowledge:**

What content knowledge is needed to understand this visualization? Are preparatory activities or scaffolding needed to use this visualization effectively? If so, how can these be provided to students?

**Embedded conventions:**

What visual conventions does this visualization use that students might not understand or that might lead to confusion?

* *Scale*: Is the scale clearly indicated? Is there any exaggeration of scale? For example, is the vertical dimension exaggerated with respect to the horizontal dimension?
* *Legend and labels*: Are they present, clear, and adequate?
* *Projection*: Are there aspects of the projection (such as distortion of area) that need to be explained?
* *Color*: Is it clear what the colors in the visualization represent? Are the colors misleading or confusing?
* *Time and date*: Is the time and date information provided adequate to understand the visualization?

**Misconceptions:**

Might this visualization inadvertently introduce misconceptions or misunderstandings? If so, how can you provide additional information to guard against this misunderstanding?