

# CITIES OF THE AURORA MATH ESSAY

## Lesson Summary:

Students continue to develop the self-questioning process involved in writing a math essay, reading a sample math essay and identifying the transition within the essay.

## Objectives:

The student will:

- use the self-questioning process involved in writing a math essay;
- read a math essay;
- identify transition words in a math essay; and
- use self-questioning to determine what she/he knows and what she/he has been asked to find.

## GLEs Addressed:

### Science

- [5-8] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.
- [9] SD3.2 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by explaining the phenomena of the aurora.

### Math

- [5] PS-3 The student communicates his or her mathematical thinking by representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or organizing and communicating mathematical problem-solving strategies and solutions using mathematical language (M8.2.1, M8.2.2, & M8.2.3).
- [6] PS-3 The student communicates his or her mathematical thinking by representing problems using mathematical language including concrete, pictorial, and/or symbolic representation; or using appropriate vocabulary, symbols, and technology to explain mathematical solutions (M8.2.1, M8.2.2, M8.2.3).
- [7] PS-3 The student communicates his or her mathematical thinking by representing mathematical problems numerically, graphically, and/or symbolically; or using appropriate vocabulary, symbols, or technology to explain, justify, and defend strategies and solutions (M8.3.1, M8.3.2, & M8.3.3).
- [8] PS-3 The student communicates his or her mathematical thinking by representing mathematical problems numerically, graphically, and/or symbolically, translating among these alternative representations; or using appropriate vocabulary, symbols, or technology to explain, justify, and defend strategies and solutions (M8.3.1, M8.3.2, & M8.3.3).
- [7] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, and community (M10.3.1 & M10.3.2).
- [8] PS-5 The student demonstrates the ability to apply mathematical skills and processes across the content strands by using real-world contexts such as science, humanities, peers, community, and careers (M10.3.1 & M10.4.2).

### Writing

- [5] 2.1.3 The student writes about a topic by organizing ideas logically to establish clear relationships within and between paragraphs (e.g., using transition words or phrases that reveal order or chronology) (L).
- [6] 2.1.3 The student writes about a topic by organizing and sequencing ideas logically to establish clear relationships within and between paragraphs (e.g., using transition words or phrases that reveal order of chronology, comparison/contrast) (L).
- [7] 3.1.3 The student writes about a topic by organizing ideas using appropriate structures (e.g., chronology order, order of importance, comparison and contrast) to maintain the unity of the composition with a variety of transitional words and phrases.
- [8] 3.1.3 The student writes about a topic by organizing ideas using appropriate structures (e.g., chronology order, order of importance, comparison and contrast, classification and definition) to maintain the unity of the composition using a variety of transitional words and phrases.

**Search Terms:** mathematics, math essay, transition, language arts, writing, aurora, Northern Lights

