

## **Building Language Skills with The Seattle Times**

Date: Thursday, April 20, 2017

Article: **UPS top scorer in math competition on self-driving cars**

Print Replica: Tuesday, April 18, 2017

Section: NW Tuesday, B2

### **Standard:**

#### CCSS.ELA-LITERACY.RI.5.10

By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4-5 text complexity band independently and proficiently.

### **Key Ideas and Details:**

#### CCSS.ELA-Literacy.RI.4.1

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

#### CCSS.ELA-Literacy.RI.4.3

Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

### **Objective:**

Students will practice their reading skills to explore how the author uses reasoning and evidence to support specific points in the text by using deeper level questions and connecting the content to their personal lives.

### **Vocabulary:**

Look up the definitions for the following word. First, write what you think the highlighted word means, then look up the definition and write it in the space provided, using your own words.

The team's answer included a letter to Gov. Jay Inslee that summarized their findings. "Our simulation suggests that when self-driving cars **impact** traffic flow at all, they improve roadways for everyone, not only for the owners of self-driving cars," they wrote.

### ***Impact guess:***

### ***Impact definition:***

### **Building Language Skills:**

*Visualizing* text is a proven way that improves reading comprehension. Have students close their eyes and listen carefully. Have them think deeply about the words described in the statement.

The teacher will read the following information to the class, taken from the article.

***Spivey said he thinks the liberal-arts college does a good job preparing students not only to be good mathematicians and scientists, but also to explain the math and science behind their ideas.***

***“A large part of this competition is not just constructing a good model,” he said, “but also explaining it well.”***

Have students share their thoughts. What images did you visualize? What emotions or thoughts arise? Do you agree or disagree with Spivey’s quote? Do you enjoy math and science? Are there opportunities in school to get creative in the areas of math and science and do cool projects and simulations like these students did? Why or why not?

### **Comprehension:**

1. A team of math whizzes at the University of Puget Sound provided a top-rated answer in a mathematics modeling competition that required them to examine what issue?
2. What was their final answer?
3. Three students — Jordan Fonseca, Jesse Jenks and Matthew Moreno — applied mathematical-modeling skills to compete with \_\_\_\_\_ student teams across the globe participating in the international Mathematical Contest in Modeling.
4. Their answer in the online competition placed them in the top \_\_\_\_\_ teams — seven Chinese teams and four American teams — whose answer scored “outstanding” or “finalist” on the math problems.
5. The students proposed an answer to impact on traffic flow if self-driving cars took to the streets on major highways in Thurston, Pierce, King and Snohomish counties. What were the students provided and what did they create to answer questions about how traffic would be affected?
6. How many pages was the answer? What kind of model did they use?
7. What did their models show?
8. The team’s model also showed that if the concentration of self-driving cars were to rise above 5 percent, a car lane reserved for self-driving cars only — on roads with three or more lanes — would reduce what?
9. The students also raised some caveats. In what ways was their study limited?

### **Post-Reading Class Discussion or Journal Writing Assignment:**

- What do you already know about self-driving cars?
- Have you, or anyone you know, driven in one? What were their feelings about the ride?
- If you haven't, how would you feel about driving a car and letting it drive for you? Would you like it or not? Give some details to support your answer.
- Talk with your friends or family members, how would they feel about owning or riding in a self-driving car?
- Would you rather get an Uber with a driver or a self-driving car? (*They're actually testing this program now and have a fleet of self-driving cars*)
- Do you think self-driving cars would impact traffic flow? Why or why not?
- The team concluded that these cars would "improve roadways for everyone, not only for the owners of self-driving cars." Do you agree or disagree with their conclusion?

***The study didn't take into account a variety of other issues — including changes in traffic volumes over the course of a day, the effect of bad weather on traffic patterns, even the psychological effects that the presence of self-driving cars could have on other motorists.***

- Do you think these additional factors would've changed the validity of their team's findings? Why or why not?