



## **Science Exemplary Text Student Handout**

### **Steer Clear**

Automakers are offering electronic stability control on more and more passenger vehicles to help prevent them from sliding, veering off the road, or even rolling over. The technology is a product of an ongoing evolution stemming from antilock brakes.

When a driver jams the brake pedal too hard, anti-lock hydraulic valves subtract brake pressure at a given wheel so the wheel does not lock up. As these systems proliferated in the 1990s, manufacturers tacked on traction-control valves that help a spinning drive wheel grip the road.

For stability control, engineers mounted more hydraulics that can apply pressure to any wheel, even if the driver is not braking. When sensors indicate the car is sliding forward instead of turning or is turning too sharply, the actuators momentarily brake certain wheels to correct the trajectory. "Going to electronic stability control was a big step," says Scott Dahl, director of chassis-control strategy at supplier Robert Bosch in Farmington Hills, Michigan. "We had to add sensors that can determine what the driver intends to do and compare that with what the car is actually doing." Most systems also petition the engine-control computer to reduce engine torque to dampen wayward movement.

Fischetti, Mark. (2007). "Working Knowledge: Electronic Stability Control." *Scientific American*. April 2007.

This is an example of exemplary text found in *Common Core Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects: Appendix B Text Exemplars and Sample Performance Tasks*. Retrieved from [http://www.corestandards.org/assets/Appendix\\_B.pdf](http://www.corestandards.org/assets/Appendix_B.pdf)

## Science Exemplary Text Teacher Resource

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**EFL 6**  
**Word Count 198**

*Teacher introduces the text with minimal commentary and students read it independently. Teacher then reads passage aloud. Give a brief definition to words students would likely not be able to define from context (underlined in text). Teacher guides the students through a series of text-dependent questions. Complete the performance task as a cumulative evaluation of the close-reading.*

### Text-Dependent Questions

1. What is the main idea of this article?
2. Why are all of these changes being made to cars?
3. What will the car do if you are sliding or turning too fast?
4. How did this surge in technology start?
5. Explain what anti-lock brakes do, according to the article.

### Performance Tasks for Informational Texts

Students determine the meaning of key terms such as hydraulic, trajectory, and torque as well as other domain-specific words and phrases such as actuators, antilock brakes, and traction control used in Mark Fischetti's "Working Knowledge: Electronic Stability Control." [RST.11–12.4]

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