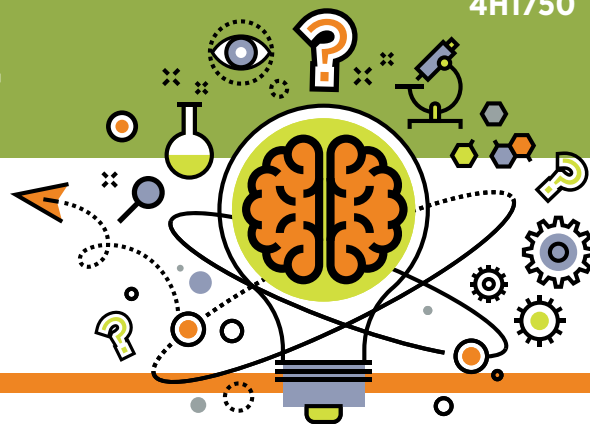# TEACHING SCIENCE
...when you don't know diddly-squat

Does texting affect safe driving?

Purpose:

The purpose is **not** to teach specific content, but to teach the process of science – asking questions and discovering answers. This activity encourages young people to try to figure things out for themselves rather than just read an answer on the internet or in a book. As a leader, try not to express your opinion, but let the youth engage in arguments based on evidence.

Time required:

20 minutes or multiple days depending on the interest and questions the youth have

Materials:

❏ Video game system
❏ Racing game
❏ 2 phones with texting capability
❏ Pencil
❏ Paper

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Science Practice:
Asking questions and defining problems

1. *Is it safe to text while you drive? Do you think some people can text while driving while others cannot? How could you test this safely?*

Science Practice:
Planning and carrying out investigations

2. Have youth drive a course on the video racing game. Keep track of how many times they crash and their time on the track. Repeat the same course while another person is texting them and they try to respond. Keep track of how many times they crash and their time on the track while they are texting.

Science Practice:
Using mathematics and computational thinking

3. Create a chart with the driver, number of crashes (with and without texting) and time to complete course (with and without texting) like the one below:

Results of Driving With and Without Texting

Driver	Number of crashes (without texting)	Time to complete course (without texting)	Number of crashes (without texting)	Time to complete course (without texting)

Did texting make a difference? Why or why not?

Science Practice:
Developing and using models

4. *What are some of the situations that occur while driving that the video game model did not include? How could you make it more realistic? Would you say this test is helpful for determining if texting while driving is safe?*

Science Practice:
Analyzing and interpreting data

5. *Are certain types of people better at texting while driving than others? Older or younger people? Males or females? Does experience either driving or texting make a difference?*

Science Practice:
Constructing explanations and designing solutions

6. *Based on what you observed, is there anything you could do to make texting while driving safer? How would you design a car differently based on the prevalence of technology?*

Science Practice:
Engaging in argument from evidence

7. *Do you think if someone could text while driving safely in the video game they should be allowed to text while driving in real life? Why or why not?*

Science Practice:
Obtaining, evaluating, and communicating information

8. *Would this be helpful information to share with law enforcement? Do you think this would be a helpful exercise during driver's education courses? How could you share this information?*

You do not need all the answers to teach science. You simply need an inquisitive mind and to be willing to carry out an investigation.

Other thoughts:

▶ *Are there other driving situations you could safely test using a video game? Eating and driving? Listening to music? Having a conversation on the phone? Answering trivia questions?*

Science & Engineering Practices:

These eight Science and Engineering Practices come from *A Framework for K–12 Science Education* (National Research Council, 2012, p. 42). These research-based best practices for engaging youth in science are connected to in-school science standards that all children must meet.

▶ Asking questions and defining problems
▶ Developing and using models
▶ Planning and carrying out investigations
▶ Analyzing and interpreting data
▶ Using mathematics and computational thinking
▶ Constructing explanations and designing solutions
▶ Engaging in argument from evidence
▶ Obtaining, evaluating, and communicating information

Reference:

National Research Council. (2012). *A framework for K-12 science education: Practices, crosscutting concepts, and core ideas*. Washington, DC: National Academies Press.

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