

Assessing Characteristics of Meaningful Learning

Your Name: Peter Barron

Lesson Plan Name: Driving while Distracted

Lesson Plan Grade Levels: 9-12

Lesson Plan URL: <http://sciencenetlinks.com/lessons/driving-while-distracted/Lesson>

Plan Description:

This lesson's primary function is to demonstrate to teenagers just how vulnerable they are at an age where they might feel invincible. Driving is one of the important rites of passage for teenagers, yet collectively, they remain one of the most dangerous driving groups, if only because their inexperience in the advanced art, and distractions while driving are some of the most deadly causes of crashes on the road.

There are a number of different ways the lesson looks to accomplish this, from fliers with statistics, to audio clips and a short video. The students begin with the "Monkey Business Illusion" video on YouTube to test how well they observe details in a rapidly changing and confusing environment. Students are supposed to count how many times a team of three people in white shirts pass a basketball, while another team in black shirts does the same. This happens while one black shirt player leaves the stage in favor of a man who walks on in a gorilla suit, all while the background color of video changes from scarlet to gold.

The video plays twice, with the narrator pointing out everything that changed in case students had been prepared ahead of time

Included next in the lesson, is a flier that is targeted to teens exactly from the education website www.distraction.gov with statistics about teenage crashes, injuries and deaths about distracted driving. These include the number of deaths and injuries in 2014 from distracted drivers, as well how long sending one text message could take attention away from drivers.

Lastly included in the lesson are two audio clips and questions for teachers to either ask out loud or hand out as work sheets. These two audio clips are from Scienceupdate.com. One addresses the value of hands-free headsets in keeping drivers from being distracted and the other addresses general use of a phone, or general tasks that require significant concentration taking away from driving.

Once all the extra activities are done, the lesson plan recommends a class discussion on themes of

"What is distracted driving and what causes it?
Why is distracted driving a major problem for new drivers?
What are the legal issues involved in distracted driving and how are states dealing with them?"⁽¹⁾

To assess the retention of the knowledge, the lesson plan suggests having students develop a one-minute Public Service Announcement in order to inform their fellow classmates about the dangers of distracted driving, as well as questions to assess if the students are informative as they need to be.

For each of the five categories below, provide a rating of the technology use based on each factor in the category. Provide evidence in the form of brief examples from the plan. If the plan does not contain sufficient information for you to give a particular rating, indicate “UNKNOWN” in the Rating column. However, you should select a plan that allows you to rate most of the factors.

Assessing Active Learning

Factor	Rating high-medium-low	Evidence Supporting Rating
Learner interaction with real-world objects	Medium	The assignment uses media, but that media is not as interactive as it could be; the most we get is students intensely watching a video from details. This is aside from any print outs that the teacher chooses to employ.
Observation and reflection	High	The students are encouraged to watch and listen to media presentation and fill out questionnaires about them.
Learner interactions	Medium	With the PSA part of the assignment, there are a lot of interactions between students and using the variables on their own, but otherwise the variables are more passive and student observation.
Tool use	Medium	The “Monkey Business” video does require a lot of observation and cognitive consideration, but the rest is more passive, answering questions on audio clips.

Assessing Constructive Learning

Factor	Rating high-medium-low	Evidence Supporting Rating
Dissonance/Puzzling	Low	Aside from the follow up PSA, there isn’t a lot to work out for students here with problem solving. The “Monkey Business” video will require intense student concentration, but the rest of the activities are far more passive.
Constructing mental models and making	Low	While presenting the material back in a PSA is good assessment, there isn’t a lot

meaning		done with the information in the full lesson aside from the questionnaires, which is more information recall than construction mental models.
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Assessing Intentional Learning

Factor	Rating high- medium -low	Evidence Supporting Rating
Goal directedness	Medium	The specified goal getting students to be aware of the dangers of distracted driving seems easily obtained, but given the passive nature of most of the activities, it doesn't score as high as it could. A simple google search found a game on the New York times that was far more informative. http://www.nytimes.com/interactive/2009/07/19/technology/20090719-driving-game.html?_r=0
Setting own goals	Low	This is a lesson set by teachers first and foremost; student attitudes may not exactly have them seek material out willingly
Regulating own learning	Medium	Students monitor each other with PSA part of the assignment but otherwise, lesson can be done solo.
Learning how to learn	Low	There's very little opportunity to discuss the learning process here, aside from PSA
Articulation of goals as focus of activity	Medium	The activities are fairly straightforward towards the final lesson, i.e. and students may not be completely aware of final product.
Technology use in support of learning goals	Medium	Given the technology is used to display lesson this is a good start, but depending on technology available to teacher, this may rate medium or high.

Assessing Authentic Learning

Factor	Rating high-medium-low	Evidence Supporting Rating
Complexity	Medium	Depending on what class or classes approach the topic, this could qualify as a few different subjects, but could as easily be handled by one class. Generally this uses general knowledge math and science.
Higher-order thinking	Medium	While not pure memorization, interactivity and development may depend on how involved teacher wants to

		make it. More interactivity could be possible- especially by supplementing with other resources.
Recognizing problems	Medium	Considering the PSA part of the assignment, students can help develop a better delivered message than provided
“Right answers”	Medium	Much of the data present is what you call “common sense” – even if not said out loud, most anyone would agree that distracted driving is an issue. The right answers will be highly dependent on how the information is conveyed back in Discussion and PSA segments.

Assessing Collaborative Learning

Factor	Rating high-medium-low	Evidence Supporting Rating
Interaction among learners	High	The recommended follow-up activity of student group work to build their own PSA on distracted driving rates as high.
Interaction with people outside of school	Low	Depending on individual students, they may or may not choose to convey the information outside of school, but there is no compelling reason to do so.
Social negotiation	Medium	Depends on students involved, but there is no guarantee groups will work together well. Still, it does have capability for Discussion and PSA part of assignment.
Acceptance and distribution of roles and responsibility	Medium	Again, depends on general class populations and teacher control of how students work together as groups. Generally speaking, it is a good idea for the PSA to delegate, but discussion is dependent on the teacher.

References

1. Driving while Distracted. (n.d.). Retrieved March 25, 2016, from <http://sciencenetlinks.com/lessons/driving-while-distracted/>