GETTING SET UP

SCRIPT	COMMENTARY
1: Now that we know what an inductive loop is along with a few of its uses, we are going to make a miniature version in the classroom using this Build Kit.	1: Consider including notes on the importance of working together so that everyone has a chance to understand and ask questions as the inductive loop is built.
2: This slide shows a list of items that are included in the kit.	2: Consider using this time as a chance to make sure you have everything you need to build a successful loop and have students help identify components as you go. It will be helpful if you have built the loop by yourself prior to constructing it with students in the classroom.
3: Here is a glimpse of what the final product will look like after we build it – this is where we are headed with all of these pieces.	3: You can show them how the lights on the detector card in this photo show the loop is sensing metal from the truck passing over it.
4: First, we will start by creating the loop out of copper wire.	4: This will be the portion of the build that the truck/metal will pass over in order to generate a signature.
5: Next, we will connect the loop we built to the detector card which will read the strength of induction.	5: Connecting these two components allows the signal to be detected, read, and further communicated with other components of the build.
6: Now we will supply power to what we have built so far. Without power, nothing we built will work.	6: No commentary
7: After making sure the battery will remain charged on the laptop by plugging it into the wall, the laptop will serve as a foundation for software to run. When we open up this software in a little bit and the inductive loop has metal pass over it, the software on the computer will tell us all the details being communicated through the system.	7: No commentary

8: Clicking on this icon will open up the software needed that will tell us all the details of the inductive loop as well as the metal passing over it.	8: No commentary
9: Next, we will tell the software that the device is ready to go by connecting the two allowing communication between them. After that, we will tell the software that we only built a single loop by ensuring it is set to Single Channel (A) operating mode.	9: This software has other features that are not currently used in the program such as dual channel loops (this would allow speed estimation) as well as stop-detect features.
10: Next, we will determine our sampling speed. This is the speed at which the software will detect for the presence of metal over the inductive loop.	10: A sampling speed of 40,000 in this case refers to the software detecting for the presence of metal 40,000 times per millisecond.
11: Next, when we turn Event Logging on, we are allowing the software to keep a record of what it has detected over time. This can be useful in case we forget a number, record it ourselves incorrectly, or need to look at historical records.	11: No commentary
12: Allowing signal analysis will turn on the software feature that graphs the detection of certain truck characteristics. This is the feature that will be compared to determine what types of vehicles are moving down the roadway since a passenger car and a semi-truck's signatures will look different from one another.	12: No commentary
13: Now that we have it all up and running, I need a volunteer to test it out and make sure the detection is being graphed.	13: You will want to leave the signal analysis screen open. When a detection occurs, the detector card will make a clicking noise.
14: Congratulations, you are all set up!	14: No commentary