Intersection Safety

THE CHALLENGE

Learn about the different types of traffic control devices (TCDs). Understand how they help people to safely enter and exit intersections.

GRADE LEVEL

Elementary School (PreK - 5th Grade).

ACTIVITY DURATION

Approx. 30 minutes. (5 to 10 min. Introduction, 10 to 15 min. Activity, 5 to 10 min. Discussion)

MATERIALS

An electronic device (laptop, tablet, etc.) playing a simulation of the operation of an intersection with all modes of transportation, including motor vehicles, bicycles, pedestrians, and trains (Link to example video: https://www.youtube.com/watch?v=OtYby7QnyAE).

Traffic Sign models (as shown in right image) or printouts.

Samples of the materials to make Pavement Marking.

Raised Pavement Markers (if available).

Printouts of one or several local intersection aerial images or diagrams.

SET UP

This activity requires a table large enough to accommodate all of the materials. It is designed to be a “station” format (as shown in the photo below), but it could easily be modified to be taught in more of a traditional classroom setting.

Traffic control devices (TCDs) are critical for the safe and efficient movement of people and goods.

ACTIVITY

Start with an Introduction (5 to 10 min):
1. Introduce yourself and describe “The Challenge.”
2. Explain that you’re going to show them an example of an intersection (based on the age group, define an intersection). Play the video simulation.
3. While the video is playing, ask questions about the students’ understanding of how people know what to do at the intersection (how the intersection operates), based on what the students can see in the video.
4. Describe what traffic control devices are and their purpose (see Discussion notes).
5. Show the Traffic Control Device models / samples.

Lead them through the Activity (10 to 15 min):

6. Show the photos and diagrams of the local intersection(s) – one at a time – and ask the students to do the following:
   a. Find the TCDs in the photos and diagrams.
b. Explain what each TCD means and what they would need to do if they saw the TCD at the intersection.

c. Explain what they would need to do to safely enter and exit the intersection (based on all of the TCDs they have identified)

Close with a brief Discussion (5 to 10 min):
7. Summarize and reflect on what the students have learned (see Discussion notes for more details).
8. Challenge the students to look for TCDs while they’re out and about.

DISCUSSION

During the introduction, talk to the students about what traffic control devices are and how they work at an intersection. Remember to use simple, non-technical language for this age-group – break the concepts down to their level. For example:

“Traffic control devices are signs, signals, paint markings, and other items on the roadway that provide information to drivers, bicyclists, and people walking. These traffic control devices tell the people:

1. what they can and can’t do on the roadway (i.e. regulatory),
2. what they need to watch out for (i.e. warning)
3. what the safe and correct path forward is (i.e. guidance)

For example, these devices help drivers to figure out how to drive safely through an intersection. (Based on the students’ age, explain that an intersection is a place where two roadways cross each other or come together).

The traffic control devices help to make it clear what drivers can do and who gets to go through the intersection first. This helps to keep crashes from happening.

All in all, traffic control devices help to make the movements more orderly and therefore make the roadways and highways safer.”

During the closing discussion, test the students’ understanding of the following:

1. the purpose of TCDs,
2. the different types of information they provide and how that relates the safety
3. how to safely enter and exit intersections with different types of traffic control devices (TCDs).

LEVEL OF DIFFICULTY

IMPORTANT: It is crucial to have a conversation with the classroom teacher prior to performing the activity. This will aid in understanding the educational level of the class which will help determine the appropriate level of difficulty of the materials and items for discussion. For example, regular classes vs. gifted & talented or AP classes.

Increase difficulty by:

1. Letting the students explain more of the questions (i.e. how the simulation intersection and local intersections are operating & why, the names and meanings for the various TCDs).
2. Providing the information about the design of traffic control devices (color, shape, size, etc.) and have students identify these aspects of the TCDs for the local intersections.
3. Teaching the students how to improve TCDs to make transportation safer, e.g. increase the visibility of the TCDs, and then having them evaluate the TCDs for the local intersections.
4. Increasing the level of questioning.

Decrease difficulty by:

1. Removing the activity – and only walking the students through the intersection simulation
2. Focusing solely on the names and meanings for the various TCDs.
3. Reducing the number of local intersections.
4. Decreasing the level of questioning.