



The ITE STEM Committee is providing the following resources to assist ITE Sections and local chapters that wish to host STEM events as part of the Innov8 day in November 2020.

The suggested activities have been selected to provide maximum flexibility in the event that activities must be hosted in a virtual environment due to COVID-19. Resources are differentiated by student level, and described in the following sections.

While the national Innov8 day is November 8, you do not have to hold your event on this specific date. Select a date that works well for your District, Section, or Chapter! **Feel free to adapt suggestions to local preferences and needs- the ideas below are simply meant to facilitate implementation of ITE-hosted Innov8 events around the country in November 2020!**

All Grade Levels

Easy ideas:

- **Create a Transportation Trivia event** using Kahoot! or other online platform. Choose topics that students will be familiar with (like speed humps, bike lanes, etc.) and make connections to engineering by sharing brief facts about design, safety considerations, etc. after each question.
- **Host a panel of ITE members (or student chapter members)** to talk about transportation career pathways. This is a great way to feature the diversity of opportunities (and people!) in transportation!
- **Host a transportation project showcase** featuring 'cool projects' that ITE members are designing or have completed. To keep things exciting, use a 'lightning talk' format with speakers using slides primarily with pictures and constraining talks to 3-5 minutes. Have presentations for the first half of the session, and let students ask questions (and you ask the students questions) for the second half to keep everyone engaged.



Elementary and Middle School

Streets Have Personality Game

Students take on a persona and act out how they would travel on different street examples. After each turn acting, the class has the chance to discuss implications.

Adaptation for virtual setting: Provide initial presentation to orient students to different street types. Group students into small teams via breakout rooms (such as through Zoom) or, ask for volunteers to demonstrate each mode type and then engage in group discussion. **If using breakout rooms, an ITE volunteer should be assigned to each group for facilitation/monitoring.**



Elementary and Middle School cont.

Traffic Counts and Signal Timing

Students will learn how to count traffic at an intersection and how this relates to signal timing and the operation of an intersection.

Adaptation for virtual setting: Work with local municipalities to obtain footage from a local signalized intersection to use rather than visiting a site in person. Facilitate as large group or via breakout rooms in a platform such as Zoom. **If using breakout rooms, an ITE volunteer should be assigned to each group for facilitation/monitoring.**

Sign the Way

This activity provides students with an opportunity to learn about the types of signs transportation engineers use to convey information to drivers and how drivers see signs at night.

Adaptation for virtual setting: Provide initial presentation and show videos via virtual platform; break students into groups and use platform such as Zoom Breakout Rooms to create virtual working groups (an ITE representative should be assigned to each breakout room as an activity facilitator/monitor). If a breakout room platform is not available, facilitate as a large group and invite students to share their signs and rationale for development.

High School

The following activities curated by the ITE STEM Committee are easily adapted to a virtual setting:

Transportation Trends and Technology Research Project

This activity allows students to conduct online research to learn more about a topic of interest related to transportation trends and technologies and to further educate an audience of their peers.

Transportation and Climate Change Action Hour

Through this activity, students will conduct online research to learn more about a topic related to transportation and climate change. Students will present their findings along with a call to action. The presentations should consider how the topic is part of a larger transportation system and provide steps needed to implement the action.

Considering the Safety Benefits of Autonomous Vehicles

This activity allows students to conduct online research to learn more about safety benefits accrued at each of the levels of autonomous driving as defined by the Society of Automotive Engineers (SAE). This is a topic related to transportation trends and technologies, further intended to educate an audience of their peers. Students are then to assemble in teams and present their understanding of each level of automation as well as pick the level of automation they believe will clearly provide the most safety benefits while minimizing driver confusion and challenges in adoption.

For a more involved High School event, check out the Distracted Driving Challenge Materials!