

Best Pandemic Practices Smart Grid for Schools

Use of the sets in the schools should follow school policies concerning social distancing and the use of PPE. All hands-on components should be positioned as far apart as is reasonable in the classroom.

Hands-On Resources:

All Smart Grid for Schools items are available for shipping to schools or organizations as in years past. All items are shipped directly from CeMaST. They will not be shipped from one school to another. This allows time for complete disinfection of all parts.

The **Steam Engine Model** should only ever be handled by the teacher.

Generators should be disinfected between students, with special attention to the handle, cables, and all wood parts.

The **Grid Construction** kit is packed with 8 additional audio cables and couplers so each grid line can be set up at twice the normal distance from the headquarters office. While grids can be spread out further using wire, it is recommended that only one student work with each grid line at a time (one student per each of the four grid lines). Kit components can be disinfected with most sprays and wipes, though we ask that you monitor color loss and choose a different product if your disinfectant is removing paint.

There are some common materials for the **Smart Homes** which must be disinfected between each student's use, including the tablet (if used), the car, the water sensor, and the multisensor. Disinfection can be reduced by having one student handle the physical materials at the direction of others.

The smart home can be controlled from any device by accessing the home's WiFi network, so multiple students can use the same home simultaneously and at a social distance. The interface is designed for devices tablet-sized and larger, but it is usable on some phones as well.

The only limitation with multiple devices is that only one student will be able to access the dashboard or home automation page at once. (This is enforced by the system, and is not an instruction the teacher needs to provide.) All other challenges / experiments are available to all students at all times.

The surface of the **Solar Farm Simulator** surface is all unvarnished wood, so it is not easily-disinfected by wipes. We recommend using spray disinfectants on all components of the solar farm simulator. Please do not over-wet the simulator, as long periods of moisture could deteriorate the wood.

For details on these kits, shipped free-of-charge to your school, please visit <http://smartgridforschools.org/>. All materials can be used with companion curricula, also available on the web.

Virtual Resources:

For students who are not at school, or for whom hands-on experiences would be difficult in the classroom, several of the hands-on components have been made available in a completely virtual form.

These experiences can be completely self-guided, or companion questions / activities can be assigned. Companion curricula and additional details are available from <http://smartgridforschools.org/>.

The **Virtual Grid Construction** game challenges students to place customers on the map and provide them power. Like the hands-on experience, students progress through the construction of the grid chronologically, first connecting factories then moving into devices making the grid 'smart.'

This web-based experience is available for students on any device tablet-sized or larger.

The **Virtual Smart Home** includes an animated virtual home as well as most of the challenges and experiments from the hands-on smart home and several additional challenges/experiments.

This web-based experience is available for students on any device tablet-sized or larger.

An interactive **Virtual Reality Tour** of a solar farm is under development and will be available for piloting in November 2020. This experience allows students to explore careers as they navigate the construction site of the University of Champaign-Urbana's Solar Farm 2.0.

This experience will be designed for phone-sized devices and is expected to be available for all Android and iOS devices. Teachers may request free silicone goggles to turn each student's phone into a virtual reality headsets.

Please let us know if you have any comments, questions, or suggestions about the use of Smart Grid for Schools.