

## EDUCATIONAL OPPORTUNITIES FOR STUDENTS AND TEACHERS

*Future Energy Chicago* invites students to work together to explore energy concepts in a Learning Lab session facilitated by educators from the Museum's Center for the Advancement of Science Education. The exhibit is designed to get students and other Museum visitors excited about science, engineering and design through collaborative learning challenges in the *Future Energy Chicago* simulation.

*Future Energy Chicago* is recommended for students in grades 4 – 8 who are visiting the Museum on a field trip. The exhibit is aligned with the Next Generation Science Standards (NGSS), the new national K-12 science learning standards. NGSS emphasizes real-world impacts of science and connections between the different science fields, among other goals.

*Future Energy Chicago* invites students to explore how energy use and production impact their lives and encourages them use real facts and information to make decisions about these topics. Students discover how they, and their communities, can make smart choices about energy—such as using compact florescent light bulbs at home or taking public transportation instead of driving—as they explore related careers in the exhibit's dynamic virtual simulation game. In this multi-player game, students work on teams and take on the roles of home energy consultants, urban planners, automotive engineers, transportation planners and power engineers as they try to create the future house, neighborhood, car, transportation system and power supply for the city of Chicago.

## **Related programs for teachers**

MSI's science teacher education courses provide middle-grades teachers in high-needs schools with science content and teaching strategies. Our academic year courses provide teachers with lesson plans, materials to do hands-on activities in the classroom, and a class field trip that includes funding for a bus and a Learning Lab. These courses are offered at no cost to teachers who apply and are selected to participate.

Teacher courses related to the science concepts explored in *Future Energy Chicago* include:

- Expedition: Green (environmental science) Explore and study global and regional ecology and ecosystems concepts, and increase knowledge of resource management and sustainability issues.
- Get Re-Energized (physical science) Experiment with concepts related to energy such as energy transformation and conversion, potential and kinetic energy, light, heat, electricity and more.

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