

Safety with Electricity

Mod.3.6

TIME

90 minutes

OVERVIEW

Students design a poster or a web page to promote safety with electricity.

Note: Mod.3.6: Safety with Electricity should be undertaken after Mod.2.4: Chindogu: Useless Inventions has been completed.

LEARNING OUTCOMES

Through this learning experience (LE), students will achieve specific learning outcomes (SLOs) in various subject areas. Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified.

English Language Arts

Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:

- 1.2.3 *Combine Ideas* — Search for ways to reorganize ideas and information to extend understanding.
- 2.3.4 *Experiment with Language* — Alter words, forms, and sentence patterns to create new versions of texts for a variety of purposes [such as humour...]; explain ways in which figures of speech [such as similes, metaphors...] clarify and enhance meaning.
- 2.3.5 *Create Original Texts* — Create original texts [such as letters, short stories, media broadcasts, plays, poems, video presentations, Readers Theatre...] to communicate and demonstrate understanding of forms and techniques.
- 4.1.1 *Generate Ideas* — Focus a topic for oral, written, and visual texts integrating ideas from experiences and a variety of other sources.
- 4.2.4 *Enhance Artistry* — Choose language, sounds, and images [including transitional devices] to enhance meaning and emphasis.
- 4.2.5 *Enhance Presentation* — Prepare detailed and organized compositions, presentations, reports, and inquiry or research projects using templates or pre-established organizers.
- 5.2.1 *Cooperate with Others* — Assist group members to maintain focus and complete tasks; identify and solve group process issues.

Science

Consider the intent of this LE and your choice of instructional and assessment strategies to determine which SLOs students may achieve, in addition to those identified below:

- SLOs related to Scientific Inquiry or the Design Process in Cluster 0: Overall Skills and Attitudes.
- 6-3-01 Use appropriate vocabulary related to their investigations of electricity.
Include: positive charge, negative charge, current electricity, static electricity, electrical circuit, insulator, conductor, switch, series circuit, parallel circuit, electromagnet, magnetic field, motor, generator, transformation, electrical energy, renewable, non-renewable, energy consumption.
- 6-3-04 Identify dangers associated with static and current electricity, and demonstrate and describe appropriate safety precautions.

ICT LITERACY SKILLS AND COMPETENCIES

Consider the intent of this LE and your choice of instructional and assessment strategies to determine which skills and competencies students may achieve, in addition to those identified below:

- basic operating skills
- graphics creation
- inquiry using electronic sources
- electronic publishing

SUGGESTED LEARNING RESOURCES**Software**

- graphics
- web page authoring

Internet

- IMYM Links Database: <<http://www.edu.gov.mb.ca/ks4/tech/imym/resources/links.html>>

Videos

- Manitoba Hydro. *Appliance Safety Quiz*. Videocassette. Winnipeg, MB: Manitoba Hydro, 1989. (25 min.)
- ---. *Electrical Safety at Home and at Work*. Videocassette. Winnipeg, MB: Manitoba Hydro, 1996. (VHS, 17 min.)
- ---. *Watching for Wires: Electrical Safety on the Farm*. Videocassette. Winnipeg, MB: Manitoba Hydro, 1992. (VHS, 20 min.)

Print

- Appendix C: Index of Teaching and Learning Strategies and Tools
- Manitoba Education and Training. *Grades 5 to 8 Science: A Foundation for Implementation*. Winnipeg, MB: Manitoba Education and Training, 2000.
- Manitoba Hydro. *Electrical Safety at Home and Work*. Colour brochure. Winnipeg, MB: Manitoba Hydro, n.d.
- ---. *Electrical Safety First*. Activity booklet. Winnipeg, MB: Manitoba Hydro, n.d.
- ---. *Farm Safely around Electricity*. Winnipeg, MB: Manitoba Hydro, n.d.
- ---. *Middle and Senior Years Safety Poster*. Winnipeg, MB: Manitoba Hydro, n.d.

BLMs

- BLM Mod.2.4#1: Peer Assessment of an Advertisement
- BLM Mod.2.4#2: Advertisement Planning

TBLM

- TBLM Mod.2.4#2: Examples of Advertising Strategies

Materials

- poster paper and/or bristol board
- markers

SUGGESTIONS FOR INSTRUCTION**Preparation and Set-up**

- Access appropriate websites listed in the IMYM Links Database for this LE. Bookmark the websites on the class computers, or ask students to do so before beginning this LE.

Activating Strategies

- With a partner, students brainstorm for safety issues based on their prior knowledge of electricity or on their experiences during Module 3: Explore Electricity: The Backbone of Modern Inventions.
- Students access websites and read information about how to use electricity safely. They consider both current electricity and static electricity.
- Invite an Education and Safety representative from Manitoba Hydro to talk to students about safety issues with electricity.
- As a class, discuss, and record on a wall chart, safety issues that could be represented on a poster or on a website.
- Review advertising strategies, as discussed in Mod.2.4: Chindogu: Useless Inventions (see TBLM Mod.2.4#2: Examples of Advertising Strategies).

Acquiring Strategies

- With a partner, students choose a safety issue identified on the wall chart, and decide whether they will represent the issue on a poster or on a website.
- Students brainstorm for slogans, phrases, and catchwords that will appropriately represent the electricity safety concept to be promoted. They decide on an appropriate illustration, sketch it, and, if they are creating a web page, scan it using a digital scanner.
- Students agree on the advertising strategy that best carries the message they want to convey. They complete BLM Mod.2.4#2: Advertisement Planning.

Applying Strategies

- Students design a poster (using their scanned illustration and a graphics program) or create a web page promoting their chosen concept for safety with electricity. (See ICT.11: Make It: Creating an Effective Web Page.)

Variations/Extensions

- Students watch a video such as *Appliance Safety Quiz* (Manitoba Hydro). They create a safety game with questions and answers related to safety with electricity. Students can make the game with cards and a playing board, or they can create it online, using a game that can be downloaded from a website (see IMYM Links Database).
- Hold a safety week at school. Students from the school display posters on various safety issues. Grade 6 students display their posters or websites on safety with electricity.

SUGGESTIONS FOR ASSESSMENT

- In Think-Pair-Square groups, each pair of students assesses the poster of another pair, using BLM Mod.2.4#1: Peer Assessment of an Advertisement.

CONNECTION TO INVENTION CONVENTION

- Students' experimentation with electricity helps them understand electricity as an important force behind major inventions and helps them think about how they can use electricity in developing their own invention.
- Making posters gives students practice in publicizing and promoting their invention.

