Kitchen Without Electricity Lesson Plan

Objective: The purpose of this lesson is to provide specific questions and activities to accompany an elementary field trip to the Falls on the Colorado Museum. Students will compare and contrast elements of their own lives with those 100+ years ago.

Grade Levels: K-5th

Applicable TEKS:

1. Kindergarten Social Studies
    a. (12) Science, technology, and society. The student understands ways technology is used in the home and school and how technology affects people's lives. The student is expected to:
        (A) identify examples of technology used in the home and school;
        (B) describe how technology helps accomplish specific tasks and meet people's needs; and
        (C) describe how his or her life might be different without modern technology.
    b. (13) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
        (A) gather information about a topic using a variety of valid oral and visual sources such as interviews, music, pictures, symbols, and artifacts with adult assistance; and
        (B) sequence and categorize information.
    c. (14) Social studies skills. The student communicates in oral and visual forms. The student is expected to:
        (A) place events in chronological order;
        (B) use social studies terminology related to time and chronology correctly, including before, after, next, first, last, yesterday, today, and tomorrow;
        (C) express ideas orally based on knowledge and experiences; and
        (D) create and interpret visuals, including pictures and maps.
    d. (15) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

2. 1st Grade Social Studies
    a. (15) Science, technology, and society. The student identifies individuals who created or invented new technology and understands how technology affects daily life, past and present. The student is expected to:
        (A) describe how technology has affected the ways families live;
        (B) describe how technology has affected communication, transportation, and recreation
    b. (16) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
        (A) gather information about a topic using a variety of valid oral and visual sources such as interviews, music, pictures, symbols, and artifacts with adult assistance; and
        (B) sequence and categorize information.
    c. (17) Social studies skills. The student communicates in oral, visual, and written forms. The student is expected to:
        (A) use a simple timeline to distinguish among past, present, and future;
        (B) use a calendar to describe and measure time in days, weeks, months, and years;
        (C) express ideas orally based on knowledge and experiences;
        (D) create and interpret visual and written material; and
        (E) use social studies terminology correctly.
    d. (18) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

3. 2nd Grade Social Studies
    a. (13) Science, technology, and society. The student understands how science and technology have affected life, past and present. The student is expected to:
        (A) describe how science and technology have affected communication, transportation, and recreation; and
        (B) explain how science and technology have affected the ways in which people meet basic needs.
    b. (15) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
        (A) gather information about a topic using a variety of valid oral and visual sources such as interviews, music, pictures, maps, and artifacts; and
        (B) interpret oral, visual, and print material by sequencing, categorizing, identifying the main idea, predicting, comparing, and contrasting.

c. (16) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
    (A) describe the order of events by using designations of time periods such as historical and present times;
    (B) apply vocabulary related to chronology, including past, present, and future;
    (C) create and interpret timelines for events in the past and present;
    (D) use social studies terminology correctly;
    (E) express ideas orally based on knowledge and experiences; and
    (F) create written and visual material such as stories, maps, and graphic organizers to express ideas.
d. (17) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

4. 3rd Grade Social Studies
    a. (13) Science, technology, and society. The student understands how individuals have created or invented new technology and affected life in various communities, past and present.
    b. (14) Social studies skills. The student applies critical-thinking skills to organize and use information acquired from a variety of valid sources, including technology. The student is expected to:
        (A) gather information, including historical and current events and geographic data, about the community using a variety of resources;
        (B) interpret oral, visual, and print material by sequencing, categorizing, identifying the main idea, distinguishing between fact and opinion, identifying cause and effect, comparing, and contrasting; and
        (C) interpret and create visuals, including graphs, charts, tables, timelines, illustrations, and maps.
    c. (15) Social studies skills. The student communicates in written, oral, and visual forms. The student is expected to:
        (A) use social studies terminology correctly;
        (B) create and interpret timelines;
        (C) apply the terms year, decade, and century to describe historical times;
        (D) express ideas orally based on knowledge and experiences; and
        (E) create written and visual material such as stories, pictures, maps, and graphic organizers to express ideas.
    d. (16) Social studies skills. The student uses problem-solving and decision-making skills, working independently and with others. The student is expected to use problem-solving and decision-making processes to identify a

problem, gather information, list and consider options, consider advantages and disadvantages, choose and implement a solution, and evaluate the effectiveness of the solution.

5. Technology Applications (TAC Chapter 126)
   a. 1st grade: (4) Creativity and innovation--emerging technologies. The student understands that technology is dynamic and impacts different communities. The student is expected to identify examples of how technology has impacted different communities.

   b. 2nd grade: (4) Creativity and innovation--emerging technologies. The student demonstrates an understanding that technology is dynamic and impacts different communities. The student is expected to identify and analyze how technology impacts different communities.

   c. 3rd grade: (4) Creativity and innovation--emerging technologies. The student demonstrates an understanding that technology is dynamic and impacts different communities. The student is expected to define emerging technologies.

   d. 4th grade: (4) Creativity and innovation--emerging technologies. The student demonstrates an understanding that technology is dynamic and impacts different communities. The student is expected to identify examples of emerging technologies.

   e. 5th grade (4) Creativity and innovation--emerging technologies. The student demonstrates an understanding that technology is dynamic and impacts different communities. The student is expected to predict how emerging technologies may impact different communities.

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Pre-Field Trip Activities

Here are some suggestions for preparing various levels of students for the field trip (1-2 45 minute class periods):

1. Prior to engaging students in the following activity, ask them to go home and observe their own kitchens, making a list of various tools and appliances used by them or their family. [Use a chart with images for younger students to circle, if needed]

2. The next day, ask students individually or in groups to brainstorm the different types of appliances that they find and/or use in their kitchens at home (5-15 minutes). Alternatively, for a longer assignment, have students draw a picture of their kitchen, including and labeling different appliances and tools (20-30 minutes).

3. After students have brainstormed or drawn their picture, ask students to share the kitchen appliances/tools they identified.

4. As students are sharing their ideas, write them down on a whiteboard, or use a Parking Lot-style website. Make two categories on the board: Electric vs Non-Electric. Ask students whether particular items are powered by electricity or not, and record them in the appropriate category (10-15 minutes).

5. Depending on the grade level, the teacher can wrap up the lesson here by reflecting on how much we depend upon electricity, either orally or using an Exit Ticket (5-10 minutes).

6. To extend the lesson, ask students to brainstorm again, either individually or in groups, to consider how the functions of a modern kitchen could be accomplished without electricity (i.e. “how can we cook food without an electric oven or microwave?”). The teacher could assign a particular appliance or function to an individual or group for more specific results (oven, refrigerator, toaster, etc.).

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Post-Field Trip Discussion

Here are some suggested questions to pose to students following the conclusion of the field trip:

1. What were the physical characteristics of the objects you saw at the Museum (weight, shape, etc)? How do they compare with their modern counterparts?

2. Do you think our modern appliances are better than the older tools? Why or why not?

3. Of all the objects at the Museum, which one seemed like the easiest to use? Which one would be the hardest? Explain your answers.

4. In your opinion, what is the most important thing powered by electricity in your home? Why did you choose that object?

5. Given what you know about technology at home from the past and in the present, what technologies do you predict appearing in the future?

Extension Activity

Instruct students to go home and ask the older members of their family (parents, grandparents) if they ever lived without electricity. It could be their own memory or what they remember about their ancestors' lives.