

Lesson Two

K-W-L / Small Group Rules

Grade: Fourth Grade

Time: 60 Minutes (w/small group accommodations)

Materials: Classroom K-W-L poster, Markers, Chart paper, "How Ben Franklin Stole the Lightning" by Rosalyn Schanzer

Objective: Students discuss what they know about electricity and want to know about electricity. Students review important safety rules as well as group rules for working with science materials. They learn and use a graphic organizer as brainstorming techniques.

Standards: NYS/National Standards

New York State Standards: Standard One: Analysis, inquiry, and design.

- Scientific Inquiry: Key Idea One, The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing creative process. **S1.1** Ask "why" questions in attempts to seek greater understanding concerning objects and events they have observed and heard about

National Standards:

NS.K-4.2 Physical Science

- As a result of the activities in grades K-4, all students should develop an understanding of the following: properties of objects and materials, position and motion of objects, and light, heat, electricity, and magnetism. Utilized to build an electrical circuit as well as being able to understand electricity and its path traveled.

NS.K-4.1 Science Inquiry

- As a result of the activities in grades K-4, all students should develop abilities necessary to do scientific inquiry, and understanding about scientific inquiry.

Procedure:

- 1.) The teacher will discuss background of a very historical person (Ben Franklin). The teacher will overview that in 1752 his experiments created a better understanding of electricity. He revealed that lightning was a form of electricity. From this point on a series of inventions were created by people such as Thomas Edison and his invention of the light bulb and Samuel Morse's invention of the telegraph.
- 2.) The teacher will then conduct a book walk/ read aloud of "How Ben Franklin Stole the Lightning". While doing this the teacher will pause and ask questions regarding the illustrations as well as the content.

Lesson two (cont.)

- 3.) The teacher will conclude the read aloud and present a class K-W-L, The teacher will inform students that this is a graphic organizer that will guide our learning and direct us in learning new information regarding the topic.
- 4.) The teacher explains that the “K” represents things that we think we already know about the topic, the “W” represents things that we want to know about the topic, and the “L” represents things that we have learned about the topic.
- 5.) The teacher encourages students to discuss what they already know about electricity in their groups (classroom arrangement). They are given approximately 5 minutes to discuss this.
- 6.) The teacher then asks for students’ feedback in regards to what they already know and records it in the “K” column of the chart. The teacher is careful and conducts a think aloud while doing this to show students the importance of not putting duplicate answers as well as making them more specific.
- 7.) The teacher will then direct students to identify some things that they want to know about this topic (group discussion 5 minutes).
- 8.) The teacher will give students an opportunity to respond while the teacher records information in the “W” column for what I want to know.
- 9.) The teacher will then explain that many of these questions will be answered as this unit progresses, and that we will record things that we have learned as well as questions we have answered on this K-W-L several times throughout.
- 10.) The teacher will explain to students that learning can and will be fun. It can be frustrating learning new things, however, you can always ask for help. It is also beneficial if we work in groups as well as independently. We need guidelines for safety as well as making the most out of our learning experience. The teacher will record some guidelines and rules and poster for students to view. While recording direct examples will be reflected upon.

The Rules: Follow our regular classroom rules, work and use quiet/polite voices. Always work at your station and do not move around, if you have a question raise your hand and be patient. Help one another and do not argue. Only work with your lab materials and do not experiment with other electrical units or wall outlets.

Conclusion: The teacher will ask students to reflect on some things they already know as well as what they want to learn in regards to electricity (refer to K-W-L). The teacher will ask students to restate the rules presented, give examples of students doing the correct and incorrect thing, and how they could assist in fixing it.