



How Coal Turns into Electricity

Objective: View the animation that shows the steps to turn coal into electricity. In addition, look at other resources that explain the same process. Write up the steps in order.

Overview

Students will view the animation on turning coal into electricity. Using other resources as well, the students will imagine that they are tour guides, leading people through the process. At each stop, students will describe what is happening and why. Students will then show the animation and narrate the process as if they were the tour guides.

Standards Addressed

National Science Education Standards Content Standard D

As a result of activities, students should be able to plan and conduct a simple investigation, employ simple tools and equipment to gather data, and use data to construct a reasonable explanation.

Materials

- The coal animation that shows how coal is turned into electricity
- Additional books/resources from the teacher that explain the same process
<http://library.thinkquest.org/6075/coal.html>
http://www.fossil.energy.gov/education/energylessons/coal/Elem_Coal_Studyguide_draft1.pdf
- Organizer sheet (provided)
- Paper and pencil

Activity Steps

1. Students can be put into small groups for this activity. They will watch the coal animation and read the brief description of what happens at each step. Go over vocabulary to be sure all students understand the process.
2. Divide the process into three locations such as The Coal Mine, The Power Plant, and The Community. List these on the organizer sheet in the main headings. These will be the main stops on the tour.
3. Using other resources (such as the two websites listed), have the students describe simply what is happening at each location and why this step is necessary. List these details on the organizer.
4. After taking notes, have students practice what will be said at each stop on the tour.

Conclusion

Have students take the class on a “tour” of the process of turning coal into electricity. Use the coal animation as the basis of the tour and have students add in their own details and information from their research. Make these presentations to the class.

Extension

Let the whole class build a model of the process. Each group can take one stop and create a 3-D model of what that step looks like. Put together all the stops to make a full model of the process.