



Understanding Energy

Lesson 2: Brainstorm Energy Source

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DESCRIPTION: Students will individually brainstorm sources of energy. This process will take place on both an individual and on a group level, allowing for students to share ideas about their perceptions of energy. On a sheet of paper, students will write or draw descriptions of these energy sources. The lesson plan will result in a compilation of visuals created by the whole class that students can reference in order to bring up reminders of what exactly energy sources are.

GRADE LEVEL(S): 4th, 5th

SUBJECT AREA(S): Energy, energy generation, energy sources, energy transformations, resources

ACTIVITY LENGTH: 40 minutes

LEARNING GOAL(S): Students will begin to think about various appliances and items that they use and the energy that those items consume. Students will brainstorm ideas of energy sources without worrying about right and wrong answers. Students will create a visual reference for different types of energy resources with their classmates.

NEXT GENERATION SCIENCE STANDARDS:

- 4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
- 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

UNIT CONTENT:

- Lesson 1: Energy Sort
- **Lesson 2: Brainstorm Energy Sources**
- Lesson 3: Energy Basics
- Lesson 4: Home Energy Survey
- Lesson 5: Solar Energy Basics
- Lesson 6: Home Energy Use
- Lesson 7: How to Observe and Keep Records
- Lesson 8: Setting Up an Experiment
- Lesson 9: Collecting and Reporting Data, Making Recommendations

- Ongoing Activities: Daily Observations and Record Keeping

Materials List

- (1 per student) Solar energy spiral notebook
- A large piece of posterboard or sticky paper to display results of brainstorm somewhere in the classroom

Student Background

- Students will have basic knowledge of energy and how it is used in homes, schools and businesses.
- Students should have experience with brainstorming ideas and be comfortable with the brainstorming process.

Educator Background

- Teachers should be comfortable with sources and uses of energy.

Lesson Details

This lesson is an individual brainstorm followed by a group discussion to identify energy sources

- Teacher will review the “rules” of brainstorming with the class. Rules include writing down (or drawing pictures) of everything they can think of in the category and not worrying about “right and wrong” answers.
- Students “brainstorm” individually various sources of energy. Each student will be given five minutes to write down as many sources of energy as they can think of.
- The teacher will take a suggestion from each student and begin to categorize the responses from student brainstorming. This can be done on a white board but as the list becomes more firm, the teacher or student(s) will make a list on a piece of paper to display.
- One member of our team conducted a class brainstorming session where students call out energy sources and the teacher writes them down and then after the “brainstorming” time is complete, they begin to evaluate as a class which energy sources are relevant to the unit.
- The end result of this lesson will be a list of sources of energy that will be displayed in the classroom.

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