

PRIMARY/ELEMENTARY ACTIVITY: Energy Source Puzzles

Concepts: There are renewable and nonrenewable energy sources.

Discovering patterns can help solve puzzles.

Time: 20-45 minutes

Materials: One puzzle per student Crayons, colored pencils or markers Scissors

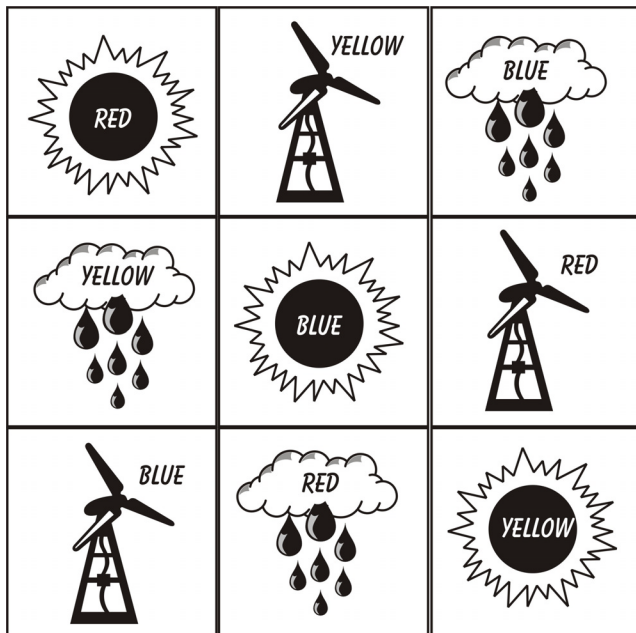
- Procedure:**
1. Choose a puzzle from page 5.
 2. Make one copy of the puzzle for each student and distribute.
 3. Instruct the students to color the squares in each column using the key at the top, then cut apart the squares. While students are doing this, discuss the energy sources the icons represent, how they are used, and whether they are renewable or nonrenewable.
 4. Explain to the students that the goal is to arrange the squares so that only one icon and one color is in each row and column.
 5. Remind the students that there are several ways to solve the puzzle. Encourage students to look for patterns while solving the puzzle. *Hint: The key to solving the puzzles is to find a pattern, such as beginning with a diagonal row of the same icon or the same color.*

Conclusion: Ask the students if they see any patterns in the solved puzzles.

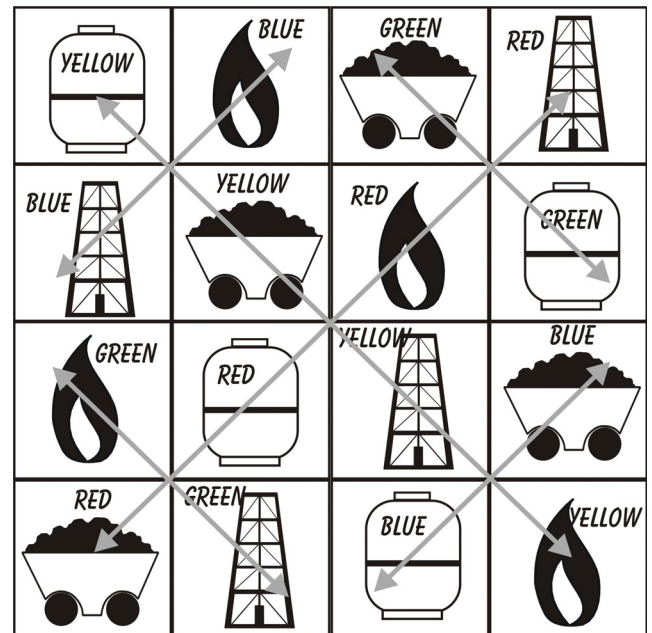
Extensions for the 4x4 puzzle squares:

Memory Game: Have groups of two students turn the puzzle pieces over and take turns matching pairs of either icons or color combinations.

Tic-Tac-Toe: Write a simple question and answer about the energy source on the back of each square (or have the students do this). Sort the squares by color. Draw a large tic-tac-toe grid on the board. Divide the class into two teams and have each team choose a color. To play, the read a question from a colored square corresponding to the team color for the team to answer. If the team answers correctly, it places the square on the tic-tac-toe grid and the other team takes a turn. A team wins by placing three squares of the same color in a row.

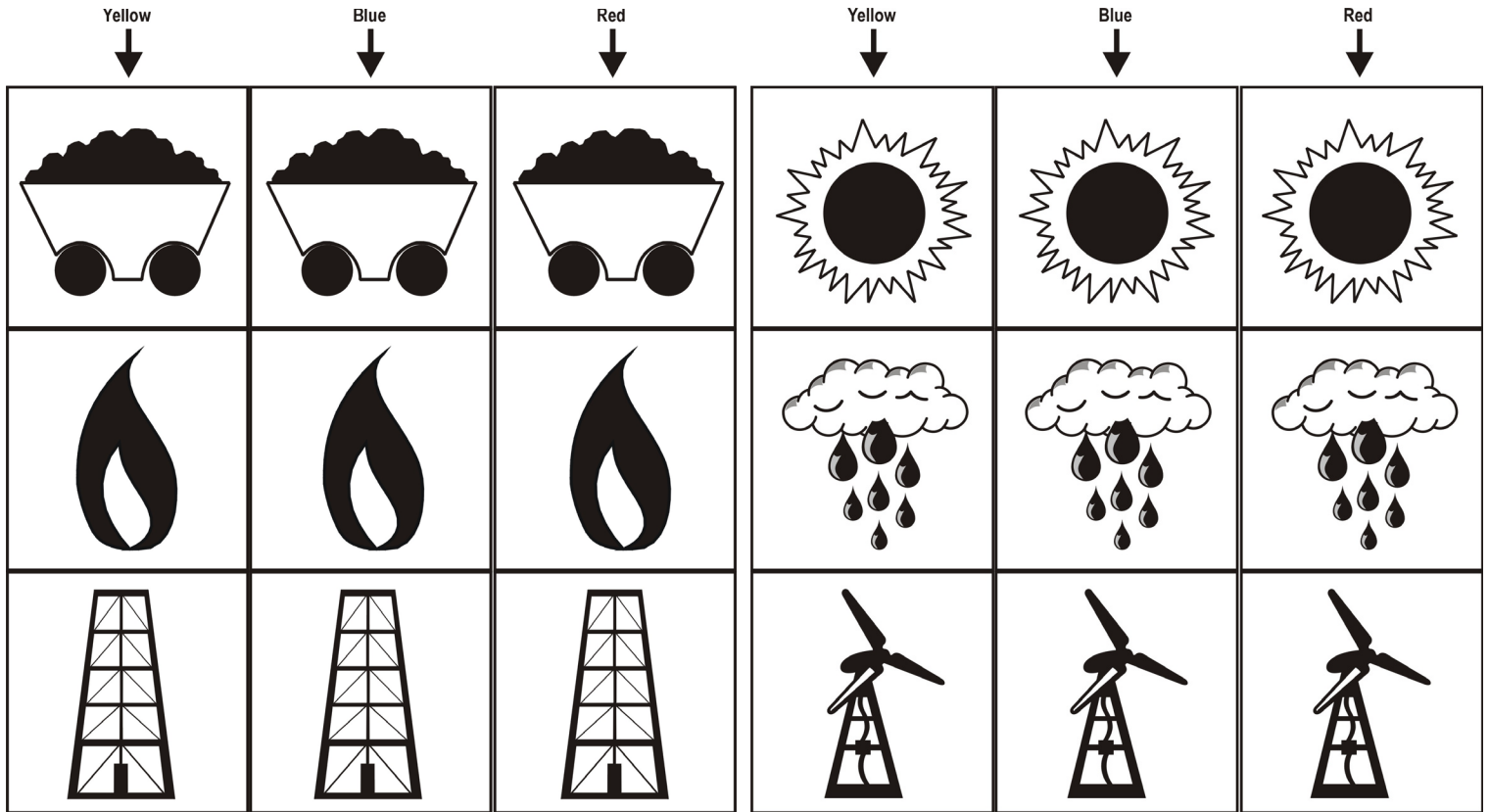


SAMPLE SOLUTIONS



This activity was designed by Melanie Harper, a member of NEED's Teacher Advisory Board from Odessa, Texas.

3x3 Energy Source Puzzles



4x4 Energy Source Puzzles

