



Renewable vs. Nonrenewable Energy

A **renewable resource** is generated from natural sources over a relatively short time scale. Examples of renewable energy sources include solar, wind, hydro, geothermal and biomass.

A **nonrenewable resource** comes from resources that are not replaced or are replaced only very slowly by natural processes. Examples of nonrenewable energy sources are fossil fuels, coal, gas and oil.

Learn about renewable vs. nonrenewable resources with this renew a bead game you can play with 4 people!

Materials

- Beads
- Four bags
- Paper
- Calculator
- Pencil





Step 1

Each person gets one one bag with 50 beads in it. You will need two different colors of beads. One color will represent renewable energy and the other will represent non-renewable energy. The ratio of beads varies for each bag.

45 color 1 + 5 color 2

40 color 1 + 10 color 2

35 color 1 + 15 color 2

30 color 1 + 20 color 2

Step 2

In this game you will be simulating the annual consumption of energy. Make sure each person has a bag with different ratios of beads. For the first round each person picks out 5 beads from their bag. These beads represent energy use from one year.

Step 3

Each person should count the number of each color bead they picked out and record the number on a piece of paper. When a non-renewable bead is picked it can not be returned to the bag (place to the side). All renewable beads should be returned to the bag.

Step 4

Repeat the process 10 times increasing the number of beads picked from the bag by 1 (this represents increasing rate of energy use).

Record the number of beads for each year. How many years did it take you to run out of non-renewable beads? What conclusions can you draw from this?