

Energy Lesson Plan (Grades ~4-8, 30-60 minutes)

For use by U.S. EPA-RTP Employees for Educational Outreach (Updated: 1/22/09)

What is energy?

How do you use energy? (lead toward Playstation/TV energy)



Can you MAKE energy?

- Have student come up and “make” energy to power the light/fan (optional)
- Discuss what it would be like if you needed to do this to be able to use electricity to use the TV

Where does energy come from?

- RENEWABLE
- NON-RENEWABLE

NON-RENEWABLE energy sources were made a long time ago, and we can't make more. These are sometimes called fossil fuels. Why?

- Show examples: coal, oil, gas, nuclear

- How fossil fuels are formed

RENEWABLE energy sources can be reused

- SOLAR – calculator, EPA building
- WATER – dam, demo of water wheel
- WIND – picture of windmill & fans
 - How much power can a windmill generate?
 - Show how a 12 foot radius of a windmill can power 12 regular light bulbs or 1 hair dryer or 48 compact fluorescent bulbs

How much energy do YOU use and what can you do to use less?

- Energy is measured in Watts – the more you use, the more you pay.
- Check in with creating energy student
- Measure Watts of various appliances in kit and in classroom
- Calculate energy/cost as time allows