

The Sun and Energy
D.Congour 4/22/09 – For Northside Elementary

The Sun - a star, a giant nuclear furnace. There are approximately 400 Billion (400,000,000,000) stars in our Milky Way Galaxy (a giant swirling cloud of stars)

Question – Has anyone seen the milky way?

Fun Sun Facts:

-93,000,000 miles away:

- bridge - 5308 years to walk @4 mph, 12 hrs/day, 365 days/yr.
- 176 years to drive@ 60mph, 24 hrs/day, 365 days/yr.
- Equivalent to walking around the Earth's equator 3,875 times!

-weighs as much as 330,000 Earths!

-15,500,000 degrees K at the center. (HOT!,HOT!, HOT)

-the light we see is 8 minutes old.

-It would take 77 years to walk around the sun's equator (2713406 miles) at 4mph.

The sun is the source of all usable energy on earth.

Definitions: Energy – The driving force that enables work.

Power – Energy delivered per unit time

Question – What types of activities require energy?

Question – What are some common sources of energy?

gasoline, propane, batteries, electricity, wood, coal, chemical, nuclear, food, biomass, wind, solar.

Question – What energy sources does your home use?

Question – Give an example of Power in every day life. Truck engine, jet engine, man pushing a wheelbarrow, circular saw cutting through wood...

Energy Usage:

We presently rely on “fossil fuels” , and will continue to rely on them in the next couple of decades.

Question -What are fossil fuels? How were they formed from the Sun's energy? Talk about how the sun's energy gets to all of these sources of energy. Is there an endless supply?

Other Sources of Energy -Are there other ways to harness energy besides using fossil fuels?

- Solar thermal. (demonstrate evac tube collector)
- Solar electric.
- Wind
- Water (Blue Mesa Reservoir dams, tides)
- Biomass (incl biodiesel)

Energy Conservation:

Question: What will happen if we start to run out of energy? (have to WALK!, house gets COLD! Food gets EXPENSIVE). It's up to all of us to do our part!

Question: What can you do to save energy?

Use kidpower! (ride bikes or walk whenever you can)

Minimize car trips

Turn off unused lights

Turn down the thermostat, wear a sweater

Close doors and windows in wintertime

Help your dad weatherstrip the doors and windows

Take showers instead of baths.

