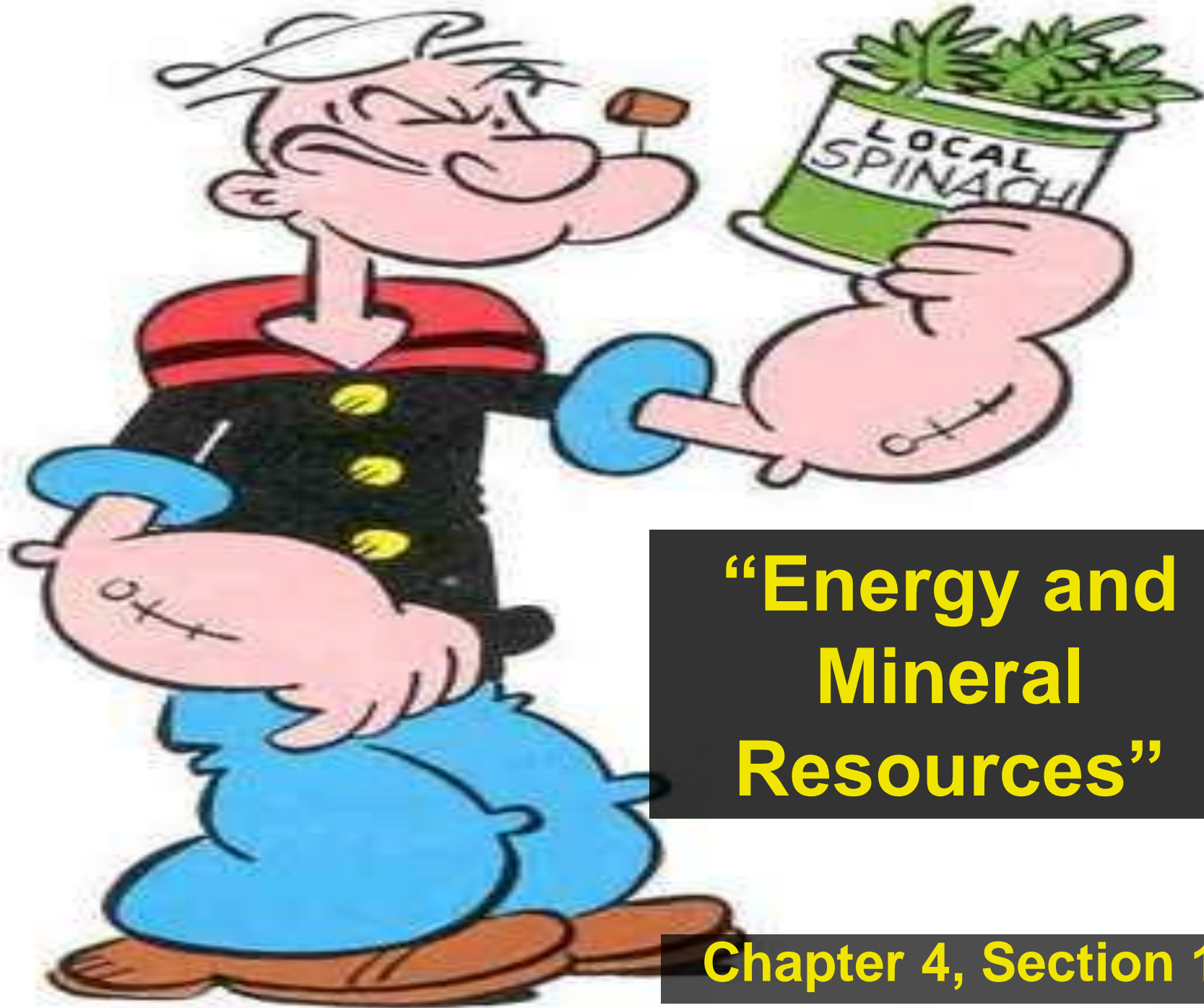


Warm-up

- 1. Define “Resource” in your own words.**
- 2. What’s the difference between a Renewable Resource and a Non-Renewable Resource?**
- 3. List 3 Resources that you have used in some way *today*.**



“Energy and Mineral Resources”

Chapter 4, Section 1

Resources:

Necessary items.

Used to **DO something.**

1. Renewable Resource:

- Replenished quickly

2. Nonrenewable Resource:

- Replenished VERY slowly
- We can't get more in time...
- Bye Bye.

Which kind of Resource?



FOOD!

A collection of cotton yarn skeins in various colors (olive green, brown, beige) arranged in a circular pattern on a dark surface. The skeins are made of thick, textured cotton yarn. A dark rectangular box with the word "COTTON!" in white, bold, sans-serif font is centered over the image.

COTTON!

Which kind of Resource?



Which kind of Resource?

WIND!





Which kind of Resource?

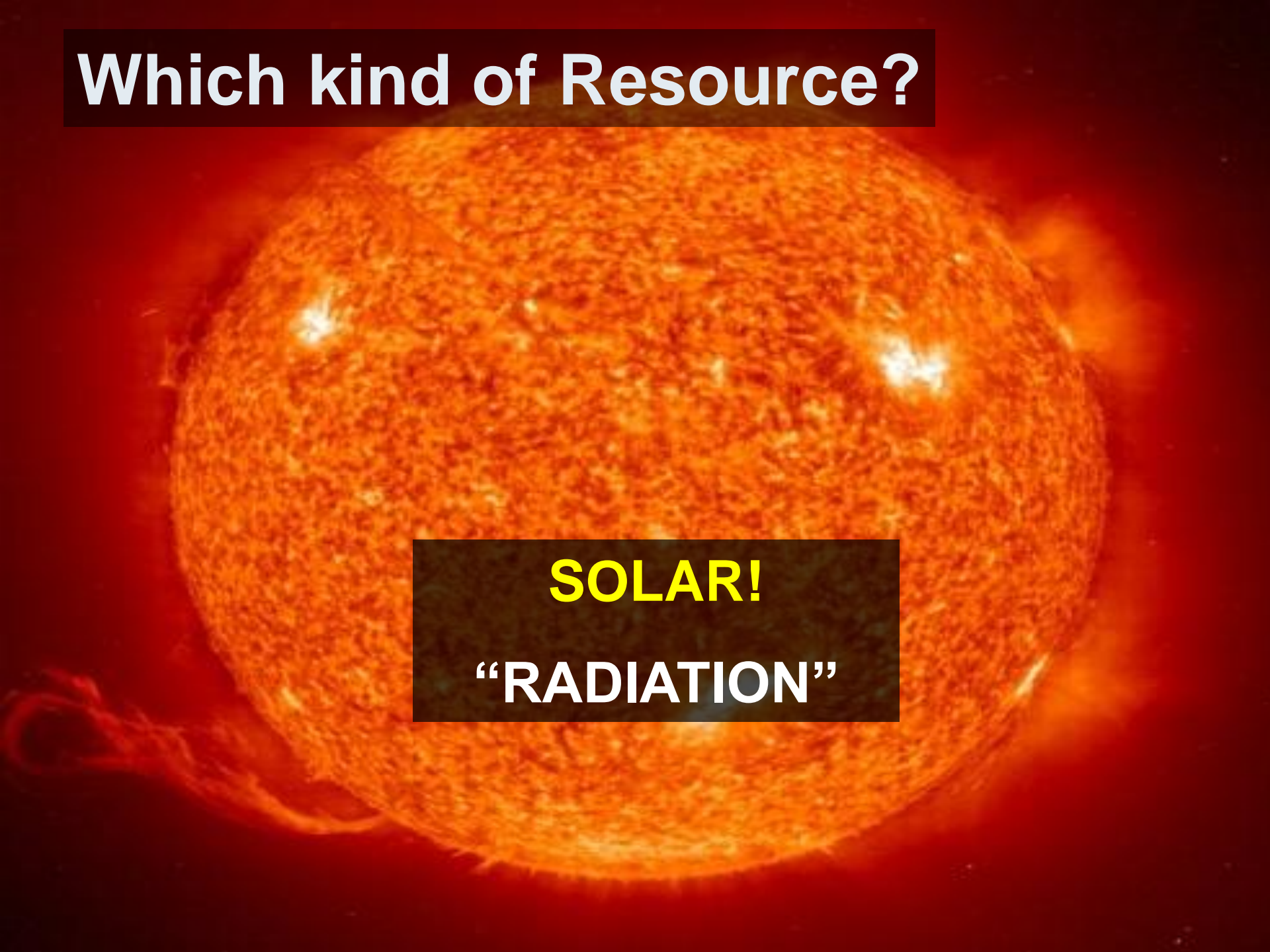
“HYDRO”ELECTRIC

“water-electric”

Which kind of Resource?

SOLAR!

“RADIATION”



Which kind of Resource?



A photograph of a train of several open-top rail cars filled with coal, moving along tracks. The coal is dark and piled high in each car. The tracks are made of steel rails on a gravel bed. The background shows more tracks and some vegetation.

Which kind of Resource?

COAL!



Electricity!

Hey!

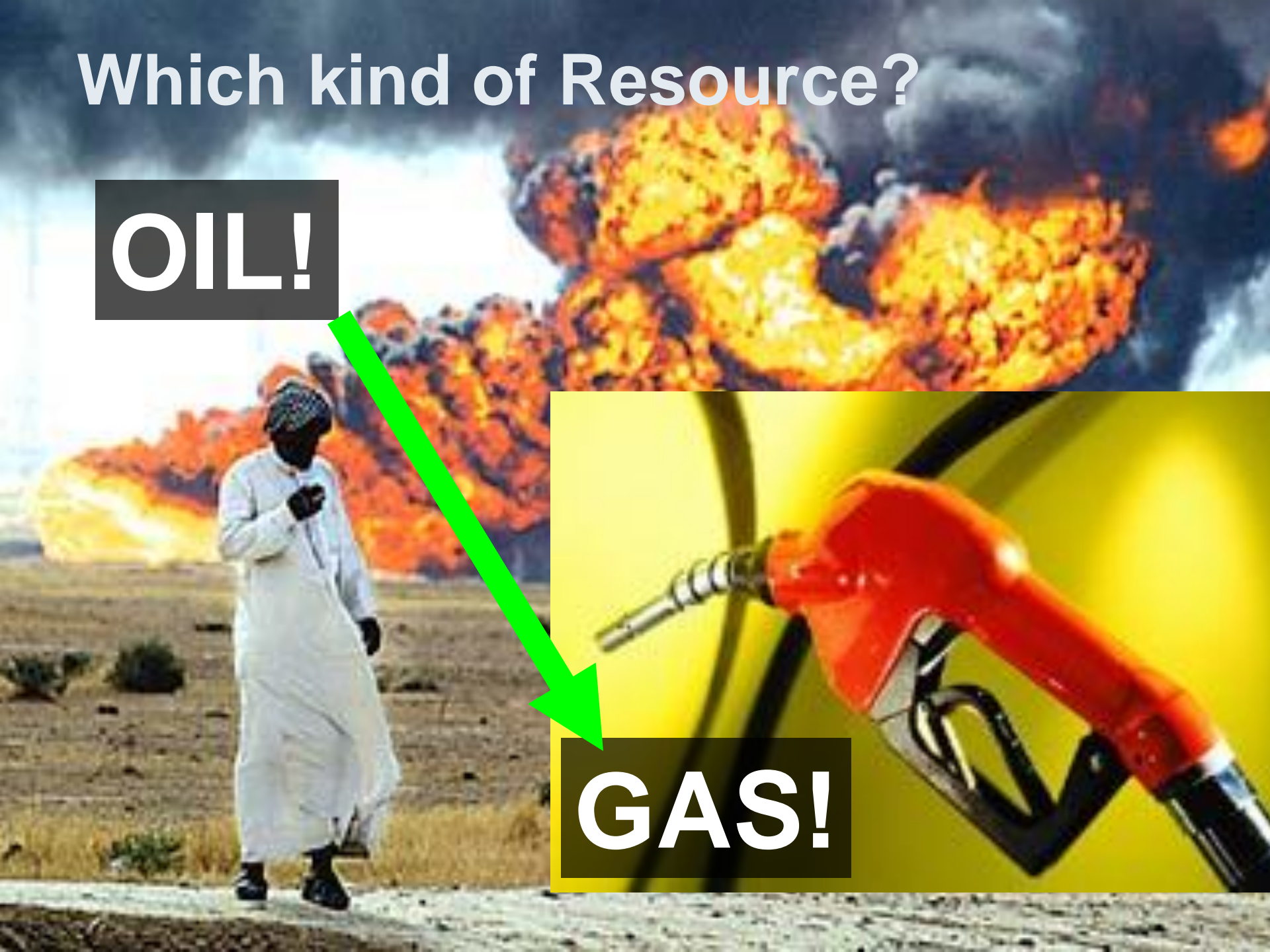
Where'd you get that Electricity?!

From?	Name	Renewable? Nonrenewable?
Wind	Wind Turbine	Renewable! 😊
Water	Hydro Electric	Renewable! 😊
Sun	Solar	Renewable! 😊
COAL	“Dirty” Electricity	Nonrenewable! ☹️

Which kind of Resource?

OIL!

GAS!



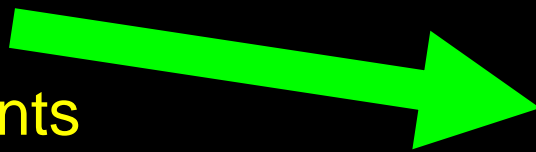
Fossil Fuels

- **Sources of Energy!**

- Coal, oil, natural gas

- **Coal:**

- Dead plants
- Heat & Pressure
- Long time.

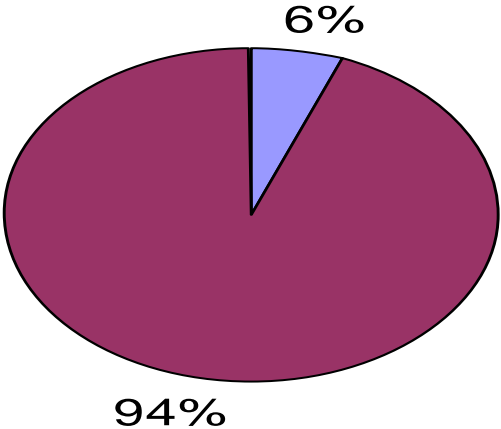


Metamorphic Rock!

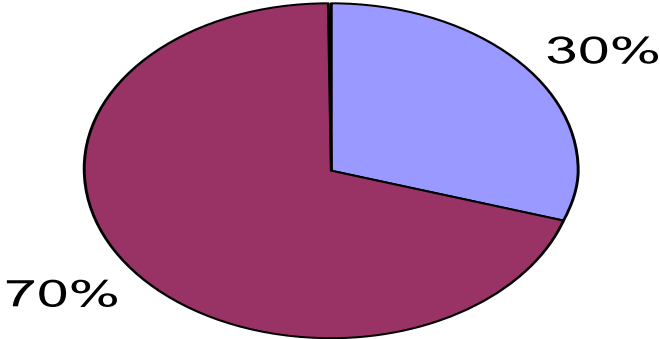
- **Oil & Natural Gas:**

- Dead Plants & Animals!
- Buried under ancient seas...
- Long time.

Percent of Global Population



Mineral Resource Use



Tar Sands & Oil Shale

- **Sand?**
 - Sediment.
 - Broken Rock.
- **Shale?**
 - Type of Sedimentary Rock.
 - Layers.
- **Tar?...Oil?**
 - Petroleum. (*liquid*)
 - Fossil Fuel.

**E
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E
R
G
Y

R
O
C
K
S**

**E
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P
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E**

Mineral Deposits

Ore:

- material from which minerals can be taken at a profit
- Make money.

Igneous Processes:

- Hydrothermal Solutions
- Magma cooling
- Useful mineral deposits

Placer Deposits

- **Heavy minerals settle quickly**
- Less dense particles remain suspended and continue to move.



Mountain Top Mining



Pit Mining



U.S. per Capita use of Mineral and Energy Resources

Nonmetallic Resources



4100 kg (9040 lbs)
Stone



3860 kg (8510 lbs)
Sand and gravel



360 kg (790 lbs)
Cement



220 kg (485 lbs)
Clays



200 kg (440 lbs)
Salt



140 kg (310 lbs)
Phosphate rock



480 kg (1060 lbs)
Other nonmetals

Metallic Resources



550 kg (1200 lbs)
Iron and steel



25 kg (55 lbs)
Aluminum



10 kg (22 lbs)
Copper



6 kg (13 lbs)
Lead



5 kg (11 lbs)
Zinc



6 kg (13 lbs)
Manganese



9 kg (20 lbs)
Other metals

Energy Resources



3500 kg (7700 lbs)
Petroleum



3700 kg (8140 lbs)
Coal



3850 kg (8470 lbs)
Natural gas

Assignment

- Read Ch. 4, Sect. 1 (pg. 94-101)
- Do Section 4.1 Assessment #1-6, 8 (pg. 101)