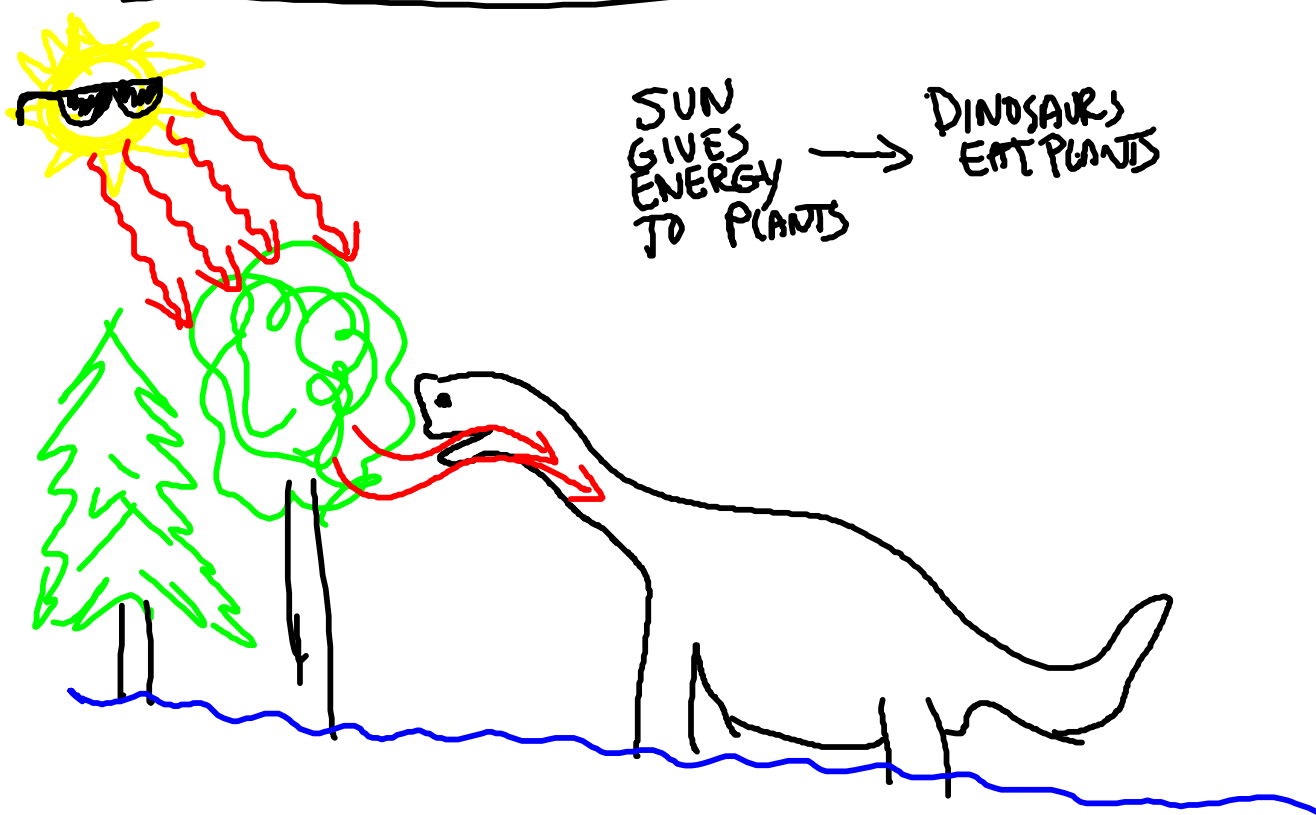


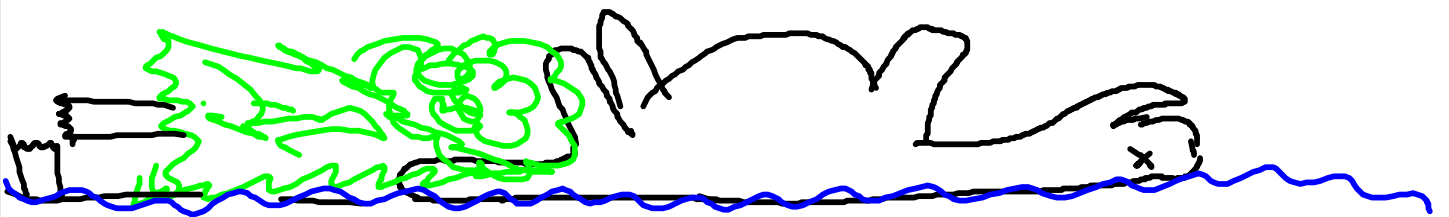
FOSSIL FUELS

- PETROLEUM (OIL), NATURAL GAS, AND COAL
- CONCENTRATED ENERGY
- NONRENEWABLE

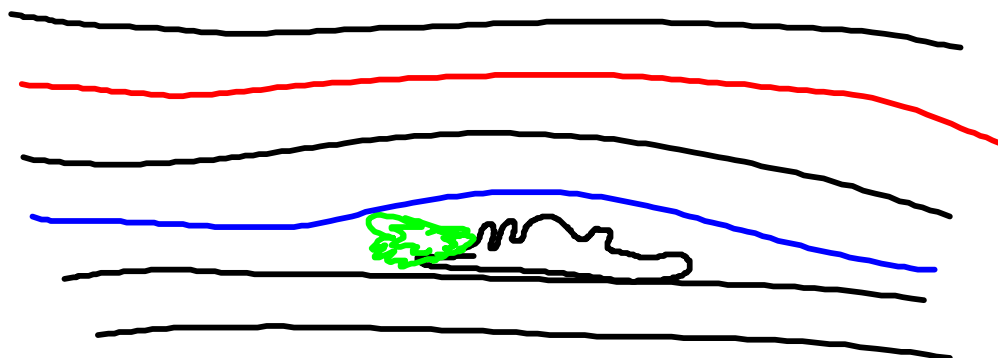
FORMATION OF FOSSIL FUELS

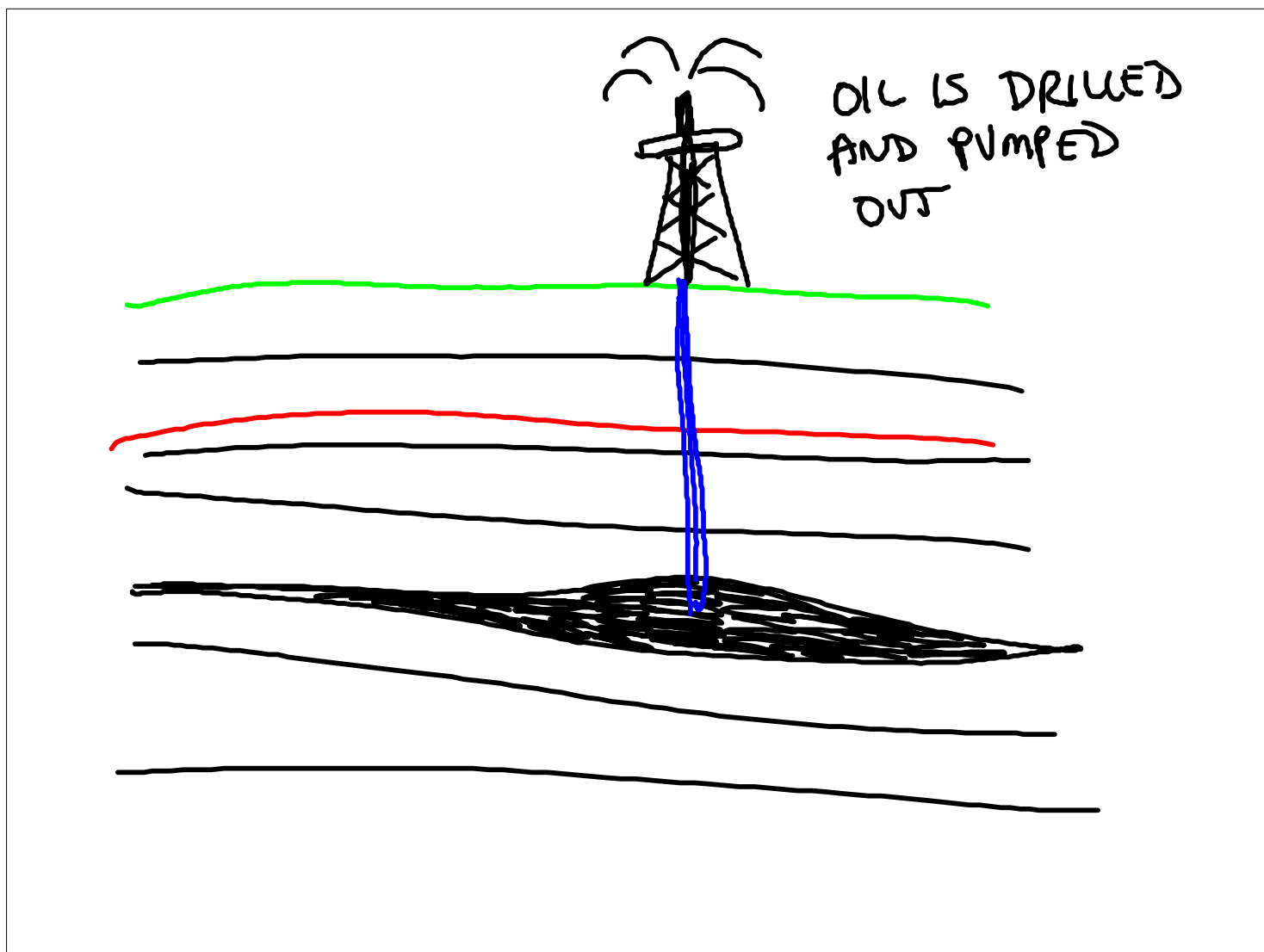


ORGANIC
MATTER DIES



ORGANIC MATERIAL IS BURIED.
HEAT AND PRESSURE CHANGES
IT INTO OIL





WE BURN FOSSIL FUELS TO MAKE
ELECTRICITY COAL 50%

FOSSIL FUELS ARE NONRENEWABLE
BECAUSE THEY CAN'T BE REPLACED
NATURALLY.

ORIGINS of ...

PETROLEUM - DECAYED ALGAE AND
(CRUDE OIL) PLANKTON

COAL - DECAYED SWAMP VEGETATION

FRACTIONAL DISTILLATION

SEPARATE PETROLEUM INTO

GASOLINE

KEROSENE

ETC.

BY USING DIFFERENT BOILING
POINTS.

NATURAL GAS HAS MORE ENERGY THAN OIL OR COAL. IT BURNS MORE CLEANLY, PRODUCES FEWER POLLUTANTS, AND LEAVES NO RESIDUE (ASH)

* BURNING FOSSIL FUELS MAKES SMOKE (PARTICULATE) WHICH CAUSES BREATHING PROBLEMS.

CO_2 IS PRODUCED WHICH CONTRIBUTES TO GLOBAL WARMING.

COAL IS MOST ABUNDANT AND MOST HARMFUL TO ENVIRONMENT.

MINING COAL IS DANGEROUS

90% OF COAL IS USED TO PRODUCE ELECTRICITY.

NUCLEAR ENERGY

RADIOACTIVE ATOMS HAVE
VERY LARGE NUCLEI

NUCLEUS FALLS APART

RELEASING SMALL PARTICLES (NEUTRON)
AND LOTS OF ENERGY

MOST COMMON FUEL IS

URANIUM (U-235)

92 PROTONS

143 NEUTRONS

92 ELECTRONS

URANIUM ATOMS FALL APART
THIS IS CALLED A FISSION
REACTION.

1 gram of U-235
PRODUCES AS MUCH
ENERGY AS BURNING
18 million Kg of COAL

U-235 IS RADIOACTIVE
FOR BILLIONS OF YEARS

DISPOSE OF NUCLEAR WASTE.

LOW LEVEL

BURIED

3m

NOT TOO DEEP

HIGH-LEVEL

BURIED

VERY DEEP (100⁺ ft)

IN CERAMIC CASES

(SALT MINES)

Renewable Energy is replaced as quickly as it is used.

Solar (from the sun) uses photovoltaic cells.

Water- Hydroelectricity. Water from behind a dam flows past a turbine.

Tides/Waves-Energy from the movement of the water makes generators move to produce electricity.

Wind-Wind powered turbines generate electricity.

Geothermal- Energy from within the Earth heats water to make steam which turns a turbine.

Biomass-wood, sugarcane, rice, animal manure.

Hydrogen-Hydrogen burns with oxygen producing water.