

Essential Question for Unit

END on what way do we witness the effects of something Having energy?
Forms of Energy (study foldable)
HEAT | SAD | HAPPY
CONV. | heat | know lab results | part of amount of data

EXOTHERMIC REACTION ENERGY
CAN YOU HEAT COFFEE BY YELING AT IT?
YES

heat in heat out
feel cold feel hot
heat → Chem Chem → heat

SCIENCE TOYS ENERGY CONVERSIONS

hand crank flashlight motion → electrical
Solar panel radiant → electrical OR DESIRED ONLY CHANGE FORMS
tuning fork motion → sound
photosynthesis radiant → chem.

Nuclear Energy
FISSION
power plant
fusion
sun

atoms vs molecules
nuclear vs. chemical

LAW OF THERMODYNAMICS IF ENERGY CANNOT BE CREATED

ENERGY ALWAYS GOES FROM 1) USEFUL → LESS USEFUL OR HEAT TRANSFER

HAPPY SAD BAULI
GPE → motion (KE)

% efficiency ↓
heat, sound
STEEL BAULS stored mech.

MOTION → HEAT, SOUND in collisions

PE ON SHelves
GPE = mgh
TOTAL ENERGY STAYS THE SAME
SLED WARS
KE = 1/2 mv^2

KE + PE = TOTAL ENERGY