Wk 5.1 Year 8F (100 min)

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| **Goal:** To measure the level of success or proficiency that has been obtained on the energy topic |
| **Student Outcome:** 1. Be able to recall scientific terms related to energy
2. Be able to calculate and interpreted meaning of energy efficiency score
3. Be able to state the transformation of energy
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| ***Activity 1****: Experiment****Activity 2:*** *Split students into 2 groups**Game rule: each student will pick a number and that is the group they will be in. The number has to be presented to the teacher when answering the question. You have to nominate a group member before you see the question.*  | *40 min* |
| **Revision**1. What are the different types of energy?

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| * 1. Light energy
	2. Sound energy
	3. Potential energy
	4. Kinetic energy
	5. Wind energy
 | * 1. Water energy
	2. Coal energy
	3. Electrical energy
	4. Thermal energy
	5. Magnetic energy
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1. Definition of potential, kinetic and heat energy
	1. Potential: stored energy
	2. Kinetic: Moving energy
	3. Heat: energy produced by friction, causes the temperature to rise.
2. What is biomass energy?
	1. stored in plants and animals
3. Is sound a kinetic energy? Why or why not?
	1. Yes, because it is caused by the vibration of particles in a medium. Therefore in the absence of particle such as a vacuum, sound cannot be transmitted.
4. What is the conversion of energy
	1. Photovoltaic cells (Solar panel)
		1. Light energy 🡪 electrical energy
	2. Headphones attached to a unplugged mobile phone
		1. Chemical 🡪 electrical 🡪 sound
	3. TV remote control
		1. Kinetic 🡪 chemical 🡪 electric 🡪 light
5. Energy efficiency
	1. The formula to calculate efficiency
		1. Useful energy/initial energy x 100
	2. What does this energy efficiency mean?
		1. The quantity of useful energy transformed from the initial energy
	3. Calculation when given the
		1. initial energy (input energy) & Efficiency, find output
		2. useful energy (output energy) & Efficiency, find input
		3. percentage of efficiency, find wasted energy
6. Difference between translucent, transparent and opaque
	1. Transparent : allows all light to pass through easily seen through
	2. Translucent: permits light to pass through but object not clearly visible
	3. Opaque:  not allowing light to pass through
7. What is reflection and refraction
	1. Reflection:  throwing back by a body or surface without absorbing it.
	2. Refraction: bending of light when it travels through different medium
8. 3 methods in which heat is transferred
	1. Conduction - Happens when solid objects touch each other
	2. Convection - Transfer of heat by the circulation or movement of the heated parts of a liquid or gas
	3. Radiation - transmitted through an intervening medium or space
9. Define the Law of Conservation
	1. Energy is never created or destroyed
 | 30min |
| Work on project | 10min |