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 | |
| ***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?  |  |  | | --- | --- | | * 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 |  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 |