**Energy Efficiency** (Phys)

RAG your understanding.

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|  | **Start of Topic** | **End of Topic** | **Revised** |
| P.1.1.1.a - I can define a system as an object or group of objects, and I can state examples of changes in the way energy is stored in a system. |  |  |  |
| P.1.1.1.b - I can describe all the energy changes involved in an energy transfer and calculate relative changes in energy when work is done. |  |  |  |
| P.1.1.2.a - I can calculate the kinetic energy of an object by recalling and applying the equation: |  |  |  |
| P.1.1.2.c - I can calculate the amount of gravitational potential energy gained by an object raised above ground level by applying, and recalling, the equation: |  |  |  |
| P.5.2.a. - I can define and calculate work done by recalling and applying the equation: W=Fs. |  |  |  |
| P.5.2.b. - I understand that 1 Joule is equivalent to 1 Newton-metre and can describe the energy transfers involved when work is done, including that work done against friction cause a rise in temperature of the object. |  |  |  |
| P.1.1.4.a - I can define power as the rate at which energy is transferred or the rate at which work is done, and the watt as an energy transfer of 1 joule per second. |  |  |  |
| P.1.1.4.b - I can calculate power by recalling and applying the equations:  P = E/t and P = W/t |  |  |  |
| P.1.1.4.c - I can explain, using examples, how two systems transferring the same amount of energy can differ in power output due to the time taken. |  |  |  |
| P.1.2.1.a - I can state that energy can be transferred usefully, stored or dissipated, but cannot be created or destroyed, and so the total energy in a closed system does not change |  |  |  |
| ***P.1.2.1.b (HT) - I can explain that only some of the energy in a system is usefully transferred, with the rest ‘wasted’, giving examples of how this wasted energy can be reduced.*** |  |  |  |
| P.1.2.2.a - I can calculate efficiency by recalling and applying the equations: |  |  |  |
| ***P.1.2.2.b (HT) - I can suggest and explain ways to increase the efficiency of an intended energy transfer.*** |  |  |  |