

Investigation task

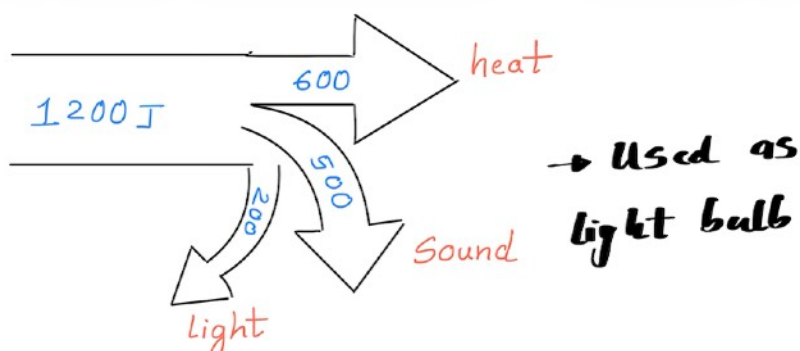
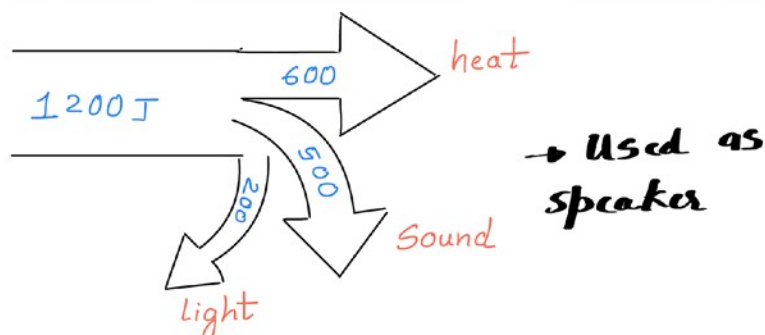
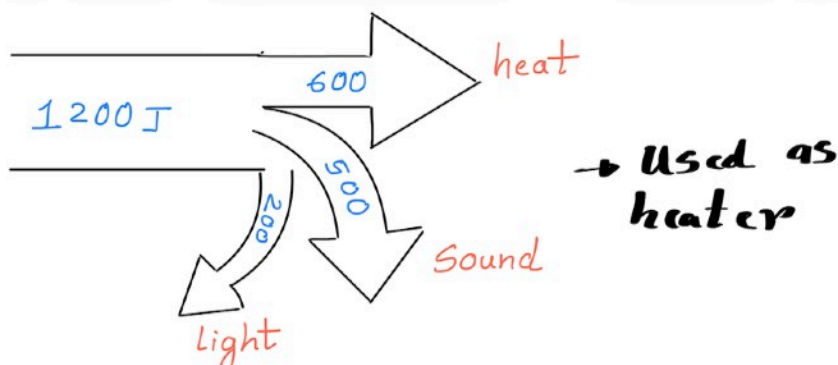
ATL - Critical thinking skills - Evaluate evidence and arguments and draw conclusions. Guiding questions - Are the machines 100 % percent efficient ?

Key terms (Reference - Physics of Cambridge IGCSE - course book)

- Conservation of energy - Energy cannot be created or destroyed. It can only be stored or transferred.
- Sankey diagrams - A flow diagram that represents the law of conservation of energy. The width of the arrow is proportional to energy.
- Efficiency - the fraction or percentage of energy supplied that is usefully transferred.

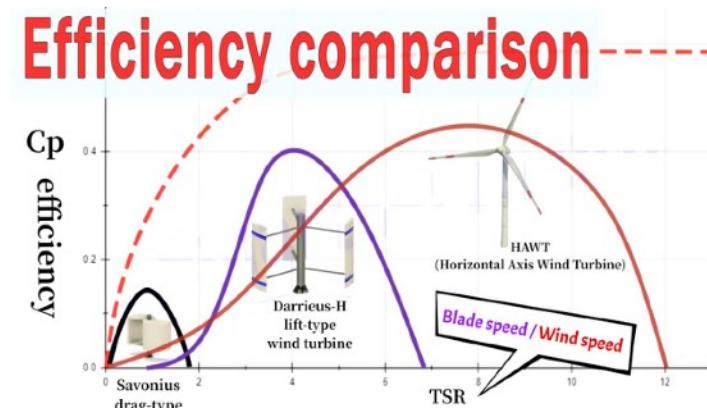
Q1 - Below are the energy transfer diagrams of an electric equipment used for three devices. It is required to investigate in which machine the electric equipment will be best suitable.

- Frame the statement of your investigation
- Write the hypothesis in ' if... then ..because " format
- Describe the methodology you can use to select the best out of three.



Q 2

Watch the below video and answer the questions that follow :



- Write the Research question
- Identify the independent and dependent variable

Q3

Understand the simulation in the link below :

A student intends to find the relation between the speed of revolution of the bicycle wheel and the electrical energy generated.

Click for simulation :

https://phet.colorado.edu/sims/html/energy-forms-and-changes/latest/energy-forms-and-changes_all.html

- Frame research question
- Identify the independent and dependent variable
- Suggest one control variable
- Frame the hypothesis.
- Write the method to be followed with logical steps in correct order. Suggest how to manipulate IV and record DV.