

Name: _____

Date Started: _____ Date Completed: _____ Score: _____

Learning Activity Sheet

Heat Engines

A. Read and understand each question carefully. Write the letter of the correct answer on the space provided before each number.

- _____ 1. Which engine is the most efficient?
- A. Carnot engine
 - B. diesel engine
 - C. gas engine
 - D. external combustion engine
- _____ 2. Which principle governs and explains the function of a heat engine?
- A. first law of thermodynamics
 - B. second law of thermodynamics
 - C. third law of thermodynamics
 - D. laws of thermodynamics
- _____ 3. Which of the following refers to an ideal engine that has the highest possible efficiency?
- A. internal combustion engine
 - B. diesel engine
 - C. Carnot engine
 - D. external combustion engine
- _____ 4. Which of the following correctly describes the mechanical work done by heat engine?
- A. Work is the same as the heat input.
 - B. Work is the same as the heat exhausted.
 - C. Work is the same as the ratio of heat output to heat input.
 - D. Work is equal to the difference in heat input and heat output.
- _____ 5. A heat engine has an efficiency of 15%. Which of the following statements is TRUE about this?
- A. The heat engine is efficient, since only 15% of the heat input goes into waste.
 - B. The heat engine is not efficient, since 85% of the heat output goes into waste.
 - C. The heat engine has high efficiency, since 85% of the energy is transformed into work.
 - D. The heat engine has low efficiency, since 85% of the energy is expelled as waste.

B. Construct a flowchart describing how heat engine works. Explain the different processes in the flowchart you have constructed.

Be guided by the following criteria as you prepare your activity.

Criteria	Good (1)	Satisfactory (3)	Excellent (5)
Diagram	Only one process is reflected in the flowchart.	Only two of the processes are included in the flowchart.	All the processes are included in the flowchart.
Explanation	Only one process is explained	Different fonts and font sizes are used. Font size reflects the category of the concept.	All the processes are accurately explained.