Glance at the "Stirling engine" LES

NOTE **This activity was designed within the framework of teacher training sessions. It will require adaptation before being used with students.**

PREPARATION

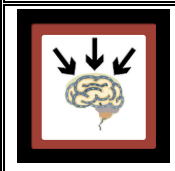
1 Trigger

- Context
- Presentation of a 7 minute film about the history of the Stirling engine.

2 Activation of previously acquired knowledge

- Stirling film presentation to be analysed
- Sketch of engine to be analysed
- Drafting an explanation
- Construction of a network of concepts

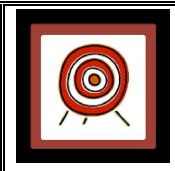
REALISATION AND INTEGRATION



3 Learning activities

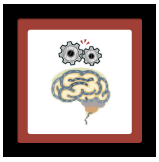
Physical properties of gases

- Using the suggested activities or
- Using activities particular to each site



4 Establishing a plan

- The student problem solves
- The teacher benchmarks the questioning and refines the evaluation criteria
- See student booklet



5 Complex task

- Starting the Stirling engine
- Analysis of the Stirling engine
  - Role of each component
  - Comic strip

6 Synthesis activity

- Document synthesis (PPT, Poster, text)
  - Advantages and disadvantages of the Stirling
  - Environmental considerations
  - Refrigeration machine
- Auto evaluation and building self-esteem
  - Construction of a new network of concepts and comparison to the first one