




Liberal Study – Energy

Group			Date		
Group Leader	Clerk	Clerk	Action	Cheerer	Time
Group Marks:					
					

Objectives:

After attending the course, students should be able to

1. have basic knowledge on renewable energy.
2. use different instruments to measure renewable energy and understand the application condition of renewable energy.
3. understand the importance of energy conservation and the role of an individual should take on environmental protection.

Content:

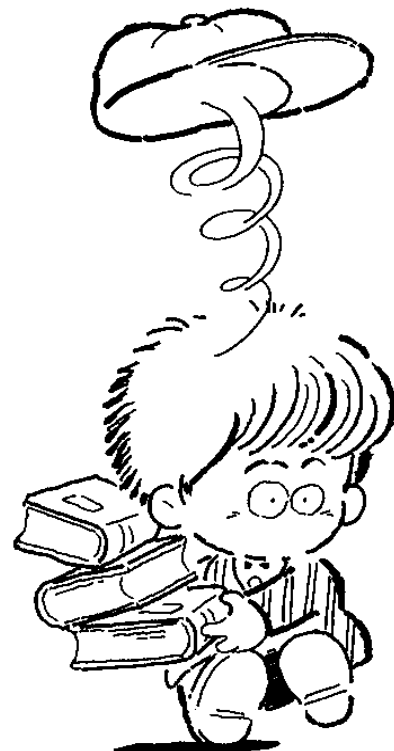
Students will participate in a investigative exploration activity in responds to the topic set by teacher.

Study Procedure:

1. Selection of study area or theme
2. Research on study topic
3. Collection of information
4. Organisation of data or information
5. Evaluation on study topic
6. Design of work plan

Tools and Reference:

	Items
1.	Anemometer
2.	Solar energy meter
3.	Electronic thermometer
4.	Map of Ho Koon Centre
5.	Whiteboard
6.	Whiteboard pen
7.	Whiteboard eraser



一. Selection of study area

The principal of Ho Koon Nature Education cum Astronomical Centre intends to cut monthly electricity bill of the centre. You are invited to study on this project and provide suggestions on energy conservation.



二. Research on study topic

Think about the study topic with the following perspectives.

Information (Hint: investigate current electricity consumption of the centre)

Pros/ Cons (Hint: the possible consequences after cutting electricity consumption)

Creativity (Hint: other creative electricity saving ideas)

3. Collection of information



Wind Power System

System	Location	Usage	Average wind speed m/s	Start up wind speed m/s	Current wind speed m/s	Average electricity generation per month kWh	Cost \$
1							
2							



Solar Power System

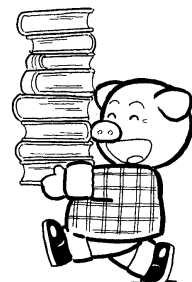
System	Location	Usage	Area m ²	Maximum power output W	Solar power that can generate maximum output W/m ²	Average solar power W/m ²	Current solar power W/m ²	Average electricity generation per month kWh	Cost \$
3									
4									



System	Location	Area m ²	Highest temperature the heater can produce °C	Current water temperature °C	Average amount of electricity that can save per month kWh	Cost\$ \$
5						

4. Design of work plan

Energy consumption report of Ho Koon Centre



Current situation of the renewable energy system

System	Location	Average electricity generation per month kWh	Efficiency (High/Low)	Retain or not? (✓/✗)
Wind Power				
Solar Power				
Solar Water Heater				

Suggestions on renewable energy system

Now, You will receive HKD\$ _____ from the principal of Ho Koon Centre to improve centre's energy saving system. You should make use of the money to maximize the amount of saved energy.



System suggested	Average electricity generation per month kWh	Cost \$
Solar Power System And / Or Solar Water Heater		
Wind Power System		
Total electricity saved for centre per month: _____ kWh		Total Cost : \$ _____

Other energy saving suggestions

Facilities:

Actions:
