

ELEGANTIA COLLEGE

ENVIRONMENTAL PROJECTS

since 2002

- 1. Is renewable energy a solution ? (2009)**
- 2. What stuff is the compost? (2009)**
- 3. Who killed our earth indirectly ? Rethinking the global warming (2008)**
- 4. Green Sea Food (2008)**
- 5. A review of recent evidence of changes in stream ecology of Ping Kong village (2008)**
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Abstracts

1. Is renewable energy a solution ? (2009)

Some renewable energy experiments are conducted and the efficiency of each device was calculated. Students were asked to think about the possibility of applying renewable energy to HK. The project keeps going this year.

2. What stuff is the compost? (2009)

Some students are interested in converting the kitchen waste to compost. They started the projects last year. So far they found out:

- a. the releasing of waste heat from the compost;
- b. the duration of decomposition varied with temperature;
- c. the releasing of some nitrogen compounds.

This year, they will investigate the variation between different types of kitchen waste.

3. Who killed our earth indirectly ? Rethinking the global warming (2008)

A group of four boys compared the electricity bills of their classmates and focused on the highest and lowest bills. They visited their family to find out the reasons accounting for the different in electricity consumption. Their findings showed that the following factors affect the electricity consumption:

- a. the family size
- b. the habit of the family members
- c. the living environment ~ countryside or downtown
- d. the facing of the flat

4. Green Sea Food (2008)

The sixth formers conducted a sea food consumption survey of the Elegantians. They found that half of the students loved having sea food, but few of them knew the sources of the seafood they had taken. They rarely concerned about the sustainability of the species. Their choice of seafood only depended on the taste. The sixth formers hoped that after the green seafood campaign, students' awareness will be increased.

5. A review of recent evidence of changes in stream ecology of Ping Kong village (2007)

Accompanied with urbanization, increasing amount of farmland in Ping Kong village has become abandon field since the 70th century. A research project was

conducted four years ago to investigate the ecological condition about the stream. This year we conducted research again to compare nowadays situation with the past. In this study, Physical parameters (stream water temperature, turbidity, current flow rate, etc) and chemical parameters (dissolved oxygen, ammonia content, phosphate content, pH, etc.) were measured to assess the water quality at different sites along the stream. The water samples collected were also used for bacterial counting to assess the pollution level. Research results show that the pollution problem is getting more serious, and the condition of lower stream is worse than the upper stream.

6. Biological indicator-lichen (2007)

Lichen is composed of two kinds of organisms, algae and fungi. Most of the lichens are light and fresh air loving organisms. So in the urban area, especially the greatly polluted area, lichens are rare. Lichens are very sensitive to the level of sulphur dioxide, so it can be used as the biological indicator. The aim of this project is to investigate the distribution of lichens in three different area, including roadside near school, roadside at Nathan road and Ping Kong village. From the distribution of lichen (genus: *Lepraria*), the pollution level could be assessed.

7. Methane from NE Landfill

After visiting the NE landfill and knowing the usage of methane, three F3 students conducted a project about the usage of methane from the NE landfill. They surfed online to find the formation, characteristics and advantages of methane. Then, they compared the usage of methane in HK and in other western countries. They found that methane was not fully utilized in HK and urged the HK government to investigate on its usage in HK.

8. Wetland management — comparison between Hong Kong and SuZhou (2006)

It was an online project. Students in HK shared their information of the HK wetland park with the students in Suzhou, a city next to Chang Jiang, China. The students from both cities discovered the similarities and difference in the wetland management.

The differences were:

1. The size of the wetland park
2. The basic concept of managing the park ~ HK is focusing on education while Suzhou is stressing on reservation and relaxation

3. The capital investment and level of modification

The similarities were:

1. Both sites were one of the stops for the migratory birds
2. Both sites were managed and promoted by the local government

9. Comparison between the utilization of water resources in Hong Kong and Xinjiang (2006)

It was an online project. Students in Hong Kong shared their information of the utilization of water resources with students in Xinjiang, an inland city of China. The students from both cities discovered the differences in utilization of water resources. They are namely the major sources of water, the usage of fresh water, the reasons for water shortage and the solutions.

10. How do the producers and consumers adapt to the wetland environment? (2008)

The study investigated on the adaptation of biotic components on wetland. Some visitors of the HK Wetland Park were interviewed. The interviews showed that people were interested in the wetland animals, but they knew little about the wetland.

11. The study of air pollution in Sheung Shui through visibility change (2006)

The study collected climatic data through our weather stations. By comparing to the photos taken, we tried to explore the sources of air pollutants – local or cross border.

12. Source separation of domestic waste (2005)

With the raise of living standard, more domestic wastes are produced everyday in Hong Kong. The study concentrated on the wastes that we produced. The residents' views on source separation of domestic wastes. Students also suggested methods to curb the increase of domestic wastes.

13. Green vanishes. What colour comes next? (2004)

The research explored the effect of urban encroachment on the rural area. Through a comparative study between old and new maps and aerial photos, the students presented their views on urban encroachment. They also did a small experiment on the water quality of a small river near the school.

14. Environmental problems we faced in our neighbourhood – a study by the F1 students.(2004)

The study helped the students to understand the environmental problems that the F1 students faced in the neighbourhood including air, waste and noise pollution.

15. Air Quality in Luen Wo Market – a comparative study of air quality in rural and urban area (2003)

Elegantia College locates in New Territories – the rural area of Hong Kong. The study encouraged the students to study the air quality of vicinity of school premise. The data collected is also compared to the air quality as collected by Hong Kong University of Science and Technology in Mongkok and Causeway Bay (the congested urban areas)

16. The household air quality of the Elegantians (2003)

By using adhesive label, suspended particulates were collected in the students' residential dwellings. The study raised the students concerns on their household air quality.