

Exemplar 3 : Knowing Your Community
(Cross-curricular project)

Learning Dimension: Shape & Space, Data Handling

Learning Unit: The eight compass points and bar charts (I)

Key Stage: 2

Objectives:

- (i) To find the eight compass points with a compass
- (ii) To become familiar with the district in the vicinity of the school
- (iii) To sketch the city plan of the district in the vicinity of the school
- (iv) To be aware of the facilities and services offered in the community
- (v) To present the collected data with statistical charts

Prerequisite Knowledge:

- (i) Finding the four directions with a compass
- (ii) Constructing a simple bar chart

Teaching Resources: Compasses

Description of the Activity:

Activity 1:

1. Pupils use compasses to find the four directions and describe the facilities within the school vicinity in the four directions.
2. Pupils use compasses to find the eight compass points and record the facilities within the school vicinity in the eight directions.

Questions for discussion:

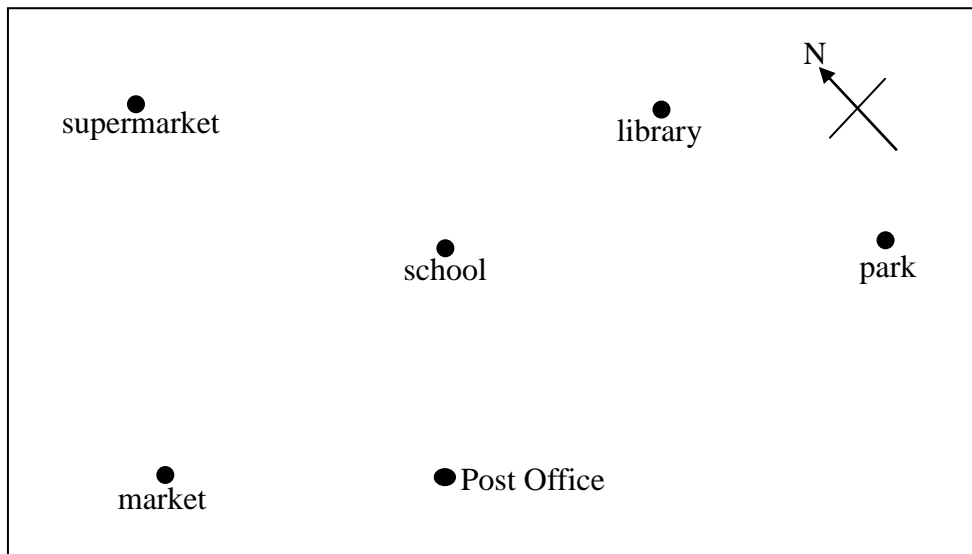
1. Will the directions of the facilities change when you are in different positions?
2. Will the directions of the facilities change when you are in the same position but face a different direction?

Activity 2:

Pupils are divided into groups to do the following tasks:

1. Sketch the city plan of the area in the vicinity of the school, with the help of compasses.

For example,



(Since distances between facilities are not the main concern of this activity, pupils can estimate them intuitively.)

2. Collect information on the facilities and services available within the school vicinity, for example, the number of supermarkets, parks, markets, libraries, the condition and maintenance of the facilities, the frequency with which the facilities are used by the residents, etc.

(More able pupils can collect information by conducting a small-scale survey.)

3. Analyze the information collected and present the data with appropriate statistical charts, such as bar charts. The teacher can encourage pupils to make use of new technology in presenting their findings and reports. For example, pupils can record data and draw statistical charts by spreadsheet, compile the report by word processor and take pictures of the facilities with digital cameras, etc.
4. Discuss the statistical charts constructed and report the findings orally or in written form.
5. Suggest ways to improve the city planning of the area in the vicinity of the school.

Questions for discussion:

1. What kinds of facilities are provided in the district?
2. Which types of facilities do you think are in excess? Why?
3. Which types of facilities do you think are insufficient? Why?

4. If you were a town planner, how would you redesign this district?
5. How can you protect and improve the environment of the community?

Notes for Teachers:

1. Pupils should be given adequate time to do the project.
2. Teachers should give explicit instructions and suggest methods for the collection of data.

This exemplar mainly involves the following generic skills:

1. Collaboration Skills

- Share responsibilities and understand the roles of individual members in collecting data and presenting projects
- Discuss and exchange ideas openly with others in sketching the city plan and deciding on the information which needs to be collected
- Listen to others patiently in discussion of the information collected
- Understand and accept different interpretations in analyzing statistical data and ways of improving the city plan from members with different socio-economic backgrounds
- Participate actively in the project, for example, in discussing strategies to be adopted for collecting information on the facilities
- Agree a suitable strategy to collect information
- Liaise, negotiate and compromise with others in selecting a suitable strategy for collecting information and in suggesting a new city plan

2. Critical Thinking Skills

- Extract, classify and organize information collected from the area in the vicinity of the school
- Understand the concepts of relevance and irrelevance, for example, in identifying the relevant information useful for supporting the proposed city plan
- Draw logical conclusions based on adequate data and evidence, for example, in making suggestions for improving city planning, based on the information collected

3. Problem-solving Skills

- Choose the relevant information to solve problems, for example, by identifying the statistical data necessary for giving suggestions for improving city planning
- Make use of various tools in solving problems, for example, using a tally in

counting the frequency with which the facilities are used, and ballots to collect opinions about the level of satisfaction with the condition of the facilities

4. Creativity

- Strengthen creative abilities such as originality, sensitivity to problems, problem formulating and analysis, through the process of designing their own projects, presenting the city plan in their own ways and suggesting ways of improving city planning

5. Numeracy Skills

- Recognize the 8 compass points
- Organize simple data and interpret simple statistical graphs in daily-life situations, for example, in investigating the facilities within the school vicinity
- Choose the correct form of numbers in presenting information, for example, by using percentages to tell how many people are satisfied with the condition of the facilities