CONCH SURVEY FIELD TRIP

Title: Conch Survey

Objectives:

1. Distinguish between juvenile and adult conch
2. Determine the distribution of conch in a prescribed area.
3. Calculate the density of the conch population.
4. Identify conch habitat.

Materials:

Notepads/clipboards, dive slates, 2 stakes, measuring tape, snorkel gear/water glass

Resources:

Conch tags, Activity

Pre-Trip Activity

1. Identify a suitable survey site.
2. Ensure that students can differentiate between juvenile and adult conch.
3. Demonstrate tally mark counting system
4. Have students develop a suitable chart to record their information
5. Discuss water safety

Field Activity

1. Identify a point on the selected shore for survey.
2. Drive stakes into the sand so that they are 15 m apart.
3. Walk into the water to chest height and measure the distance from shore in meters.
4. Divide the survey area among your group members.
5. Sketch a map of your survey area and indicate the habitat types present.
6. Systematically survey the designated area of the seafloor for conch shells.
7. Using a tally system identify the number of conch in your survey area, indicate:
   - whether or not they are alive
   - whether they are juvenile or adult
   - the habitat in which they were found.

In the classroom

1. Draw a map of the survey area, indicate its dimensions, and use a key to show the location of the different habitats that were present.
2. Calculate the area in m^2 of the survey area.
3. Construct a table to show the data collected during the survey.
4. Compare the data of different groups.
5. Calculate the density of conch (# of conch per m^2)in this area

$$\textbf{Conch density} = \frac{\textbf{number of conch identified}}{\textbf{Area of survey plot}}$$

Questions:

1. Describe the systematic survey method that was used by your group.

2. Is this a nursery area or a breeding area for conch? Explain.

3. Based on your knowledge of the life cycle of the conch, is the location of the conch what you expected? Explain, If not why?

4. Is this an area that has been affected by man's activities? Explain

5. Is the data reliable? Does each group have similar data if not why?

6. What changes can be made to the design of the activity to make it a more accurate assessment of conch distribution?

7. How can this type of information be used towards the conservation of marine resources?

8. What other information would be required for effective conservation of conch?

Sample chart e.g.
Survey Area 1

Habitat: Sea Grass			
Alive	**Dead**	**Juvenile**	**Adult**
IIII IIII	***1I***	***IIII***	***IIII II***
Total # 11		**Total # 11**	

Note to teachers: Owing to the low density of conch near shore. It may be best to seed the chosen area with live and empty conch shells so that students have the opportunity to conduct field studies.