

Island Exploration Activity

Due: **Fri Jan 29 by 5pm**, uploaded to Moodle as a PDF document

The goal of this activity is to familiarize yourself with the Islands, in preparation for beginning your group Island project. You may complete this activity either on your own or collaboratively with other people in the class (group of three at most), submitting one document for the group. You do not need to work with the same people who will be in your Island project group. Access the Islands at <http://smp-island.smp.uq.edu.au> with your X500 email address. Let your instructor know if you can't access the Islands.

The Visitor Center on the Islands (click on the square just south of Arcadia) is a great source for information about the Islands. We strongly encourage you to read the information in the Visitor Center before beginning your own explorations.

SAMPLING ON THE ISLANDS

1. Describe the Islands from the point of view of a researcher looking to obtain a representative random sample of Islanders for a research study. Obtain **estimates** for each of the following: (a) How many villages are there on the Islands? (b) How many houses are in each village? (c) How many people live in each house?
2. What is the total population of the Islands at this time? Is the total population known? Explain your reasoning.
3. **Briefly** describe a method you could use to obtain an *estimate* of the total population of the Islands.
4. If you used your method today to estimate the Islands' population, and then came back in a month and obtained another estimate, would you expect your two estimates to match? Explain your reasoning.
5. **Briefly** describe a method you could use to obtain a *simple random sample* of people who live on these Islands.
6. **Briefly** describe a method you could use to obtain a *hierarchical random sample* of people who live on these Islands.
7. Where are the hospitals located on the Islands? (There are three, one on each.) What diseases are treated in the clinics in the hospitals?

TIME ON THE ISLANDS

8. How does time work on the Islands? If you repeat a measurement on an Islander 10 minutes later in our time, how much time has passed on the Island? If you come back to the Islands tomorrow at the same time, how much time will have elapsed on the Islands? What about if you come back a week from now? A year?

(continued on reverse)

CARRYING OUT STUDIES ON THE ISLANDS

9. What other things could you study on the Islands besides the Islanders themselves? (Hint: Click on some of the little squares.)
10. Pick an Islander and list three personal characteristics of an Islander that you can obtain information about. Please include the name of your Islander and where they live?
11. What do you have to obtain from an Islander before you can ask them to do a task or submit to a treatment or measurement?
12. List three interesting tasks or treatments it is possible to administer to study participants on the Islands.
13. List three interesting diagnostic tests, measurements or outcomes it is possible to measure on study participants on the Islands.
14. Measure the diagnostic tests listed in question 13 on an Islander and report your results.
15. Create a short survey for your Islander and administer it to him/her. What were the results?
16. Describe an *experimental* study that you could do on the Islands. Describe the primary outcome of interest, the treatment and the control. For one study participant, how long does it take to administer the treatment? How long does it take to measure the outcome? How long would you follow your study participants in their time? In our time?
17. Why can't you wait until the night before the study is due to run your experiment?