

Reading Statistical Tables *Teacher's Guide*

Students will compile and utilize a statistical table using website data.

GRADE LEVEL: 6th- 8th

SUBJECT AREA/COURSE: Science, Math, Reading

SUNSHINE STATE STANDARDS:

SCIENCE:

- Explain why scientific investigations should be replicable. (SC.6.N.1.2)
- Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigations. (SC.6.N.1.4)
- Explain that scientific knowledge is durable because it is open to change as new evidence or interpretations are encountered. (SC.6.N.2.2)
- Differentiate replication (by others) from repetition (multiple trials). (SC.7.N.1.2)
- Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation. (SC.7.N.1.3)
- Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community. (SC.7.N.1.7)

MATH:

- Determine the measures of central tendency (mean, median, mode) and variability (range) for a given set of data. (MA.6.S.6.1)

READING:

- The student will locate, use, and analyze specific information from organizational text features. (LA.6.2.2.1)
- The student will organize information to show understanding. (LA.6.2.2.3)
- The student will record information related to a topic, including visual aids to organize and record information and include a list of sources used. (LA.6.4.2.2)
- Strand INFORMATION AND MEDIA LITERACY Standard2: Research Process. The student uses a systematic process for the collection, processing, and presentation of information.

ACADEMIC OUTCOMES/LESSON OBJECTIVES:

- Students will be able to complete a data table using the information on the watershed atlas.
- Students will be able to examine data and locate information.
- Students will be able answer questions relating to the data on the table.

BACKGROUND INFORMATION: Statistical tables are used to show trends and patterns. They organize and categorize information under specific headings. Horizontal lines are called rows and vertical lines of information are called columns. To read a statistical table, look at the title, then look at the headings. Using the categories at the top and left side of the table, read across a row and down a column to locate specific information.

MATERIALS NEEDED: Access to www.Hillsborough.WaterAtlas.org, Reading Statistical Tables handout, paper for answers.

SAFETY: N/A

VOCABULARY: categorize, statistical, trophic state index, oligotrophic, mesotrophic, eutrophic, hyperotrophic

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KEY: please see next page

Name:

Date:

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Note that the values below are for March 2006. The last two columns are subject to change.

| | Lakes | Surface Area in Acres | Mean Depth in Feet | Maximum Depth in Feet | Trophic State | Impaired or OK? |
|----|------------------|--------------------------|-----------------------|--------------------------|------------------|--------------------|
| 1 | Lake Alice | 91 | 9 | 25 | 24.1 | OK |
| 2 | Buck Lake | 32 | 9 | 23 | 69.6 | IMP |
| 3 | Lake Calm | 113 | 10 | 28 | 26.7 | IMP |
| 4 | Crescent Lake | 55 | 13 | 32 | 41.1 | IMP |
| 5 | Island Ford Lake | 87 | 11 | 20 | 47.1 | OK |
| 6 | Juanta Lake | 22 | 9 | 21 | 59.7 | IMP |
| 7 | Keystone Lake | 424 | 10 | 28 | 44.2 | OK |
| 8 | Little Moon | 11 | 10 | 20 | 62.8 | OK |
| 9 | Mound Lake | 74 | 3 | 26 | 31.4 | IMP |
| 10 | Lake Taylor | 45 | 9 | 21 | 43.2 | OK |

3. **a.** Crescent Lake has the greatest mean depth at 13 feet **b.** Mound Lake has the least mean depth at 3 feet.
c. Mean depth is an average of many depth readings throughout the lake.

4. Oligotrophic = 10, Mesotrophic = 3, Eutrophic = 1, Hypereutrophic = 1.

5. To determine water quality, the Trophic State Index (nutrient load) over a period of time is considered as well as dissolved oxygen, bacteria, plants and animals in the water. If the water can't support fishing and swimming, it is impaired. Water quality depends on many things including Trophic States.

6. The mode is the section with the most lakes in it. For the trophic table, the mode is Oligotrophic.

Name:

Date: