

Let the Rain Come Down!

TEKS: §111.14. Mathematics, Grade 2.

(2.3) Number, operation, and quantitative reasoning. The student adds and subtracts whole numbers to solve problems.

The student is expected to

(C) select addition or subtraction to solve problems using two-digit numbers, whether or not regrouping is necessary;

(2.11) Probability and statistics. The student organizes data to make it useful for interpreting information.

The student is expected to:

(A) construct picture graphs and bar-type graphs;

(B) draw conclusions and answer questions based on picture graphs and bar-type graphs

(2.12) Underlying processes and mathematical tools. The student applies Grade 2 mathematics to solve problems connected to everyday experiences and activities in and outside of school.

The student is expected to:

(A) identify the mathematics in everyday situations;

(B) solve problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness

(D) use tools such as real objects, manipulatives, and technology to solve problems

TEKS §111.15. Mathematics, Grade 3.

(3.3) Number, operation, and quantitative reasoning. The student adds and subtracts to solve meaningful problems involving whole numbers.

The student is expected to:

(B) select addition or subtraction and use the operation to solve problems involving whole numbers through 999.

(3.13) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data.

The student is expected to:

(A) collect, organize, record, and display data in pictographs and bar graphs where each picture or cell might represent more than one piece of data;

(B) interpret information from pictographs and bar graph

(3.14) Underlying processes and mathematical tools. The student applies Grade 3 mathematics to solve problems connected to everyday experiences and activities in and outside of school.

The student is expected to

(B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;

:

Objective: Students will construct a bar graph comparing local precipitation to that of the Yucatan, Mexico. Students will use conversions and problem solving strategies to solve word problems.

Focus: Read a non-fiction book about Rainforests, to give students background knowledge. Lead students in a discussion about newly acquired knowledge. Show pictures of the Yucatan. Discuss the fact that it rains there daily,

Explore: Introduce the following vocabulary: precipitation, monthly precipitation, yearly precipitation. Discuss how meteorologists calculate monthly precipitation amounts, as well as annual precipitation amounts. Ask students if they think it rains more in the rainforest or more where they live? (For this lesson, research your local monthly precipitation and yearly precipitation. As a class, record your local precipitation for a month .Keep a chart of the daily precipitation where all students can see.)

Show students the Rainforest Yearly Precipitation chart. Lead students in a discussion about how the U.S. uses the customary, or standard unit of measurement, contrasted to how other countries such as Mexico use the metric system. As a class, make a chart with the rainforest amounts of precipitation converting into inches. Using the data, construct a bar graph of the recorded local monthly precipitation. Next, construct a bar graph showing the monthly precipitation of the Yucatán Rainforest. Model and explain how to set up a bar graph using the data that the students have acquired.

Assessment: Students will construct a bar graph showing the annual rainfall in a particular rainforest. Students will need to refer to the Rainforest Precipitation Chart to utilize the data needed to complete their individual bar graph. (Randomly distribute a different location for students.)

Closure: Students will share their newly constructed bar graphs with one another. Lead students in a discussion comparing the similarities/ differences of the differing rainforest annual precipitation amounts.

Enrichment: Using local resources students can investigate becoming involved in local television stations weather education program. For instance, some stations might have a “Weather Watchers” program. Students may also invite a local meteorologist to come and speak to the class.

Rainforest Yearly Precipitation Chart:

Annual rainfall (of main rain forest regions):

Neotropics: 2000-3000 millimeters (mm) (this is "our" rainforest: primarily Brazil)

Africa: 1500-2500 mm

Madagascar: 2000-3000 mm

Southeast Asia: 2000-3000 mm (often >3000)

New Guinea: 2000-3000 mm (often >3000)

1000 mm = 40 inches

(From *Tropical rain forests: an ecological and biogeographical comparison*, by Richard Primack and Richard Corlett)

Created by: Donna Bass 9-3-06