Interpreting Bar Graphs

CASAS Competencies:
• 1.1.3 Interpret maps and graphs
• 6.7.2 Interpret data on bar graphs
• 6.0.3 Identify information needed to solve a given problem

Outcomes:
• Students will be able to collect data, generate a bar graph and identify data by reading and interpreting bar graph information.

Teacher Preparation and Materials:
• Overhead Projector
• Transparency of Illustration 1, (worksheets 1 and 2 optional)
• Colored white board markers for teacher
• Graph paper
• Colored markers or crayons for learners
• Rulers for drawing straight lines
• A bag of 1 lb M&M’s
• Copies of worksheets 1 and 2

Note: This lesson will take at least 2 hours, depending upon your students’ skill level.

Why?

Introduction/Warm-up:
Use Illustration 1 to show students how a bar graph can help them to find information quickly. First ask students which fruit has the largest number? How can they be sure? It’s hard to tell without counting them up individually. How can we find this information more quickly?

What?

Introduce the words “bar graph” and provide the definition before actually generating the fruit bar graph. Together, transfer the information to a bar graph. Teacher should draw the horizontal and vertical axes and write in the fruits and numbers respectively. Include a title for the bar graph below or above it. Have 3 learners come up to the board and draw in a bar for one fruit of their choice.

Once the graph is complete, ask students which fruit has the least number? Discuss how a bar graph organizes data helps to find information quickly.
Graphs are pictures that help us understand amounts. These amounts are called data (numerical information). There are many kinds of graphs, but one kind is a bar graph that uses bars to show data. The bars can be vertical (up and down), or horizontal (across). The data can be in words or numbers.

Bar Graph - An example that can be used when explaining “bar” is a ‘chocolate bar’. Chocolate bars are shaped like a block and is longer than they are wider. Draw an example on the board.

![Bar Graph Example](image)

Do!

Controlled Practice:
Create at least one, but more for practice, class-generated bar graphs.

As a whole class, survey where the learners are originally from and generate a bar graph together. Once the name of the countries and number of learners are collected on the board, ask what could be used as a title/name for the graph. (i.e. Country of Origin) Guide learners on how to start drawing the graph with a ruler. Have them draw a vertical and horizontal line and write in a name for the two axes. (i.e. 2, 4, 6, 8, 10 (numbers) and Country)

Teacher models some questions with the bar graph and asks learners for the answers.

Do the same with another topic.
   i.e. How do you get to school? (transportation)
        choices: walk, take the bus, drive a car, get a ride, etc.

Pair/Group Practice:
Using one of the class generated bar graphs, have learners make and write down some questions in pairs/groups. Once the questions are done, exchange with
another pair/group and find answers to the questions generated by another pair/group.

**Individual Practice:**
1. M&Ms – each learner gets a handful of M&Ms and graph paper. Have learners generate a bar graph representing how many M&Ms they have by color.

**So what?**

**Assessment:**
Using Worksheets 1 and 2, to have learners practice interpreting graph information.

Ask learners where they might be exposed to bar graphs. In the newspaper? On the news? Brainstorm on some possibilities to share with the class.
- Class CASAS Reading, Math or Listening scores
- CASAS Math test
- Monthly weather report – high/low/average temperature, etc.
- Children’s performance at school
- Monthly budget
Look at the graph above and answer the questions below.

1. What is the title of this graph? ________________________________

2. How many types of animals are shown? __________________________

3. How long can a dolphin hold its breath? __________________________

4. How long can a seal hold its breath? __________________________
   a. 19 minutes
   b. 12 minutes
   c. 7 minutes
   d. 6 minutes

5. How much longer can a whale hold its breath than a seal?
   a. 19 minutes
   b. 12 minutes
   c. 7 minutes
   d. 6 minutes
Look at the graph above and answer the questions below.

1. What is the title of this graph? ________________

2. How many months are there in a year? ________________

3. How much did Asha save in March? ________________

4. What month did she save the most? ________________

5. What months did Asha save the least?
   a. January and February
   b. January and December
   c. March and April
   d. March and October

6. What month did she save $10?
   a. February
   b. March
   c. April
   d. May

Worksheet 2