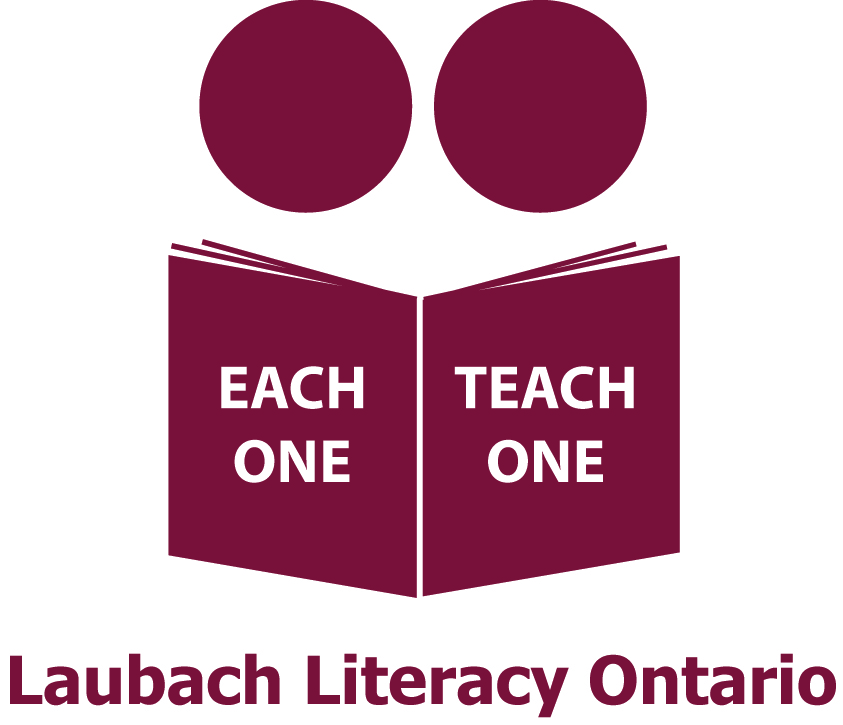
Understanding Basic Graphs and Charts 2

Instructor Guide



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## Introduction

In the workplace, one will often find many different types of numerical information stored in graphs and charts. Reading graphs and charts is an important skill to have when working in any type of job, be you a cashier, a store manager, or a CEO.

In this section you will:

* Learn about a variety of simple graphs: what they show, how they are used, what they look like, and how to read them.
* Evaluate, predict and apply data displayed in graphs

Note: This section is split into two parts. This lesson is the second part of two in Understanding Basic Charts and Graphs.

## Part 1: Pictographs

Lesson

* What do they show?
  + They use symbols to represent data.
  + The size, amount, colours or patterns represents this data.
    - e.g. a smiley face could be used to represent one satisfied customer, while a frowning face could be used to represent one dissatisfied customer
* How are they used?
  + They are used to show data that does not need to be read precisely.
  + Pictographs display the data in a more engaging or interesting way.
  + They are used most frequently when a company is trying to communicate with the public, or at least to a more general audience
* What do they look like?
  + They can take on a variety of formats.
  + Common examples include:
    - Symbols used repeatedly to show amounts
    - Parts of symbols used to show proportions
    - Symbols shaded to show proportions
    - Different sized symbols used to show amounts
* How to read them:
  + Locate the title
  + Scan the graph and identify the symbol being used
  + Think about what the symbol represents.
    - This information may be found in another part of the graph (like a legend)
    - Otherwise, you need to make guess based on what other information is present in the graph (such as categories or the title)

Activities

**Activity 1** - The students will answer the following questions in their workbooks (answers in italics).

1. In your own words, describe what information is portrayed by the pictograph.
2. How is the data represented? (Hint: What kind of *format* is used?) *– different sized symbols used to show amounts*
3. Which two news stories were the most talked about? *– the U.S. presidential election, the ISIS terror threat*
4. Which news story was the least talked about? *– rising global temperatures*
5. Assume there were 1000 total posts written about these topics. Estimate how many people posts were about the Rio 2016 Olympics. *– approx. 200*

**Activity 2 -** As a class, conduct a poll about your favourite hot beverages. The students will record the data, and then create a pictograph to visually represent the data using the template provided.

## Part 2: Process Diagrams

Lesson

* What do they show?
  + Shapes with text represent different activities.
  + Arrows connecting the shapes show the order in which the activities occur.
  + They show procedures, processes, workflow, etc.
* How are they used?
  + Workers use process diagrams to visualize the flow of activities in a process.
  + Examples:
    - Managers use work flow charts to see where they can make their employees more efficient.
    - Workers in a call centre follow process diagrams to answer questions or deal with complaints.
* What do they look like?
  + They contain boxes of different shapes or colours that show a decision or action.
  + Arrows connect these boxes to show which decisions/actions lead to other decisions/actions.
* How to read them:
  + To read a process diagram:
    - Find the title.
    - Scan the graph for the legend and identify what the different colour or shapes mean.
    - Read the text in the boxes, following the progression indicated by the arrows.
  + To use a process diagram:
    - Find the step you are interested in.
    - Read the steps before that step to see what happened prior.
    - Follow the arrows from that step to see what must be done next.

Activity

**Activity 3** - The students will answer the following questions in their workbooks (answers in italics).

1. What is the first step in this process? *– answer the call*
2. What decision needs to be made by the employee? *– whether or not the customer is satisfied*
3. If the customer is unsatisfied after being offered a refund, what must the employee do? *– transfer the call to the supervisor*
4. When is it appropriate for the employee to end a call? *– when the customer is satisfied*
5. In your own words, explain why this chart might be helpful to an employee.

## Part 3: Organizational Charts

Lesson

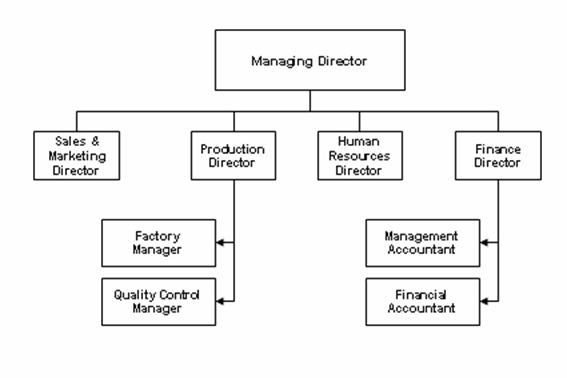
* What do they show?
  + They show a *hierarchy.*
  + Where different people or positions fit within the structure of a company or an organization.
  + The larger and more complex the chart is, the larger the workplace or portion of the workplace that is represented by the chart.
* How are they used?
  + They are often found…
    - in company policy manuals.
    - posted within a common area of the workplace.
    - in training videos or other training materials.
  + Employees will often have to review an organizational chart when they begin working in a new position, to help better understand where they fit in the greater whole of the company or organization.
* What do they look like?
  + Boxes with text (including job titles and/or employee names)
  + Lines show connections between different staff.
  + The boxes found towards the top of the chart typically represent the most senior positions, while boxes at the bottom typically represent the least senior positions.
* How do you read them?
  + For more general information:
    - Look for the company's title and determine the type of company the chart represents.
    - Scan the overall shape of the graph.
    - Identify different departments within the company.
  + For information about a single position:
    - Locate the position.
    - Follow the line above the box to find the supervisor.
    - Follow the line(s) beside the box to find coworkers.
    - Follow the line(s) below the box to find subordinates.

Activities

**Activity 4** - The students will answer the following questions in their workbooks (answers in italics).

1. How many levels does this company have (in terms of staff)? *- 4*
2. How many staff, not including the Salon Owner, work at Stevie's Beauty Parlor? (Assuming that there are two Beauty Staff and two Cleaning Staff) *- 10*
3. Who reports directly to the Office Manager? *– Financial Coordinator, Receptionist*
4. Whose work does the Supervising Beautician oversee directly? *– Beauty Staff*
5. Which positions have the least responsibilities? Which position has the most responsibility? *– Bookkeeper and Cleaning Staff, Salon Owner*

**Activity 5** – Students will complete the following organizational chart using the positions provided in the word bank.



**Activity 6 (Technology Application)** – Have the students test their graph reading skills by creating a digital family tree. The family tree maker is available at the following web address:

<http://www.familyecho.com>