Presentation Notes
Mathematical Applications in Human Services

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Practicum in Human Services
Practicum in Human Services provides occupational specific training and focuses on the development of:

- Consumer Services
- Early Childhood Development and Services
- Counseling and Mental Health Services
- Family and Community Services
- Personal Care Services
In this lesson, we are going to focus on mathematical applications in Human Services.

What do you know already?

Allow students to share.
Whether it’s a prescription in the healthcare field, an order for a product online, supplies for an office or disbursement of a government manual, orders and billings are a part of Human Services. Each specific industry and office have a structure in place for managing the orders and billing process. Errors can be costly and new employees are expected to listen carefully, follow instructions and ask questions to clarify in order to avoid problems.

How much mathematics are used in various occupations in Human Services?

What kind and in what ways?

Allow students to share.
What are employers looking for?

They want their employees to be able to:
› communicate their thoughts with other employees
› reason
› work with technical equipment

According to Mathguide.com, employers are looking for three basic traits. They want their employees to be able to:
• communicate their thoughts with other employees
• reason
• work with technical equipment

How can math deal with developing reason and working with technical equipment?

How can math affect communication? Effectively using math can increase the ability to speak and write more plainly. Language, at least the type needed for work, tends to be organized and mathematical ability helps with that process.
Have you worked in a Human Services-related occupation?

What mathematical applications were used?

Allow students to share.
What can you tell from this picture?

How does it relate to occupations in Human Services?

What clues do you get from this slide?

Allow students to share.
What does this image show?

What is it used for?

How can this be used in the field of Early Childhood Development and Services?

Allow students to share.
What is happening in this slide? What mathematical applications could be used in this occupation?

As a therapist/counselor, why is it important to possess good mathematics skills?

Allow students to share.

Teacher note: It is called a bulk bottle unscrambler. They are a necessity in an age where most companies receive their bottles in bulk. Bottle unscramblers have a small footprint with high speed capabilities and options such as ionized air cleaning of bottles before they are filled with product.
What type of technology is used for mathematical applications at the workplace?

Allow students to share.
As a cosmetologist, what do you need to know about use and application of mathematics at the workplace?

Allow students to share.
Distribute **Career and Mathematical Application Investigation** (see All Lesson Attachments tab) and introduce the project.
The following video can be viewed at the end of the Guided Practice section of this lesson.
Click on image to view video:

We Use Math - Introduction
Meet professionals from a number of exciting fields who use mathematics in their jobs every day.
https://youtu.be/aYlv4jggQJc
References and Resources

Images:
- All photos obtained through a license with Shutterstock.com.

Websites:
- Barrett, Rose and Lee, Inc. The Essential Skill of Numeracy
- Mathematical Association of America
  Research Sampler: Examining how mathematics is used in the workplace
- Math for Careers
  How you use Math at work:
  http://www.maths.org/page/56.html
- Why Must I Learn Math?
  Mathematics is no longer just a subject taken by the elite. Now it has rightfully become a staple in our educational systems... even though it is not appreciated by many people until it is needed.
  http://www.mathguide.com/issues/whymath.html#5

YouTube™:
- We Use Math - Introduction
  Meet professionals from a number of exciting fields who use mathematics in their jobs every day.
  https://youtube/cYI+4ggOJK