

ATC Program Essential Skills Package

Baking and Pastry Arts



Instructional Methods: Classroom Lectures, Practical Lab Activities

Course Format: Classroom: Individual and group work
Lab: Individual and group work (practical application)

Rationale:

Workplace Education Manitoba has listed nine Essential Skills needed to be successful in any workplace. All nine Essential Skills are used in different combinations, in different applications, in every occupation. They are the foundational skills you use to carry out your work tasks and are the building blocks you use to learn new ones. The importance of, and need for, employees to have appropriate levels of workplace Essential Skills is clear and strong.

What specifically are the Essential Skills needed in the workplace?

To help answer this question, the Federal Government, since 1994, has surveyed more than 3,000 Canadians in workplaces in all sectors and all types and sizes of organizations. All participants were asked what workplace Essential Skills they felt were needed in order for workers to be most effective, efficient and productive.

The result has been the identification of the following nine workplace Essential Skills:

1. [Reading](#)
2. [Writing](#)
3. [Numeracy](#)
4. [Document Use](#)
5. [Oral Communication](#)
6. [Working With Others](#)
7. [Thinking](#)
8. [Digital Technology](#)
9. [Continuous Learning](#)

To help students be successful in their training, ATC has developed a package focused specifically on these Essential Skills and how they apply to the program of **Pastry Chef**. The purpose of this package is not to dissuade students from attending the program, but to help them become successful by informing them of the skills required. We highly encourage all students to take some time to work through the package and become informed of the program requirements.

Material in this document has been developed around the Workplace Education Manitoba 9 Essential Skills which can be found here: <http://www.wem.mb.ca/>

Reading

- Read instructions about operating appliances and equipment, such as dishwashers, deep fryers and ovens.
- Read instructions and other text on product labels. For example, they read instructions for storing and mixing concentrated color and flavor extracts.
- Read instructions in recipes, bakers' sheets and production sheets. For example, they follow instructions in production sheets and recipes to create products such as bread, cookies and specialty Christmas logs. In addition, they read recipes to determine the number and complexity of steps for baked goods.
- Read about taste and flavor trends, blending techniques, decorating tips and industry highlights in trade publications such as Baker's Journal. They use the information to enhance their baking knowledge. For example, they may read about the food science involved in new flavor blends and suggestions for refreshing fresh fruit desserts.
- Read food handling and food importing regulations, acts and codes. For example, they read provincial food handling regulations to determine cleaning requirements for working surfaces. Self-employed and head bakers may read federal guidelines for importing food products commercially to determine which acts and regulations apply to the food and what labeling and declaration procedures to follow

Writing

- Write orders for ingredients and kitchen supplies.
- Write a summary after a catered event describing the range of services provided, prices and dates.
- Write brief notes in production logs, text entries in forms and comments on recipes, bake orders and production sheets. For example, they write notes on bulletin boards about low inventory and late supply deliveries. They explain changes to ingredients and decorations for baked goods on recipes and production sheets. They write instructions for preparing, baking and decorating baked goods on recipes, bake orders and productions sheets.

Numeracy

- Measure ingredients according to menu specifications and the number of people to be served.
- Compare quantities of ingredients used in various recipes by converting between metric and imperial measurements.
- Prepare bills for catering functions, including taxes.
- Read and write, count, round off, add or subtract, multiply or divide whole numbers.
For example, calculating material and supply quantities and ingredient amounts; counting baked goods and supplies.
- Read and write, add or subtract fractions, multiply or divide by a fraction, multiply or divide fractions.

For example, reading, writing and calculating dry and liquid ingredients in fractions of cups; calculating time intervals in fractions of hours.

- Read and write, round off, add or subtract decimals, multiply or divide by a decimal, multiply or divide decimals.

For example, reading, writing and calculating weights of ingredients grams and kilograms; completing calculations using dollar amounts.

- Read and write percent's, calculate the percent one number is of another, calculate a percent of a number.

For example, calculating taxes; calculating ingredient amounts specified as percentages; calculating markups.

- Convert between fractions and decimals or percentages.

For example, converting ingredient amounts expressed as fractions to percentages of mix yield.

- Solve problems by constructing and solving equations with one unknown.

For example, constructing equations to calculate ingredient amounts for adjusted yields in recipes.

- Perform measurement conversions.

For example, converting ounces and pounds to grams and kilograms; converting teaspoons and cups to fluid ounces; converting fluid ounces to liters and milliliters.

- Calculate averages.

Calculate rates other than percentages.

For example, calculating average production times for different baked goods; calculating average daily, weekly and seasonal sales for baked goods; establishing work rates such as cookies baked and petit fours decorated per hour.

Example 1

1. A recipe calls for $\frac{1}{8}$ tablespoon of baking powder per serving. How many tablespoons of baking powder are needed to make 2 servings?
2. A recipe calls for $\frac{4}{12}$ pound of almonds per serving. How many pounds of almonds are needed to make 24 servings?
3. There are 8 pieces of candy in a candy dish. If $\frac{1}{3}$ are candy bars, how many candy bars are there?
4. A recipe calls for $\frac{3}{10}$ tablespoon of food coloring per serving. How many tablespoons of food coloring are needed to make 5 servings?

Document Use

- Scan product labels and warning signs. For example, they locate color codes and names of dyes and concentration levels of flavor extracts on product labels. They observe hazard warnings on equipment and container labels.
- Locate data in recipes, production sheets; bake orders and quality control forms. For examples, they locate baking quantities, product sizes, decorating details, due dates and customers' names in bake orders. They locate ingredients and quantities in recipes and production sheets.
- Locate data in lists and tables. For example, they locate colors and mixing ratios on color sheets. They locate baking data such as product types and quantities in baking and production schedules. They may also locate sales data in daily, weekly and monthly sales sheets.

Examples

- Create recipes. For example, bakers create recipes that list ingredients and provide instructions to prepare, cook, assemble and decorate bakery items.

Peanut Butter Rice Krispies

Sweetened condensed milk	2/3 cup	150 mL
Smooth Peanut Butter	¼ cup	60 mL
Corn syrup, light or dark	¼ cup	60 mL
Brown sugar, packed	½ cup	125 mL
Crisp rice cereal	4 cups	1L

ICING

Semi/sweet chocolate chips	½ cup	125 mL
Smooth peanut butter	2 tbsp	30 mL

Heat first 4 ingredients in large saucepan, stirring constantly, until well mixed and thickened. Remove from heat.

Add rice cereal, stirring to coat. Pack into greased 9 x 9 inch (22 x 22 cm) pan. Cool

Icing: Melt chocolate chips and peanut butter over low heat, stirring often. Spread over squares. Cuts into 36 squares.

Example 1

1. How many squares does this recipe make?
2. If you double the recipe, how many chocolate chips will you add?
3. If you double the recipe, how much peanut butter will you need?

Oral Communication

- Discuss baking order details with customers. For example, they may ask customers about cake decorating specifications and delivery dates. They provide advice and present different choices for types of bakery goods, ingredients and decorations.
- Discuss current work assignments and products with class-mates. For example, throughout their class they speak with other bakers about current assignments to coordinate the use of equipment and space and to integrate baking tasks. They may discuss new products, health and safety regulations, work procedures and bakery operations during class.
- Make product suggestions and participate in product development meetings. Bakers may offer suggestions and give opinions about types, flavors and design features of baked goods. They may discuss the development of products for a variety of settings and organizations.

Working With Others

- Coordinate the sharing of work space and equipment with co-workers.
- Offer suggestions for improving work processes during discussion groups.
- Inform or demonstrate how to perform tasks to other workers.
- Orient new class-mates.
- Bakers work independently to prepare, bake, assemble and decorate baked goods. They coordinate and integrate tasks with other bakers in order to share resources such as ovens and workspaces.

Thinking

- Decide what supplies to order and when.
- Make adjustments to recipes, such as adding another ingredient and remixing, when the food does not turn out as expected.
- Refer to various cookbooks and trade magazines to find information on food preparation and presentation.
- Find that baked goods do not turn out as expected due to environmental conditions and substandard ingredients. They may adjust batch sizes, change ingredients and use alternate equipment. For example, bakers making bread in hot weather may reduce the amount of yeast to slow rising times.
- Are unable to complete orders due to malfunctioning equipment. For example, bakers find that overheating ovens are burning baked goods. They adjust oven temperatures and may use oven thermometers to obtain correct temperature settings. They call appliance repairers to fix the equipment. They adjust their tasks to minimize the effect on daily productivity.

Digital Technology

May use the Internet. For example, they may browse websites devoted to cooking and baking topics. They search for information about products and equipment at appropriate website.

Continuous Learning

- Read trade books and magazines, search the Internet and watch cooking programs.
- Learn by watching co-workers on the job.
- Learn by trying new recipes.

- Bakers need to learn continuously to keep abreast of new food and taste trends, to research new products and to improve their baking techniques. They learn through their daily work experiences, by observing other bakers and by reading cookbooks and industry publications such as Bakers' Journal. In addition, they may attend baking seminars and courses offered by colleges and specialty baking and cooking schools. For example, they may participate in training seminars about flavor blending and using organic products

Answer Key to Example Questions

Numeracy, Example 1

1. *What is the problem asking?* Amount of baking powder needed to make 2 servings.
What information do you have? $\frac{1}{8}$ tablespoon of baking powder are needed per

serving. 2 servings are needed.

What operation do you use? The key word **per** implies either multiplication or division. Since we are given the number of servings and the amount in each serving, this implies multiplication.

Equation: $1/8 \times 2 = 1/4$

2. *What is the problem asking?* Amount of almond needed to make 24 servings.
What information do you have? $4/12$ pound of almonds are needed per serving. 24 servings are needed.

What operation do you use? The key word **per** implies either multiplication or division. Since we are given the number of servings and the amount in each serving, this implies multiplication.

Equation: $4/12 \times 24 = 8$

3. *What is the problem asking?* Number of candy bars
What information do you have? 1 out of every 3 pieces of candy (or $1/3$) **of** the 8 pieces of candy are candy bars.

What operation do you use? We are looking for a fraction **of** a group which means multiplication.

Equation: $8 \times 1/3 = 2 \frac{2}{3}$

4. *What is the problem asking?* Amount of baking powder needed to make 2 servings.

What information do you have? $1/8$ tablespoon of baking powder are needed per serving. 2 servings are needed.

What operation do you use? The key word **per** implies either multiplication or division. Since we are given the number of servings and the amount in each serving, this implies multiplication.

Equation: $1/8 \times 2 = 1/4$

Document Use, Example 1

1. 36
2. 1 Cup
3. $3 \frac{1}{2}$ Cup

References

<http://www.mathscore.com/math/practice/Basic%20Fraction%20Word%20Problems%2002/>

<http://www10.hrsdc.gc.ca/english/ShowProfile.aspx?v=297>