

Contextualized Learning Activities (CLAs)

For the “other required credits” in the bundle of credits, students in a Specialist High Skills Major program must complete learning activities that are contextualized to the knowledge and skills relevant to the economic sector of the SHSM. Contextualized learning activities (CLAs) address curriculum expectations in these courses.

Contact Information		
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Development date	July 5, 2010	
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Specialist High Skills Major	<i>Landscape & Horticulture</i>
Course code and course title	MEL3EI – Grade 11 Mathematics for Workplace
Name of contextualized learning activity/activities	<i>Flowers’N Trees: Owning a Business</i>
Brief description of contextualized learning activity/activities	Students will apply their knowledge of unit price and mark up to determine prices of various items found in a nursery. They will apply their knowledge of discounted prices and after-tax costs, create time cards for employees, and make decisions regarding the purchase of a large scale item when starting a business in the Landscape and Horticulture sector.
Duration	Approximately 8 76-minute periods (or 10 hours). Part A: Determining Costs of Items (76 minutes) Part B: Determining the Costs of Hanging Baskets & Potted Flower Arrangements (152 minutes – includes a Summative Assessment) Part C: Paying Your Employees (152 minutes – includes a Summative Assessment) Part D: Making A Major Purchase (76 minutes) Part E: Calculating Discounts (152 minutes – includes a Summative Assessment)

Overall expectations	<p>Earning & Purchasing: The student will: <i>1. interpret information about different types of remuneration, and solve problems and make decisions involving different remuneration methods;</i> <i>2. demonstrate an understanding of payroll deductions and their impact on purchasing power;</i> <i>3. demonstrate an understanding of the factors and methods involved in making and justifying informed purchasing decisions.</i></p> <p>Saving, Investing, & Borrowing The student will: <i>3. interpret information about different ways of borrowing and their associated costs, and make and justify informed borrowing decisions.</i></p>
Specific expectations	<p>Earning & Purchasing: The student will: <i>A 1.1 gather, interpret, and compare information about the components of total earnings</i> <i>A 2.3 describe the relationship between gross pay, net pay, and payroll deductions, and estimate net pay in various situations</i> <i>A 3.1 identify and describe various incentives in making purchasing decisions (e.g., 20% off)</i> <i>A 3.2 estimate the sale price before taxes when making a purchase</i> <i>A 3.3 describe and compare a variety of strategies for estimating sales tax, and use a chosen strategy to estimate the after-tax cost of common items</i> <i>A 3.4 calculate discounts, sale prices, and after-tax costs, using technology</i> <i>A 3.6 estimate the change from an amount offered to pay a charge</i> <i>A 3.8 compare the unit prices of related items to help determine the best buy</i></p> <p>Saving, Investing, & Borrowing The student will: <i>B 3.2 gather, interpret, and compare information describing the features and conditions of various personal loans</i> <i>B 3.7 make and justify a decision to borrow, using various criteria under various circumstances (e.g., wanting to set up a business)</i></p>
Essential Skills and work habits	<ul style="list-style-type: none"> • Reading Text <ul style="list-style-type: none"> ○ Understanding text in the form of sentences or paragraphs. • Numeracy <ul style="list-style-type: none"> ○ <u>Money Math:</u> ○ <u>Scheduling or Budgeting and Accounting:</u> ○ <u>Numerical Estimation:</u> • Thinking Skills <ul style="list-style-type: none"> ○ <u>Decision Making</u> ○ <u>Problem Solving</u> . • Working Independently • Initiative • Self-advocacy • Customer Service • Entrepreneurship

Instructional/Assessment Strategies

Teacher's notes

- It is assumed that teachers have taught the lessons on mark-up, discount, after-tax costs, gross pay, net pay, deductions, and ways to pay for larger items. This activity is a way to put those expectations together in the context of owning a Nursery.
- The activity sheets should be photocopied for each student.
- The Math teacher should communicate with the Green Industries teacher on a regular basis.
- The teacher should become familiar with the use of mathematics in the Green Industries courses.
- Providing applicable real life examples from the fields of landscaping and horticulture can be beneficial for student learning.
- Constant diagnostic and formative feedback is important for consistent learning and student development (i.e. through use of student worksheets).
- If the class is a split group (not all SHSM students) it may be advantageous to group the SHSM students together, however, this CLA has benefits for all MEL students, not just those enrolled in the SHSM program.

Context

This CLA is designed for students that plan on entering the workplace in the Landscape & Horticulture sector.

Strategies

- Socratic Review: Teacher can begin each part of the activity with a reminder of pertinent definitions on the board, or a small example of the topic of the day.
- Modelling: Each handout has an example to show the students what is required for their response.
- Observation & Conferencing: As students work to complete the activity, teachers should discuss answers and point out where students may need to double check their work as form of formative feedback and assessment.
- Pen & Pencil Assessment: Students can demonstrate their learning with the summative assessments as the ends of section B, C, and E. Section D can be used as an optional summative assessment.

Assessment and Evaluation of Student Achievement

Strategies/Tasks	Purpose
1. Determining Costs of Items	Formative Assessment (give constant feedback on Student Progress)
2. Determining the Costs of Hanging Baskets & Potted Flower Arrangements	Formative Assessment (give constant feedback on Student Progress) Summative Assessment
3. Paying Your Employees	Formative Assessment (give constant feedback on Student Progress) Summative Assessment
4. Making A Major Purchase	Formative Assessment (give constant feedback on Student Progress)
5. Calculating Discounts	Formative Assessment (give constant feedback on Student Progress) Summative Assessment
Assessment tools See attached files: 1.1 <i>Owning a Nursery</i> 1.2 <i>Owning a Nursery Teacher Solutions</i>	

Additional Notes/Comments/Explanations

Pre-activity work can include worksheets that mimic the activity and can include topics covered here, especially:

- Percent mark up
- Discounts (% and fractional)
- After tax costs
- Estimating & Calculating Change
- Layaway, Rent-to-Own, Monthly Instalments, No Interest/No Payments

Resources

Human resources

Teacher, and possibly a classroom EA

Print

The provided worksheets in the accompanying file:

- 1.1 *Owning a Nursery*

Accommodations

- Individual Education Plans (IEP) should be followed at all times. Be sure to consult the SERT for additional information and suggestions
- Additional time may be needed for formative and summative assignments
- The activities and lessons outlined in this CLA allow for flexibility in the delivery of the material. Alternating teaching strategies (including chunking) can help students who are not progressing at the appropriate level
- Font can be increased for those students that have vision problems
- Use audio aids if needed

List of Attachments**1.1 Owing a Nursery****1.2 Owing a Nursery Teacher Solutions**