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| About this Lesson |
| During this lesson, students will determine the costs needed to run a small business, a restaurant, and determine how many meals they will need to sell to earn a profit. |

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| **Grade Level** | **Course(s)/subject(s)** | **Learning Goal(s)** | **Suggested****Timing** |
| 7 | Mathematics, grades 1­–8 (2005)Language Arts (2006) | At the end of this lesson, students will:* create a budget for a small business, such as a restaurant.In doing so they will need to use mathematical skills, such as using integers, and solve multi-step problems.
 | 75 minutes |

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| Curriculum Links |
| Mathematics, grades 1–8 (2005)Number Sense and Numeration * identify and compare integers found in real-life contexts

Language Arts (2006)Media Literacy* produce a variety of media texts of some technical complexity for specific purposes and audiences, using appropriate forms, conventions, and technique
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| Inquiry Question |
| What financial knowledge and mathematical skills does a small business need in order to be successful? |

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| Materials List |
| * iPads/computers/calculators
* Cheat sheet for students to look at for restaurant needs
* Restaurant Plan Sample (Appendix A)
* Restaurant Planner (Appendix B)
* Restaurant Planner cont’d (Appendix C)
* Business Plan Reflection (Appendix D)
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| **Timing**(Mins.) | **Lesson Sequence** | **Assessment for and as Learning Opportunities** (self/peer/teacher) |
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| MINDS ON |
| 5-10 minutes | WHOLE CLASSThink/Pair/ShareWrite the following questions on the board for the students to observe:1. What are some examples of small businesses?
2. What things does a small business need to have to make money?
3. What costs does a small business have?
4. Discuss the following terms: Profit, break-even, inputs. Write the terms on the board/post on the word wall/copy or handout.

Explain to the students that today we will be designing a plan for a small business, a restaurant. We will be looking at each of the input costs needed to run a restaurant, determine the prices of the meals we will be selling, and calculate how many meals the restaurant would need to sell to earn a profit each day. |  |
|  | Context for Learning* Students must have a basic understanding of the terms profit, break-even and inputs.
* Students should have an understanding of division.
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| **Timing**(Mins.) | **Lesson Sequence** | **Assessment for and as Learning Opportunities** (self/peer/teacher) |
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| ACTION |
| 50–60 minutes | WHOLE CLASSThink of the kind of restaurant that you would like to have (Chinese, French, etc.). Your restaurant must have at least two dishes.List the inputs (things that you would need in order to run a restaurant) in your notebooks using your iPad/cellphone/ computer (serving staff, rental space, food for the three dishes, power, etc.). Using computers/cellphones or the provided cheat sheet, have the students research a number of **inputs** needed to start a restaurant. Inputs are the items or people that are needed to run a restaurant. (For this example, you can assume that the cost of meal inputs are free.) Make sure you calculate the cost/day for each of the inputs. Some inputs (e.g., rent) will be needed to be calculated as a daily cost by dividing the rent (e.g., monthly) by the number of working days in that period (e.g., 30 days in a month, assuming the restaurant is open every day, or 26 days in a month, assuming the restaurant is closed one day a week). For one-time costs (plates, tables, etc.) tell the students to assume that these will be paid off in a year. For example, if you need plates for your restaurant, find the price of a plate, multiply the cost by the number needed, and divide that by the number of days *worked* in a year (365). Again using computers/cellphones or the provided cheat sheet, have the students determine the cost for each input (e.g., rental space, minimum wage for workers).  |  |
|  | Have the students create a menu for the restaurant. They should choose four to five meals for the restaurant. Have the students look up the cost of the meals at restaurants around Toronto. Use these prices in the menu.(Alternative much more advanced option: Students determine their own meal prices by creating a recipe and calculating the total cost of inputs including ingredients. Using the information the students found, have them calculate the price for each meal.)Determine how many meals would need to be sold in order to make a profit per day (advanced: and per year). |  |

| **Timing**(Mins.) | **Lesson Sequence** | **Assessment for and as Learning Opportunities** (self/peer/teacher) |
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| CONSOLIDATION/DEBRIEF |
| 5–10 minutes | WHOLE CLASSDiscuss the following questions: 1. Would your restaurant be profitable given the costs?
2. What changes might you need to make to earn more money?
3. What might be the consequences of those changes?
4. Given the costs involved in running a restaurant, would you like to run a business like this? Give reasons for your examples.
 | Business Plan Reflection (Appendix D) |

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| Restaurant Planner (Sample) |
| Restaurant Type: \_\_French\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Days Open: \_\_\_30\_\_\_\_Days/Month

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| --- | --- | --- | --- |
| Input Type | $ Cost/ Input/Day | Number Needed | Total $ Cost of Input/Day (Multiply by number needed) |
| Rent ($2,500/month) | $83 | 1 | $83 |
| Wait Staff | $15 | 10 | $150 |
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| **Daily Total Cost of Inputs** |  |  | $233 |

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**APPENDIX A**

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| Restaurant Planner |
| Restaurant Type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Days Open: \_\_\_\_\_\_\_\_\_\_Days/Month

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| --- | --- | --- | --- |
| Input Type | $ Cost/ Input/Day | Number Needed | Total $ Cost of Input(Multiply by number needed) |
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| **Daily Total Cost of Inputs** |  |  |  |

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**APPENDIX B**

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| Restaurant Planner (cont’d.) |
| How many meals per day would it take to be earning money each day? What combinations of meals would it take to be earning money each day?

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| Meals | Cost of Meals |
| 1. |  |
| 2. |  |
| 3. |  |
| 4. |  |
| 5. |  |
| 6. |  |
| 7. |  |

Meal Combinations

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| --- | --- | --- | --- |
| Meal Name | Cost per Meal | Number of Meals Sold | Total Earnings per Meal |
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| Total Daily Earnings |  |

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| Profit = Income – Cost | Daily Profit | Yearly Profit |
| Total Income |  |  |
| Total Cost |  |  |
| Profit |  |  |

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**APPENDIX C**

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| Business Plan Reflection |
| 1. How much money would you need to make to break-even (make back the money you invested, spent to make the business function)?
2. What changes could you make to your business to make more money?
3. What might be the consequences of making those changes to earn more money?
4. Given the costs involved in running a restaurant, would you like to run a business like this? Give reasons for your examples.
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**APPENDIX D**