Designing and Marketing a PRODUCT

A Cross-Curricular Learning Activity
for Grade 8 Mathematics,
Applied Design, Skills and Technologies, and
English Language Arts

BRITISH COLUMBIA | Ministry of Education

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The new BC Curriculum reflects a shift towards a concept-based, competency-driven curriculum. The new curriculum is less prescriptive than before, allowing educators to be creative and innovative in their design of learning experiences, and offering flexibility and choice for teachers and students.

The new curriculum promotes higher-order thinking and deeper learning centred on the 'Big Ideas' in each discipline. Core competencies related to Thinking, Communication, and Personal and Social Responsibility are explicit, and First Peoples' Principles of Learning are integrated throughout.

This resource is a lesson plan designed to address the learning standards and core competencies outlined in the new BC Curriculum for Grade 8 Mathematics, Applied Design, Skills and Technologies, and English Language Arts. It was developed by Open School BC, Ministry of Education in partnership with the provincial Curriculum and Assessment team and BC teachers.

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Big Ideas

Mathematics 8

Number represents, describes, and compares the quantities of ratios, rates, and percents.

Applied Design, Skills and Technologies 8

Design can be responsive to identified needs.

English Language Arts 8

Questioning what we hear, read, and view contributes to our ability to be educated and engaged citizens.

Rationale

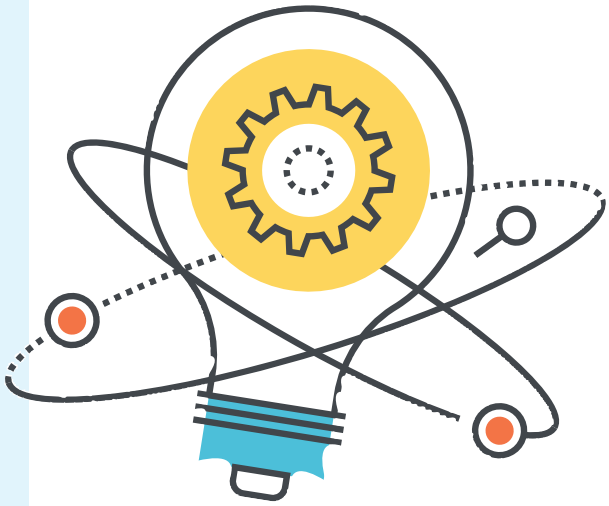
This learning activity shows an example of cross-curricular teaching in which students have an opportunity to be innovators and constructors of their own learning. In focusing on designing and marketing a product, this learning activity mirrors the interdisciplinary nature of the world: to be successful in business it is important to have creative ideas, good communication skills, and a solid understanding of financial matters. Therefore, it felt natural and realistic to combine Mathematics, Applied Design, Skills and Technologies, and English Language Arts in this activity.

While teaching proportional reasoning has long been a part of BC's curriculum, this learning activity is intended to take that skill beyond the level of knowledge by giving students an opportunity to apply proportional reasoning and demonstrate a deeper understanding. By providing students with opportunities to make choices, to reflect on their own values, to innovate, and to create, this activity will foster student engagement and emphasize the relevance of mathematical literacy. This will make a difference in students' confidence and enjoyment of math, and will help them to retain these skills and use them in their lives.

This document comprises a series of activities that teachers can choose from, add to, adapt, or incorporate into other lessons. All of the activities are intended to be suggested approaches that can be tailored by teachers according to the needs of their students.

Core Competencies

This learning activity applies many facets of each of the core competencies. We have chosen to highlight several facets of the three core competencies in our assessment plan, but you may choose other facets depending on your students' needs.



Communication:
Collaborate to plan, carry out, and review constructions and activities

Creative Thinking:
Developing ideas

Positive personal and cultural identity:
Personal values and choices

Other facets of the core competencies could include:

- **Communication:** Connect and engage with others to share and develop ideas
- **Communication:** Acquire, interpret, and present information
- **Creative Thinking:** Novelty and value (innovation)
- **Creative Thinking:** Generating ideas
- **Critical Thinking:** Develop and design

Curricular Connections

Mathematics 8

Curricular Competencies

- Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
- Use tools or technology to explore and create patterns and relationships, and test conjectures
- Connect mathematical concepts to each other and to other areas and personal interests

Content

- Numerical proportional reasoning (rates, ratio, proportions, and percent)
- Financial literacy — best buys

Applied Design, Skills and Technologies 8

Curricular Competencies

- Generate potential ideas
- Add to others' ideas
- Screen ideas against criteria and constraints
- Evaluate personal, social, and environmental impacts and ethical considerations
- Choose an idea to pursue

Content

- Development of a product or service, including its features and benefits
- Forms of advertising and marketing that can influence a potential customer or buyer

English Language Arts 8

Curricular Competencies

- Recognize and appreciate how different features, forms, and genres of texts reflect different purposes, audiences, and messages
- Use writing and design processes to plan, develop, and create engaging and meaningful literary and informational texts for a variety of purposes and audiences

Content

- Elements of visual/graphic texts
- Language features, structures, and conventions

Optional:

- Features of oral language
- Presentation techniques

Learning Goals

These learning goals are a combination of Big Ideas, Curricular Competencies, and Content, and Core Competencies. You may choose to use these goals for assessment.

- Calculate unit prices and best buys using proportional reasoning and ratios.
- Use appropriate technology (a spreadsheet program) to support unit price calculations. (optional)
- Develop a product and decide on its price by applying creative design, calculating unit price, and considering personal values.
- Create an advertisement for a product that uses text, graphics, and/or oral presentation for the purpose of influencing potential buyers.
- Work collaboratively with peers to generate, develop, refine, and implement ideas for a product. design and marketing.

Prior Knowledge

(Know, Do, Understand)

Before engaging in this learning activity, students will need to know/do/understand the following concepts:

- How to make monetary calculations with decimal notation (e.g., 50¢ + $1.25) (Do)
- Monetary value (e.g., 50¢ is ¼ or 25% of $2.00) (Understand)
- The purpose of budgeting to inform decision making (Understand)
- How to multiply with fractions (e.g., $1.19/100 grams x 350 grams= $4.17) (Understand)
- How to use persuasive language or images (Do)
- Age-appropriate spelling, grammar, conventions (Know)
- How the quality of a product influences its appeal (Understand)
- How to give and receive feedback from peers, teachers, and experts (Do)

Entry Points

Activity 1: Student Inquiry Discussion

Pose this question to students: "You're going to be designing and marketing a product for sale. What are some questions you'd need to think about in order to decide what to make?"

Option: Give each student a sticky note and have them write down their thoughts and stick them on the board.

Questions they might come up with include:

- What am I interested in making?
- How much does it cost to make the product?
- Where can I get the materials?
- What kinds of products do people want?
- What values or personal preferences do people consider when choosing products?

In debriefing these questions with students, you can explore some of this learning activity's essential questions.

It may also be useful to mention that throughout this activity, students will have to sometimes think like a producer and at other times think like a consumer. When creating and selling their products, they will need to think not only about how to make the best product, but what consumer needs and expectations are. Throughout the lesson, we will be asking students to switch between these various perspectives. You may want to remind students of which perspective(s) they should be adopting at each stage of the activity.

During the entry points, you can introduce some of the essential questions for this learning activity:

- How do products get priced? How does a producer decide how much their product should cost?
- Why is unit price important for making spending decisions?
- What decisions and actions go into making a product?
- What makes a product sell?
- What is "profit" (versus cost or revenue) and why is it important?
- What products align with your values and interests?

Activity 2: Hear from an Expert

Have a local entrepreneur come in and talk about their experience designing and marketing a product, or watch an episode of Junior Dragon's Den (e.g., Dan and Mike's Ice Cream or Screamin Brothers Frozen Dairy Treats). This activity should provide an additional sense of relevance by showing an example that students can relate to (a young person and/or a local person).

Learning Activity

1. Setting the Stage

This introduction addresses the "know" level for the math content.

Introducing Unit Price and Best Buys

Show students examples of unit price in different forms, like cost per item, per volume, per weight. Without explaining how to do it, have students devise their own ways of figuring out the best buy by comparing similar products with different unit costs. This can be done as a whole class, in pairs, or individually. You can use the prices of real products found in your community, or us those in Appendix A. To ensure understanding, review each example as a class.

Thinking about Product Costs

To get the class thinking about what goes into making a product, show them a common, simply designed product (e.g., a table, a cushion, a piece of jewelry or clothing) and ask: What must be considered when deciding how much this product costs?

Examples of questions students could explore:

- What goes into making a product?
- How is the cost of making a product determined?
- How can the cost of making a product be reduced?
- How is the selling price of a product determined?
- How much are consumers willing to pay for the product?

Option: To get students thinking, you could show a short video about how something is made, such as How It's Made Lego.

With these questions, it's not important for students to actually know how the product was made or priced, but rather for them to think about what considerations might go into the process of deciding its cost.

This is also a good time to introduce the idea of demand for products and target markets. Demand describes a consumer's desire and willingness to pay for a specific product. A target market is a particular group of consumers at which a product is aimed.

Successful products meet a demand in their target market. To further explore the Big Idea "Design can be responsive to identified needs," you could give students some examples of products designed to meet specific needs, such as the introduction of laptop computers to meet a need for people to be able to bring their computers to places, rather than just having desktops. Another example would be the creation of driverless cars to meet the needs of an increasingly busy and mobile society.

In discussing selling price, you could introduce the concept of optimal pricing. The optimal price of your product is the one that will maximize your profit. If a product is priced too low, consumers may think it's "cheap." If it's priced too high, nobody will buy it. So setting a price is not just about how much it costs to make a product, but also about how much consumers will pay and how the product compares to other similar products.

2. Designing a Product

We have provided several options for this activity. Each of these options will help students to learn about product design and unit price by designing a product and calculating the cost to make it.

Before beginning any of these activities, you may want to develop assessment categories with your students. The value of this activity isn't just about making a useful rubric; it's also about increasing student buy-in by involving them in their own learning, as well as getting students thinking about their design goals and what it means to do quality work. This rubric can be used as a student self-assessment, a teacher assessment, or a joint assessment that both student and teacher carry out together through a conversation.

If students are not already familiar with rubrics, you can model how the categories they suggest can be used to create a rubric (for sample rubrics, see Appendix D). In this activity, the rubric is intended to assess outcomes related to Applied Design, Skills and Technologies only, as Mathematics and English Language Arts outcomes will be assessed separately.

Ask students to consider the question, "How do you know what makes a successful product?" They may come up with examples such as:

- Creativity
- Product looks and feels appealing
- Product meets a need in its target market

You can choose the best answers and use them to co-create a rubric with students. The assessment categories in the rubric will likely depend on which product design option the class is doing. You can choose from the following options:

1. Makerfaire: Students design and make unique products using simple materials
2. Imagining a Product: Students design (but do not actually create) products and conduct research to find real prices for materials
3. Cupcake Design: Students design (but do not make) cupcakes using the price list included with this learning activity

Option 1: Makerfaire

In this activity, students will design and create a product using simple materials. This will allow students to play with their ideas in a hands-on way that will stimulate creativity and innovation.

To prepare for this activity, gather an array of materials available at the school or from students' homes, such as art supplies or found materials (e.g., office supplies, recycled materials, coloured string, popsicle sticks, plastic beads, coloured paper, glue, tape). For ideas for materials, you might want to look at pictures of "up-cycled" crafts online. Assign each material a unit cost (e.g., $5 for a handful of beads, $2 for a metre of tape).

Explain to students that these are the materials available to them for designing a product. When they have designed and created their product, they will have an opportunity to sell it (for pretend money) at a "Makerfaire." For more information and some short videos about makerfaires, check out the Makerfaire website.

Provide students with some reasonable constraints for their products, such as:

- You have up to $50 to spend on materials
- You have to include five components (e.g., string, beads)

Divide students into groups of two to four and allow them time to design their products, creating a sketch and brief description of their ideas. Once they are ready, give students some pretend money (it could be paper money, tokens, or even something like paper clips or toothpicks) and have students "buy" the materials using the money they've been allocated. Students will be required to make decisions about how much of each material they can afford to buy, and then enter the unit cost and amount of each material they purchase into the table (or spreadsheet) in Appendix E.

Allow students time to create their products. They may need to return, exchange, or purchase additional items from the "store" as they refine and perfect their design.

Option 2: Imagining a Product

In this option, students can design any product they want, but they will not actually be purchasing the supplies or making the product. They will conduct research to find prices for their materials, and will design a product that fits within the given constraints.

Before beginning this option, do a class brainstorm about products that students could realistically design and sell. To model the activity students are about to begin, choose one example as a class and have the students create a materials list. Have them discuss what decisions would be required regarding materials, labour, and design.

Students should now be ready to start thinking about their own products. Have them divide into small groups of two to four for this activity. You'll want them to create a product that is complex enough to involve a cost calculation using unit costs, but not so complex that it will be too tricky to calculate the costs. In order to achieve this balance, you probably want to give them some constraints. For example:

- You have up to $50 to spend on materials
- You have to include five components (e.g., string, beads)
- You need to know the unit price for each component

If this activity still feels too open-ended, teachers can limit the products to a certain genre, such as arts and crafts, baking, or clothing.

Give students enough time to:

- decide what they are going to create
- create a drawing or description of their product
- create a detailed materials list

Next, students will need to research the prices of their materials. Students can find the prices for their materials in several ways:

Access the Internet

- Students can use the Internet at home or in the classroom to look up prices of their materials online (using online sale sites or retail store websites).
- If students have Internet access, encourage them to shop around and identify the "best buy" for their materials.
- If the school has limited Internet access for students, you could do online research to create price lists based on the students' lists of materials.

Bring store flyers to class

- Bring bring flyers from appropriate stores to class. (In this case, additional constraints will be placed on the materials students can use in their product design.)

Visit a local store

- Students can visit a nearby store to find actual costs for their products.

Whatever you decide, it is best to use actual, current prices, as this will emphasize that calculating unit cost is real-world skill, not just something to do in math class.

When selecting their materials, it may be challenging for students to decide on the amount of each material they need without having the materials in front of them. For example, they might not know how much 100 grams of candy is. In this case, you could provide students with opportunities to experiment in order to better understand unit costs. For example, have the students measure out 100 grams of a granular product to see how much it is, and then use estimation and multiplication to determine the amount they need. Or, if possible, provide students with an example of a material similar to the one they plan to use, such as a 100-gram jar of sprinkles or a 200-metre ball of yarn. Looking at pictures of the materials online may also help them visualize sizes and amounts. When they do decide how much of each material to buy, they will likely need to use a reasonable estimation of the amount rather than try to calculate costs exactly.

Have the students choose their materials and fill out the costs using the table (or a spreadsheet) in Appendix E.

Option 3: Cupcake Design

This activity uses the list of ingredients in Appendix B to have students design their own unique cupcakes. Students will not actually be making the cupcakes and will not need to research costs, as the costs are provided.

Begin this activity with a class brainstorm about how students make decisions about what foods to buy or eat. Ask them to imagine they are at a bake sale and are choosing what to buy. What do they think makes a certain type of baked good popular? What factors would they consider when deciding what to buy?

Have students divide into groups of two and give them each a copy of the cupcake ingredients flyer (Appendix B). Give them some reasonable constraints, such as:

- You have up to $25 to spend on ingredients
- You have to include five ingredients

Have them choose their ingredients and fill out the costs using the table in Appendix E (or a spreadsheet).

3. Pricing the Product

Exploring "Profit"

We have already explored how the costs of products are set in relation to the price of materials and labour, and by understanding the demand for the product. But before deciding how much their product will cost, students should have a good understanding of profit and what it's for. As a class, discuss:

- What does profit mean?
- Do you need a profit, and if so why?
- If you need a profit, how much is enough?
- What is a profit margin?

Introduce different approaches to profit using the examples in Appendix C (or local examples if possible). Share these examples in a class discussion or presentation. Have students reflect on how they intend to use the potential profit from their product, and why.

This section is important for several reasons. It encourages students to consider their own values and choices, thinking beyond the "what" of their product design to address the "why." It also emphasizes that making ethical judgments is an important part of financial literacy and being a wise consumer.

Ask students to identify the rationale for choosing the price they did for their product. Any rationale is OK: they won't be judged on their value decisions, as long as they've thought their decision through. This will help you to assess their learning on the Personal Values and Choices Core Competency (from Positive Personal & Cultural Identity).

Deciding on a Price

Use the tables in Appendix E or have students create their own using a spreadsheet, to calculate unit costs and the price of their product. This is where students will have an opportunity to demonstrate that they understand and can apply their new math skills. They will be assessed on the accuracy of their calculations.

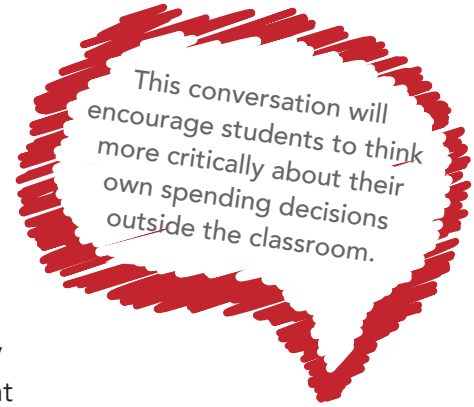
4. Marketing a Product

Analyzing Marketing and Deals

Introduce the idea that advertisements are one element of marketing (other elements include things like product placing, pricing, and promotion).

Start a class discussion about what makes a good advertisement. You could show flyers or online ads as examples and discuss the following:

- What marketing approaches are used?
- What makes products seem appealing?
- Which flyers/ads are nicest to look at, and why?
- How do retailers use "deals"?
- How do you determine if it is a "good deal" or not?



If possible, give students examples of real-life "deals" involving unit cost and have them determine if they will really save money. For example (note: there isn't necessarily a "right answer" to these questions):

- Photo prints cost 35¢ for over 36 photos, and 39¢ for 1–35 photos. You want 32 photos. Will you save money if you add more photos?
- Avocados are sold 4 for $5. Do you need to buy 4 to get this price? What happens if you buy 3?
- Granola bars are $2 each, but a box of 10 is $17.99. How much money will you save on each bar if you buy 10? Do you need 10?
- Ben and Jerry's ice cream is on sale for 30% off the normal price of $7.99. The same size of container of grocery store–brand ice cream is not on sale but costs $4.99. Which is better value?

Creating Advertisements

The type of advertisement you ask students to create will vary depending on which Curricular Competencies and Content you want to address. For example, they could create:

- a flyer or brochure (addresses content related to "elements of visual/graphic texts")
- a radio advertisement or oral marketing pitch (addresses content related to "features of oral language")

Or have students choose the format that they feel works best for their product.

As a class, develop assessment categories for their advertisement. For example:

- eye-catching graphics
- correct spelling
- convincing marketing language

See the rubric in Appendix D for examples.

For more discussion on how (and why) to co-create rubrics with students, refer to the discussion in the "Designing a Product" section. As with the product design assessment, this rubric can be used as a student self-assessment, a teacher assessment, or a joint assessment that both student and teacher carry out together.

Give students time and materials to create their advertisements.

Cross-curricular Social Studies connection:

You could give each student the same amount of money or different amounts. If different, this would be an opportunity to discuss the origin and effects of income inequality.

Shopping

Set up a "marketplace" by having each group put up and/or present their advertisement, then allow students to "shop" for each other's products.

- Give each student a certain amount of pretend money (could be paper money, tokens, or even something like toothpicks or paper clips).
- One member of each team stays at their station with their product advertisement and/or drawing or description (or their actual product, in the case of the Makerfaire option).
- The other students circulate and "buy" products by leaving money at the station for the product(s) they choose. When they "buy" a product, they must also fill out a "Shopper's Choice Slip" that explains why they chose that product (Appendix F).
- At some point, have the students who are manning their stations switch with another member of their team so they can have a turn to shop.
- When everyone has finished shopping, have each team tally their "income" and then look back to their budget table to calculate their profit, if any.

This is intended to be a realistic way to give peer assessment and provide each student with rich feedback. The success of a real product depends on customer satisfaction and sales. If students know this is coming, they will be more invested in trying to create a product that "sells." However, you will need to judge whether your class is ready for giving constructive feedback. If not, this final activity may need to be tailored so that it doesn't spoil the fun, leaving students with negative feelings. It may be useful to introduce and/or review some principles for giving constructive feedback, such as being specific and mentioning both positive aspects and areas to improve upon.

You may also want to write on the board some suggested specific questions for feedback, such as:

What appealed to you about the product?

- How did the product compare with other products?
- Did you think the price was fair? Why or why not?
- Describe your thought process in deciding to buy the product. Was your decision based on a practical or emotional reaction to the product? How was your choice related to your own values and preferences?

5. Reflections

Create an opportunity for students to reflect on the outcomes and process of the learning activity. Reflections could be a combination of written and oral feedback.

Reflection questions could include:

- Did you make a profit?
- What worked well with regard to a) product design and b) marketing approach?
- What would you do differently next time with regard to a) product design and b) marketing approach?
- What were your most important considerations when designing and selling your product? What were your most important considerations when deciding what product to buy? Did you notice any similarities or differences between being a product producer and a being consumer of products?
- How did you make decisions together as a group?
- How did you personally contribute to the group?
- What worked well within your group?
- What would you do differently next time with regard to group decision making or communication?
- What did you learn about yourself through this experience?

If students are familiar with the "I can" statements that are part of the Core Competencies, you can encourage them to write their own, or choose some from the list in Appendix G.

Extensions

There are many ways to extend this lesson to provide students with opportunities to explore deeper skills within these subject areas, or to increase cross-curricular connections with other subject areas. Here are some suggestions:

- Challenge students to reduce the cost of making their product by shopping around for better value or experimenting with different configurations. For example, students could consider whether making larger quantities or buying lower-quality materials could reduce their costs.
- Discuss how different societies view concepts of trade, profit, and marketing. For example, students could compare First Peoples pre-contact economies with today's capitalist economy, and look at real-life examples of how First Peoples have adapted to, resisted, or altered capitalist economic approaches. Students could also explore how economies have changed throughout time in different parts of the world, and how economies based on bartering differ from currency-based approaches.
- Create a product as a class and have a fundraiser. Let students decide as a group how they will use the funds.
- Explore the concept of false advertising and the rules and regulations that are in place to limit false advertising.
- Take students to a store and have them "shop" (by selecting but not buying) according to a set budget.
- Pretend that you are an investor and will choose products to go into development. Hold your own Junior Dragon's Den!

Assessment

This learning activity has several different assessment strategies, to provide both formative assessment (assessment for learning) and summative assessment (assessment of learning). You can choose to include all or some of these assessment options.

Assessment Activity	Curricular Connections
1. Assessment of product design plan (See rubric in Appendix D)	Applied Design, Skills and Technologies 8 Curricular Competencies and Content
2. Teacher assessment of cost calculations table (Appendix E)	Mathematics 8 Curricular Competencies and Content
3. Teacher assessment of student's rationale for product pricing	Core Competency: Personal Values and Choices Applied Design, Skills and Technologies 8: Evaluate personal, social, and environmental impacts and ethical considerations
4. Assessment of product marketing (See rubric in Appendix D)	English Language Arts 8 Curricular Competencies and Content Applied Design, Skills and Technologies 8: Forms of advertising and marketing that can influence a potential customer or buyer
5. Peer assessment of product (using "Shopper's Choice Slip" in Appendix F)	Core Competencies: Personal Values and Choices Applied Design, Skills and Technologies 8: Gather peer and/or user and/or expert feedback and inspiration
6. Self-assessment of outcome and process	Core Competencies: Communication and Creative Thinking

Store of Savings!

Hot Chocolate

Can
500 g
$5.27

Box
7 packets / 28 g each
$3.97

Potato Chips

Standard Bag
75 g
$1.50

Family Size Bag
500 g
$6.00

Soda Pop

2 Litre Bottle
$1.97

350 mL Can
79¢

Bottled Water

12 pack / 500 mL each
$3.98

1 Litre
$2.27

Embroidery Thread

Ball
40 metres
$1.75

Large Spindle
100 metres
$2.29

36 skeins /
8 metres each
$7.12

Beads

Small Jar
1000 Beads
$4.99

Medium Jar
11,000 Beads
$16.18

Large Jar
22,000 Beads
$23.79

Cupcake Ingredient List

Chocolate Cupcakes	12 for	**$6.00**
Vanilla Cupcakes	12 for	**$5.00**
Lemon Cupcakes	12 for	**$6.99**
Chocolate Icing	340 g box for	**$3.50**
Vanilla Icing	450 g box for	**$3.79**
Creamy Deluxe Chocolate Icing	400 g box for	**$5.00**
Creamy Deluxe Vanilla Icing	400 g box for	**$4.50**
Butterscotch Icing	325 g box for	**$3.00**
Chocolate Sprinkles	113 g container for	**$3.19**
Colored Sprinkles	113 g container for	**$3.19**
Sprinkle variety pack	5 packs (57 g total) for	**$3.99**
Cinnamon Hearts (sold in bulk)	100 g for	**$0.99**
Chocolate chips (sold in bulk)	100 g for	**$1.09**
Gummy bears (sold in bulk)	100 g for	**$1.29**
Jelly beans (sold in bulk)	100 g for	**$2.49**
M and M's (sold in bulk)	100 g for	**$1.19**
Sour gummies (sold in bulk)	100 g for	**$1.99**
Blue whale candies (sold in bulk)	100 g for	**$2.99**
Licorice all sorts (sold in bulk)	100 g for	**$1.09**
Strawberries	1 lb box (454 g) for	**$4.99**
Raspberries	170 g box for	**$5.99**
Food coloring variety pack	4 pack of 7 ml each for	**$3.79**
Food coloring single color	28 ml container for	**$2.49**
Decorating Icing	120 g tube for	**$3.19**

Appendix C: Approaches to Profit

Profit is the net gain that a business makes (its income minus its expenses). Ultimately, profit is what allows our economy to grow and prosper, as profit can be:

- reinvested in development of new products and services
- spent on other products and services in a market economy
- taxed by governments, and then used to benefit society as a whole

Without profit, a capitalist economy could not function. But while profit is important, it's not the only goal for some organizations. Here are some examples of organizations that don't see maximizing profit as their sole purpose:

- Not-for-profit organizations — For example, when the Red Cross sells T-shirts or holiday cards, it is not doing so in order to make a profit that it will keep. The revenue from those products is used to pay for the services that the Red Cross provides.
- A company that wants to "give back" to the community by donating a portion of its proceeds to charity — for example:
  - Screamin Brothers, a frozen dairy-treat company started by Canadian youth who wanted to donate a portion of their profits to children's organizations
  - Tom's shoes, a shoe and clothing company that donates a portion of its profits to international charities
- A company that values "corporate social responsibility" — This means that it tries to be responsible to society by supporting a certain set of values or principles that may not be linked to profit maximization. This may include companies that advertise their products as "fair trade" or "locally made" (although these labels can also be used as part of a marketing approach).
  - A good example of a socially responsible company is Brash87, a line of hockey sticks made by former NHL player Donald Brashear, who wanted to make a high-quality affordable stick that wasn't too expensive for kids to afford. In his pitch on Dragon's Den, he explained how he sacrifices potentially higher profits in order to maintain his sticks' low prices.
- A business that is designed to benefit the community — Some First Peoples businesses reinvest their profits in their communities to promote further economic development. For example, the Okanagan Nation Development Corporation is owned collectively by the bands that make up the Okanagan Nation, and it runs a number of businesses that are designed to lead to greater prosperity for the members of the First Nation.

Appendix D: Rubrics

The assessment categories provided are examples only. Actual assessment categories will be developed with students.

Product Design				
Assessment Category	Beginning	Developing	Accomplished	Exemplary
Creativity				
Looks and/or feels appealing				
Meets a real need				
Design detail is well developed				

Product Design				
Assessment Category	Beginning	Developing	Accomplished	Exemplary
Well laid-out				
Correct spelling and grammar				
Eye-catching graphics				
Convincing sales pitch				
Addresses target market				

Appendix E: Tables (Blank and Sample)

A. Material	B. Advertised cost of that material	C. Unit price (cost for one unit)	D. Amount you need to buy to make your product	E. Cost of that material
1.				
2.				
3.				
4.				
5.				
6.				
7.				

F. Total costs of all materials	G. Number of products we're making	H. Cost per item we're making	I. Selling price per item we're making (You decide)	J. Profit per item we're making

Rationale for Selling Price:

_____

_____

_____

Sample

A. Material	B. Advertised cost of that material	C. Unit price (cost for one unit)	D. Amount you need to buy to make your product	E. Cost of that material
1. Vanilla cupcakes	12 for $6.00	$0.50 per cupcake	24	$12.00
2. Chocolate icing	340 g for $3.50 (sold as a box)	$0.01 per gram	2 boxes (680 g)	$7.00
3. Rainbow sprinkles	113 g for $3.19 (sold in containers of this size)	$0.28 per gram	2 containers (339 g)	$6.38
4. Cinnamon hearts	100 g for $0.99 (sold as bulk)	$0.099 per gram	200 g	$1.98
5. M&Ms	100 g for $1.19 (sold as bulk)	$0.012 per gram	200 g	$2.38

F. Total costs of all materials (Sum of column E)	G. Number of products we're making	H. Cost per item we're making (Total cost [F]/ number [G])	I. Selling price per item we're making (You decide)	J. Profit per item we're making (Selling price [I] – cost [H])
$29.74	24	$1.24	$2.25	$1.01

Rationale for Selling Price:

We didn't want to make the cupcakes too expensive, otherwise nobody would want to buy them, but they had to be at least $1.50 for us to make a worthwhile profit. We were going to charge $2.00, but then we thought we'd try charging $2.25 and donating $0.25 per cupcake to our local food bank. We will still make a profit of $0.76 per cupcake, for a total profit of $18.24 if we sell all 24 cupcakes.

Appendix F: Shoppers Choice Slip

What product did you buy?
Why did you buy that product?

Appendix G: "I Can" Statements from the Core Competencies

Collaborate to plan, carry out, and review constructions and activities

- I can work with others to achieve a common goal; I do my share.
- I can take on roles and responsibilities in a group.
- I can summarize key ideas and identify the ways we agree.

Creative Thinking: Developing ideas

- I make my ideas work or I change what I am doing.
- I can usually make my ideas work within the constraints of a given form, problem, and materials if I keep playing with them.
- I build the skills I need to make my ideas work, and usually succeed, even if it takes a few tries.
- I can persevere if necessary to develop my ideas. I expect ambiguity, failure, and setbacks, and use them to advance my thinking.

Positive Personal and Cultural Identity: Personal values and choices

- I can tell what is important to me.
- I can explain what my values are and how they affect choices I make.
- I can tell how some important aspects of my life have influenced my values. I understand how my values shape my choices.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