

## Development and Peace *Chocolate Chip Mining*



CANADIAN CATHOLIC ORGANIZATION FOR  
**Development  
and Peace**



ACGC   
Alberta Council for Global Cooperation





# Chocolate Chip Cookie Mining

**Goal:** This activity for kids will introduce them to the economics of mining while developing skills in math, science, problem solving, decision making and language arts. Each player must “purchase” their “property”, “purchase” the necessary “equipment”, pay the costs associated with the “mining operation” and finally pay the cost of “reclamation”. In return each player earns money for the amount of “ore” mined. The object is to make as much money as possible after paying all expenses.

## How to Play:

- Start by giving each player \$19 of play money, a “Cookie Mining Spreadsheet” and a sheet of grid paper.
- Each player must purchase his or her own “mining property” which is a cookie. There are three different types of cookies for sale from which each player must choose (one cookie per player) to be their “mining property”. Once the “property” is chosen, the player may “name” his/her mine. Cookies for sale are:
  - Safeway/Giant/ or other supermarket brand (any cookie that is smaller and with less chips than the others will do) costs \$3.00
  - Chips Ahoy costs \$5.00
  - Chips Deluxe costs \$7.00
- After the cookie is bought, each player places the cookie on the grid sheet and traces the outline of the cookie with a pencil. The player must count each square that falls inside the circle. Each partial square counts as a full square.
- The players purchase their own “mining equipment”. They may purchase more than one piece of “equipment”. Players may not share “equipment”. “Mining equipment” for sale is:
  - Flat toothpick costs \$2.00 each
  - Round toothpick costs \$4.00 each
  - Paper clip costs \$6.00 each
- Since “equipment” operators and other expenses must be paid, there is a mining cost charged to each player of \$1.00 per minute.
- Sale of chocolate chip mined from cookie brings \$2.00 (broken chocolate chip can be combined to make one whole chip).
- Once the cookie has been “mined”, it must be placed back into the circled area on the grid paper “reclaimed” using the “mining tools”- no fingers or hands allowed!
- Reclamation costs \$1.00 per square over the original count.

Source: IMCC Minerals Education Workshop Notebook, Section A, page 1.

**Rules:**

- Players may not use their fingers to hold cookie. The only things that may touch the cookie are the mining tools and the graph paper.
- Players should be allowed a maximum of five minutes to actually mine their cookie. Players that finishes in less than five minutes should only pay for the time that was spend mining.
- A player may purchase as many mining tools as the player desires and the tools may be of different types.
- If the mining tools break and they are no longer useable, a new tool must be purchased.
- The players that make money by the end of the game win.
- All the players win at the end of the game because they get to eat their cookie!

For organizers using this activity during the THINKfast it may be best to do this activity near the end of the fast so that participants can eat the cookies soon afterwards.

**Review:** The game provided each player an opportunity to make the most money they can with the resources provided. Each player practices decision-making and problem solving skills as they determine which property and which piece(s) of mining equipment to purchase.

Each player learns a simplified flow of an operating mine and the responsibility, cost and potential difficulty of reclamation as they attempt to return the cookie back to the exact size it was before the “mining” started.

**Recommended additional variation:** To make the reclamation process even more comprehensive and challenging, frost the cookies and apply candy sprinkles (green for trees, multi-coloured for flowers/ various vegetation) before mining begins. Using their tools, players will have to remove the “vegetation” (sprinkles) and “topsoil” (frosting) before mining can begin. They should store their topsoil (the frosting) to be replaced later in the “reclamation” process. After replacing the pieces of cookies, the players must replace the topsoil. They may purchase new “trees” and other forms of “vegetation” to replace those removed before “mining” began on their “mine site”. Charge 10 cents per candy sprinkle for new “vegetation”.

Source: IMCC Minerals Education Workshop Notebook, Section A, page 1.

# COOKIE MINING SPREADSHEET

1. Name of cookie ("mine") \_\_\_\_\_

2. Price of cookie                  \$3.00                  \$5.00                  \$7.00

3. Size of cookie        \_\_\_\_\_ squares covered

4. Equipment:

Flat toothpick                  # \_\_\_\_\_ x \$2.00 = \_\_\_\_\_

Round toothpick                  # \_\_\_\_\_ x \$4.00 = \_\_\_\_\_

Paper clip                  # \_\_\_\_\_ x \$6.00 = \_\_\_\_\_

TOTAL EQUIPMENT COST                  \_\_\_\_\_

5. Mining: \_\_\_\_\_ minutes x \$1.00

COST OF REMOVING CHIPS                  \_\_\_\_\_

**6. TOTAL COST OF MINING**                  \_\_\_\_\_

7. Chip removal:

Number of chips \_\_\_\_\_ x \$2.00

**8. VALUE OF CHIPS**                  \_\_\_\_\_

<b>How much did I make?</b>
Value of Chips.....(+/-) \$ _____.
Total cost of mining..... (-) \$ _____.
Reclamation: ____ squares x \$1.00 (-) \$ _____.
<b>PROFIT/LOSS.....(+/-) \$ _____.</b>

Source: IMCC Minerals Education Workshop Notebook, Section A, page 1.