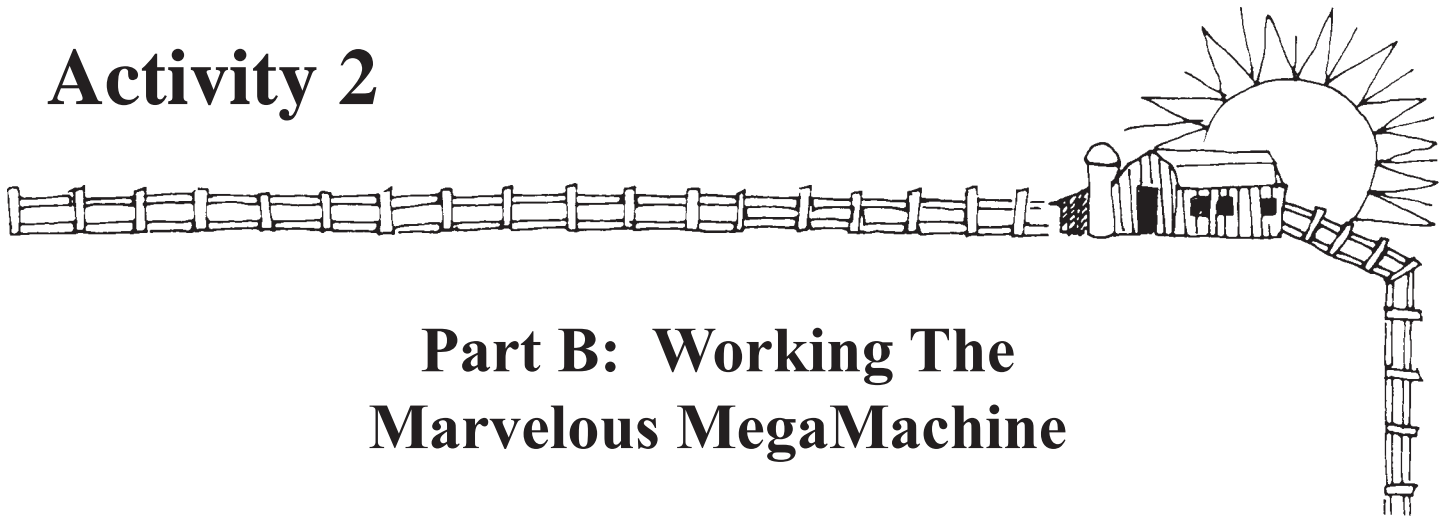


Activity 2



Part B: Working The Marvelous MegaMachine

- Study Question:** How does grain farming, transportation and export affect students if their families are not in the grain business?
- Activity:** Students role play the benefits from national transportation links spreading beyond primary producers to whole communities.
- Curriculum Fit:** **Grade Four - Social Studies**
- Self-sufficiency/Independence
 - Explore the benefits Alberta derives from its links with other parts of Canada and the world.
- Agriculture Concepts:** Economic Importance
- Purpose:** To have students experience how money earned in grain exports moves through the economy.
- Materials Required:** task sheets provided
supply of blank paper
\$160,000 play money per farmer
- Time Required:** Two 50 minute periods.

Background — For the Teacher

This activity demonstrates what happens to farm income.

It will be most effective if your class does it immediately after the activity, Working the Marvelous MegaMachine. In Working the Marvelous Megamachine, students acting as farmers receive \$160 per tonne of grain sold. If all of their grain is sold during your simulation this will total \$160,000. In this activity your student farmers will pay their bills. You can run Part B of the exercise independently by simply telling the student farmers to begin with \$160,000.

The figures used here are reasonable estimates of the operating costs of average wheat farmers. The figure for mortgage payments represents an 11% interest rate on a mortgage of about half the 1996 start up costs for a farm this size. The total income is based on the 1996 final Canadian Wheat Board price for #1 Northern Hard Red Spring Wheat and an average crop from a six quarter section (384 hectare) farm.

Students should benefit from this activity in two ways. First, they will see the cash squeeze that results from low prices paid to the farmer; and secondly, as they follow the money paid through the next spending stage, they will see how money earned in grain exports benefits people throughout the province.

Procedure

Preparation

1. Photocopy Student Resource Sheets Four to Six and cut the cards apart so that students can play the game.
2. Photocopy the Student Resource Sheets as follows: Student Resource Sheet One - 1 per student
Student Resource Sheet Two - 1 per supplier
Student Resource Sheet Three - 1 per farmer

Introduction

3. Ask the students who were farmers in Activity 1 - Working the Marvelous MegaMachine - to tell the class how much they were paid in total, and how much their entire crop was worth.
4. Explain that in this exercise students will see what happens to all the money that goes to a farmer.
5. Have those students who are not acting as farmers draw a role card from this lesson.
6. Students brainstorm a list of what a family spends money on. Copy the list onto Student Resource Sheet One.

7. Have student suppliers make out bills for each of the farmers in the amount owed.
8. Have the student suppliers move among the student farmers, presenting bills and receiving cheques or play money.
9. Once all the bills are paid, distribute Student Resource Sheets One and Two to the appropriate students and have them record their transactions.

Conclusion

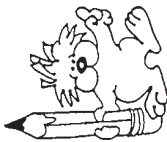
10. As soon as the recording is completed lead the class in a discussion focusing on:
 - a. How did the farmer do financially?
 - b. How does the money earned by the farmer reach the other members of his or her community?

Discussion Questions:

1.
 - a. Did the farmers in this exercise make enough money?
 - b. How much would the farmers need to be paid per tonne of wheat to pay all their costs with 1000 T production?
 - c. How much would the farmers need to increase their production to meet their costs at the price of \$160/T?
 - d. If all the events of these lessons were true, and you were the farmer, what would you do to pay your bills?
2.
 - a. How many businesses does it take to supply the things listed here?
 - b. What kinds of things would be paid for as family living expenses by the farmers and suppliers in this activity?
 - c. How many more businesses does it take to supply these items?

Related Activities:

1. Ask local businesses how they are affected by increases and decreases in farm income.
2. Invite a guest speaker to talk about how farms make and spend money.
3. Collect news articles and other information on how farming and rural towns are linked physically, economically and by communications to each other and to far away places.



SHEET THREE — Farmer's Expenses

STUDENT RESOURCE

Income from the MegaMachine

BANK

mortgage loan \$80,000

operating loan \$3,000

UTILITY COMPANIES

utilities used \$2,000

INSURANCE COMPANY

insurance coverage \$2,000

ALBERTA HAIL & CROP INSURANCE

crop insurance \$4,000

FARMER

living costs \$28,000

machinery fund \$36,000

LOCAL GOV'T

property taxes \$2,500

ACCOUNTANT

preparing taxes and advice \$500

SERVICE/REPAIR SHOP

fuels \$8,000

machinery repair \$5,000

SEED SUPPLIER

seed for crop \$5,000

CHEMICAL SUPPLIERS

fertilizer \$10,000

pesticides \$8,000

Income from the Megamachine _____

Minus Total Expenses _____

Equals Amount Remaining _____

FARMER	living costs	\$28,000
	machinery fund	36,000
Local Government	property taxes	2,500
Accountant	preparing taxes and advice	500
Service/Repair Shop	fuels	8,000
	machinery repair	5,000
Chemical Suppliers	fertilizer	10,000
	pesticides	8,000
Seed Supplier	seed for crop	5,000
Alberta Hail & Crop Insurance	crop insurance	4,000
Insurance Company	insurance coverage	2,000
Utility Companies	utilities used	2,000
Bank	mortgage loan	80,000
	operating loan	3,000
Total Expenses \$		

SHEET FOUR —

Role Cards



BANK

Collect \$80,000 for mortgage loan for start up costs.
Collect \$3,000 for interest on an operating loan. (Money the farmer borrows to pay bills until he is paid for his crops.)

UTILITY COMPANIES

(electricity, telephone, natural gas)

Collect \$2,000 for utilities used.

ACCOUNTANT

Collect \$500 for preparing taxes and management advice.

LOCAL GOVERNMENT

Collect \$2,500 property taxes.

FARMER

Take \$28,000 for living costs.

Set aside \$36,000 into a machinery replacement fund. (This is 15% of the \$240,000 your machinery cost.)

INSURANCE COMPANY

Collect \$2,000 to protect against losses to fire, theft, accidents and liability for other injuries.

SERVICE AND REPAIR SHOP

Collect \$8,000 for gasoline, diesel fuel, motor oil and grease.

Collect \$5,000 for machinery repair.

ALBERTA HAIL AND CROP INSURANCE

Collect \$4,000 to protect against crop loss from hail, drought and insect infestations.

SEED SUPPLIER

Collect \$5,000 for providing seed for this year's crop.

CHEMICAL SUPPLIERS

Collect \$10,000 for fertilizer.

Collect \$8,000 for pesticides.

SHEET ONE —

Case Study - Grain Farm



These cost figures were developed by Farm Business Management Branch, Alberta Agriculture, Food & Rural Development, for a 1280 acre (512 Ha) farm in south-western Alberta. They were accurate in Fall 1996.

Revenue figures are based on the final price paid by the Canadian Wheat Board for the top grade of Hard Red Spring Wheat in the 1996 crop year.

START-UP COSTS

1.	Land	\$ 400/ac
2.	Water Well	\$ 5,000
3.	Road	\$ 3,000
4.	Natural Gas	\$ 3,000
5.	Electricity	\$ 5,000
6.	Phone	\$ 1,500
7.	Sewage System	\$ 3,000
8.	Mobile Home	\$ 15,000
9.	Furniture/Appliances	\$ 7,000
10.	Grain Storage	\$ 25,000
11.	Equipment Storage	\$ 18,000
12.	Grain Machinery	\$ 240,000
13.	Truck	\$ 17,000
14.	Fuel Tank, Tools, etc.	\$ 10,000

TOTAL \$ 864,500

FIXED OPERATING COSTS (ANNUAL)

1.	Land Taxes	\$ 2,500
2.	Utilities	\$ 1,500
3.	Licences/Insurance	\$ 2,000
4.	Accounting Fees	\$ 500
5.	Living Costs	\$ 28,000
6.	Depreciation of machinery, 15% of value (not a cash cost)	\$ 36,000

TOTAL \$ 70,500

VARIABLE OPERATING COSTS AND ESTIMATED REVENUES

HARD WHEAT

REVENUE		COSTS	
1.	1996 final price \$ 160/Tonne	1.	Seed \$ 8/acre
2.	Expected yield 1 Tonne/acre or 2.5 T/hectare	2.	Fertilizer \$ 20/acre
3.	Revenue per acre \$ 160.00	3.	Chemicals \$ 10/acre
4.	Total acreage 1000 acres or 400 hectares	4.	Machinery-fuel & lube \$ 8/acre
		5.	Machinery-repair \$ 5/acre
		6.	Crop & hail insurance \$ 4/acre
		7.	Interest on operating capital \$ 3/acre
TOTAL REVENUE \$ \$160,000.00		TOTAL \$ 58/acre	