

## Income or Expense? – Sample Activity

### Purpose

A typical business goal is to make more money than they spend. The first step in business is to identify what income and expenses are.

The term income includes cash received from the sale of goods and services. Income includes any increase in the value of owned items over time. Selling vegetables, crops, and animals are examples of goods sold for income. Collecting payment to mow a lawn or work in an auto shop is income from services.

Expenses are part of any business. Farmers pay for seeds, apply fertilizer, and run machinery over cropland before they sell grain or hay. Ranchers purchase breeding stock and acquire pasture to graze before they can sell calves. A manufacturing enterprise requires a physical facility, labor, transportation, and marketing to sell products.

Companies track their income and expenses using a document called a ledger. A ledger is a book or electronic spreadsheet with a list of financial transactions. All income and expenses are registered under appropriate headings, as shown in Figure 1.

Date	Item	Income	Expense	Running Total
1/3	Pay check	\$ 100		\$ 100
1/15	Gas for car		\$ 40	\$ 60
1/20	Movie Ticket		\$ 10	\$ 50
1/24	Notebook		\$ 2	\$ 48
2/3	Pay check	\$ 100		\$ 148
2/6	Birthday money	\$ 50		\$ 198
2/8	Sales Bonus	\$ 25		\$ 223
		<b>Total Income</b>	<b>Total Expenses</b>	<b>Net Income</b>
		\$ 275	\$ 52	\$ 223

Figure 1. Sample Electronic Ledger

There is often a column with a running total showing the most current account balance.

Agribusinesses calculate net income to determine profitability. The formula below shows that net income is the difference between total income and expenses. You can measure net income for an entire enterprise or a specific project.

$$\text{net income} = \text{total income} - \text{total expenses}$$

How are income and expenses categorized in a ledger?

### Materials

#### Per student:

- *Agriscience Notebook*
- Cup of M&M® candies
- Device with calculator
- Device with spreadsheet software
- Pencil

### Procedure

Work with a partner to identify if items are income or expenses in the ledger. Then, individually simulate ledger transactions with a cup of M&M® candies during Part Two.

**Part One – Classification of Transactions**

- Review the ledger entry items in Table 1.

**Table 1. Candy Representation**

Color	Ledger Entry	Classification (I or E)
Red	Paycheck	
Orange	Bonus Pay	
Yellow	Item sold	
Green	Inventory purchase for resale	
Blue	Essential Purchases	
Brown	Non-Essential Purchase	

- Classify with your partner if the item is income or expense. Then, record your classification on the ledger entry item in Table 1.
  - Use *I* to represent income
  - Use *E* to represent expense
- Review Table 1 with your teacher before you move on to the next step.
- Answer the analysis questions.
  - What are some examples of bonus pay an individual might receive?
  - What are some examples of essential purchases?
  - What are some examples of non-essential purchases?

**Part Two – Recording Transactions**

- Working independently for the remainder of the activity, obtain a cup of M&M® candy from your teacher.
- Randomly draw an M&M® candy from your cup.
- Record the candy in Table 2 using the key in Table 1.
  - Example: You draw a red candy. Record it as *Red – Pay Check*.
  - Each transaction occurs on one day and is equal to \$5.00. Therefore, in the income column, record your red candy into 1/3 as \$5.00. The *expense* column would be left blank.

**Table 2. Ledger**

Date	Item	Income	Expense	Running Total
1/3	Red- Paycheck	\$5.00		\$5.00
1/4	Blue-Essential Purchases		\$5.00	\$0.00
1/5				
1/6				
1/8				
1/9				
1/10				
1/11				
1/12				
1/15				
		<b>Total Income</b>	<b>Total Expenses</b>	<b>Net Income</b>

4. Calculate your running total by taking the value in the previous row in the *Running Total* column and adding an income or subtracting an expense—record in Table 2.
5. Repeat Steps 2–4 for eight total transactions.
6. Calculate the *Total Income* and *Total Expenses* by adding the value in each column—record in Table 2.
7. Calculate the net income using the listed formula. Record in Table 2.

$$\text{net income} = \text{total income} - \text{total expenses}$$

8. Answer the analysis questions.

q4 What could cause your running total to go negative? How could you prevent this from happening?

q5 By choosing random entries, were there events you would not have allowed to happen in real life? Why or why not?

q6 Did you finish with a positive or negative balance? How would you have changed this?

SAMPLE

# Sample Teacher Notes

Students work individually to review journal entries in ledger format and then calculate total income and expense figures. This workbook contains multiple sheets of calculations made throughout *Lesson 2.1 Categorizing Transactions* and *Lesson 2.2 The Cost of Doing Business*.

## Teacher Preparation

### Part Two

Prepare a 3 oz cup of M&M® candies for each student. Each cup should contain approximately 10 candies. Avoid using seasonal candies with unique colors, as the item's color is what students are looking for.

## Student Performance

### Part One

For the first ledger, student pairs categorize items as either income or expense in the table on the student worksheet. Review student categorizations before students simulate business transactions in Part Two. The key for the simulation is shown in Figure 1.

### Part Two

Individually, students simulate business transactions by drawing out M&M® candies and recording the transaction categorizations from Part One. They create a ledger with a running total.

Color	Ledger Entry	Classification (I or E)
Red	Paycheck	Income
Orange	Bonus Pay	Income
Yellow	Item sold	Income
Green	Inventory purchase for resale	Expense
Blue	Essential Purchases	Expense
Brown	Non-Essential Purchase	Expense

Figure 1. Simulation Categories

Consider completing the first ledger entry in Table 2 as an example for students to follow, then allow students to complete the ledger as they draw candies. Each student has unique values depending on the candies they draw from their cup. Once transactions are complete, students calculate totals for each category. Check student entries and totals before students move on to *Part Three*.

## Results and Evaluation

After this activity, students should be able to identify types of income and expenses, calculate net income, and create and complete ledgers from raw data. Refer to Table 3 for responses to classifications. Responses to analysis questions are available in the full version of this APP.

Table 3: Candy Representation

Color	Journal Entry	(I or E)
Red	Paycheck	I
Orange	Bonus Pay	I
Yellow	Item sold	I
Green	Inventory purchase for resale	E
Blue	Essential Purchases	E
Brown	Non-Essential Purchase	E

# Sample Activity

This sample is a modified version of *Activity 2.1.1 Income or Expense?* from the CASE 4 Learning *Agricultural Business Foundations* (ABF) curriculum. For more information about the course visit [www.case4learning.org](http://www.case4learning.org). The sample has been modified for time and material simplification to fit a workshop format and is not for resale or profit. Teachers are permitted to use this sample in their classroom without certification.

Contact [CASE 4 Learning](http://CASE4Learning.org) to receive permission to use this sample at a teacher professional development.



# AGRICULTURAL BUSINESS FOUNDATIONS

## Course Description

Agricultural Business Foundations (ABF) introduces students to business management in agriculture. Mathematics, reading, and writing components are woven in the context of agriculture. Students can use the introductory skills and knowledge developed in this course throughout subsequent agricultural education courses.

The ABF course is structured for students interested in any agricultural pathway. This semester long course can be paired with other curricula by supplementing an agricultural or business curriculum.



## Equipping teachers

- Foundation level
- Semester course
- Inquiry and project based instructional practices
- BriefCASE professional development

## Engaging students

- ✓ Develop and improve viable business plans
- ✓ Practice employability skills
- ✓ Solve business management problems
- ✓ Engage students in real-world, relevant topics
- ✓ Supervised agricultural experience connections and preparation

## Instructional Units

- The Start-Up
- Managing Finances
- Covering the Bases
- Planning

## Flexibility & Adaptability

CASE provides a comprehensive professional development experience, in addition to a work-life balance so teachers can best educate their students. Course work is adaptable and customizable based on teacher preference to fit all geographies and communities.

“CASE saved my teaching career. It allowed me to have engaging, relevant and rigorous lessons with the scaffolding I didn't have time to put together while doing the rest of the Ag teacher duties.”

- Jamie Gray, Minnesota



scan or visit [case4learning.org](http://case4learning.org)



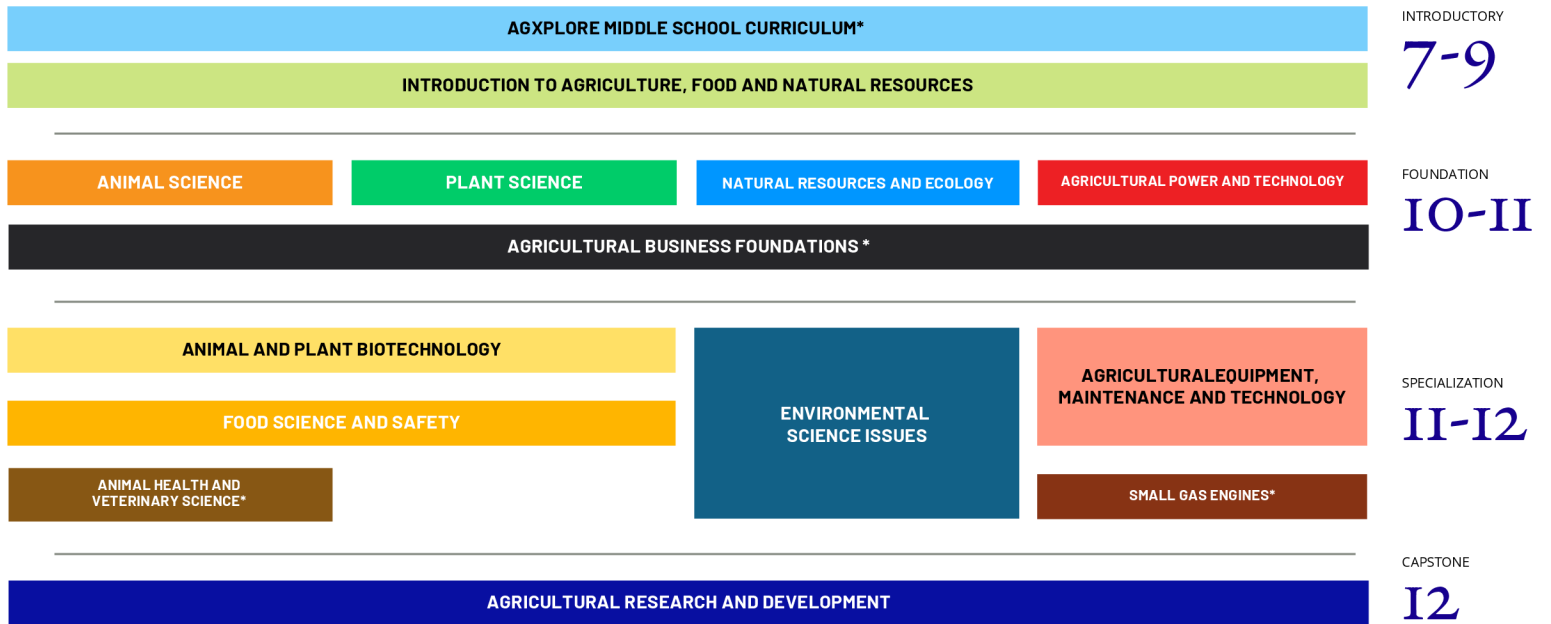
# Equipping Teachers Engaging Students



## Purposeful Curriculum

CASE has sequenced courses at four levels that enhance the delivery of agricultural education through inquiry-based learning and technical skills.

## Courses and Instruction Levels



## Mission

To design industry-leading, inquiry-based curriculum and teacher education to create lifelong learners and prepare students for the future of agriculture.

## Standards Aligned

CASE develops curriculum with industry feedback and aligns courses to National Agriculture, Food, & Natural Resources and Career & Technical Education standards.

## Professional Development and Lifetime Certification

CASE 4 Learning enhances agricultural education with inquiry and project-based learning to prepare the next generation of the agricultural workforce through teacher certification and professional development.

### CASE Institutes

Professional development events preparing teachers to implement full-year CASE courses. Institutes provide teachers the content and skills needed to use CASE curricula in their classroom. CASE Institutes range from five to eight days in a hybrid, in-person, or virtual format.

### BriefCASEs \*

Professional development for shortened CASE courses or modules. BriefCASEs range from one to three days.

### Grants & Scholarships

Corporate sponsors and donors throughout the agriculture industry support CASE teachers through funding material implementation grants and professional development scholarships. Teachers are eligible to apply in the fall to fund their programs in the following year.

### Certification

Once the teacher is certified by attending a CASE Institute or BriefCASE, they have lifetime access. There are no subscriptions or renewal fees!



#### In-Person

Teachers attend the entire training at the host site.



#### Virtual

Teachers attend the entire training online. Teachers will receive materials via mail, and are responsible for their lab space.



#### Hybrid

Teachers receive training both virtually and in-person based on the course.