Agri-Entrepreneurship Program

Unit: 4

Lesson: 4.2

Cash Flow

Precepts:

C. Vision
- C1. Contemplate the future

J. Mental Growth
- J1. Think critically
- J3. Practice sound decision making

P. Technical/Function Skills in Agriculture

National Standards:

NM-NUM.9-12.3 Compute fluently and make reasonable estimates
NSS-EC.9-12.13 Income and Earning

Student Learning Objectives:

As a result of this lesson, the student will …

1. Create an accurate cash flow statement /analysis

Instruction time for this lesson: 60 minutes

Resources:

- National FFA Organization. Essential Learnings. 2003
- Elliott, Jack. *AgriBusiness Decisions and Dollars.* 1999.
- Zimmerer, Thomas and Scarborough, Norman. *Entrepreneurship and New Venture Formation*. 1996.
- Birley, Sue and Muzyka, Dan. *Mastering Entrepreneurship.*

2000

Tools, Equipment, and Supplies:

- Writing surface
- Writing tool
- AS.1 cut into its respective sections
- TM.1 (Electronic version for projection or one transparency copy)
- Copies or AS.2 for each student
- Overhead and/or projector

Key Terms:

The following terms are presented in this lesson and appear in bold italics:

Cash Flow Statements

Interest Approach:

The following interest approach may take some time to set up, but will be of value to introduce the lesson. At the end of this lesson there is an activity sheet (AS.1), with the following headings-- "The New Entrepreneur," "Step One—What are your expenses?" "Step Two—What do you expect to make?" and "Step Three—Put it on a chart!" Each heading has dialogue identical to what is seen below (provided for your reference). Print a copy of AS.1 and cut out each heading and dialogue so it can be utilized in the interest approach.

The New Entrepreneur—So you're ready to start your own business…that's great. Before you begin there are some things you should be asking yourself. It just so happens that there is a group of experts here today that can help you with these questions.

Step One—What are your expenses? Before you do anything else, ask yourself, how much will my business cost? What items will I need to begin? Think about starting your own farm-- you will need land, a tractor, equipment, chemicals, seeds, water source, etc. What will you need for your business? Always consider what your expenses will be, and create a complete list before you begin.

Step Two—How much do you plan on making? Before you say, "Lots," remember that the idea here is to be as specific as possible. If we plan to start our own farm, we might say…I plan on selling 200 tons of hay from my farm at $60 per ton, that means I will make $12,000 each time I harvest. Weather permitting, I hope to harvest my Alfalfa five times this season, so that means I plan on making $60,000 overall. (That's $12,000 times 5 harvests)…and yes, you need to be that specific!

Step Three—Put it on a chart. When you go to the bank to get a loan to start your farm, you want to be able to present these expenses and estimated income in a neat concise way. To do that you will need to create a chart known as an income statement. Don't worry, there is a format already set up; all you need to do is plug in the numbers!

You will need four student volunteers. It is best to set the three experts up before you begin your lesson. Station three students around your room as the experts. Each will hold one of the cards (step 1-3). The entrepreneur/student volunteer will start by reading the first card

"The New Entrepreneur" aloud to the class. Explain that the student will then "take a journey" around the room in a counter-clockwise motion and visit with each of the three experts. When the entrepreneur arrives at each station, the expert will read his or her card aloud to the entire class. The student will then continue until the last station. Check for understanding after the stations are complete.

Hello! Today is an exciting day. We have a series of experts here that will help us with today's topic, and by the way, the topic involves money! To start, we need one volunteer who will act as a new business entrepreneur.

Ask student volunteer playing the role of the "New Entrepreneur" to come to the front of the room.

Let's assume that you are about to start your own hay farming business. You should consider some things before you just jump into the business. Please read your card aloud and look at where you begin.

Student will read New Entrepreneur card. Then guide students to the next station/expert who will read the "Step One" card. Student will continue on journey until he/she reaches the last station.

To get going on your new farm, we have set up a visit with a few local experts; the first is waiting over in the back corner for you.

Student travels through stations.

Who will share those three steps again?

Allow students to share.

Great! Let's give our new entrepreneur and experts a round of applause for assisting us today. Our last lesson set us up with the basic vocabulary needed to manage finances as an entrepreneur. Remember, finances are extremely important to entrepreneurs! Today we are going to dive into each of these ideas a little deeper, with the goal of each of you leaving here knowing how much you may potentially make at your new enterprise idea

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Objective 1: **Create an accurate cash flow statement/analysis.**

Students did some of this work if the homework was assigned from the previous lesson, Agri-Entrepreneurship 4.1,"Where do I start? What should I know?" Have them share and expand on their ideas through discussion.

Let's take a moment to brainstorm all of the costs associated with your proposed enterprise. For example, if we were going to open a Farm Practices DVD company, *(as discussed in the previous lesson)* we would have two types of costs: variable and fixed. Who will offer some of the examples of variable costs from our last lesson?

Allow sharing. Answers will include costs associated with producing product including cost of materials, labor, and shipping and handling.

Great! When I say, "Go," take the next five minutes to expand your list of potential variable and fixed costs for your business. Try to think of everything that you may need to run your business. For example, if we were going to start a DVD Production business, we would need blank DVDs, an office or factory, DVD burning equipment, a DVD label maker, a computer, etc. What would your business need? Please work quietly and record your answers in your notebook. Be ready to share some of your ideas in a few moments. What questions do you have? Go.

Make a judgment call on appropriate level of time here. Less experienced students may require more time/guidance. Once the majority of students have began to finish, assign them into small groups to share ideas.

Thanks for working so hard on those ideas. Sometimes it can be a great benefit to bounce ideas off each other. You will each have about two minutes to share your ideas and get feedback, including additional costs or suggestions on adjusting your cost estimates. You will work with two other teammates with no more than three in a group. When you hear the word, "Role," please switch roles and allow another teammate to share. Please keep your voices at a low level. What questions are there? Please begin. Role!

Facilitate discussions and move around the room. Make sure to facilitate switching as necessary. When finished, ask if there are any burning questions for the entire class and allow a short discussion. It may be a good idea to choose one potential group and allow them to share their entire list, recording the list on a writing surface. Allow the class to copy any ideas they gain from the group's list, and allow the class to add to their list with other potential ideas.

Thanks for being good partners. So now we have the majority of our costs identified, and don't worry if something comes up along the way, we can add it back in later. You may be on your way home tonight and think… "Dang, I forgot about a copier!" That's ok, again, we can add to this list over the next couple of days. By show of hands, how many of you are planning to do your enterprise at no cost to you? Or at a cost to you? How many of you expect to make some money? Great, so let's investigate how we will do that.

Begin discussion on income estimates. Some of the vocabulary here *was taught in lesson 4.1. Refer to the lesson for definitions and examples.*

During our last class meeting, we discussed the need to calculate how much each item or service you are selling costs--Costs of Goods Sold (COGS). Hopefully, you have used this number along with your breakeven point for your fixed costs. Now let's estimate your anticipated sales by month. There are a couple points to remember as we move on:

1. You may not turn a profit during the first two or three months; however, your start-up investment should cover the first few months if you have a negative income.
2. Your marketing plan should help your sales increase over time.
3. Be sure to factor in any seasonal items as well. For example, if your enterprise involved fruit harvesting, then most likely your income will be limited to a few months and need to carry your expenses throughout the rest of the year.

Who will share those three important points with us again?

Allow class to review the three points and allow questions on each if necessary.

Now let's look at an example.

Display TM.1 on a projector or overhead. Show students the example and discuss how the points above are included in the income statement. After reviewing the transparency with students, distribute the activity sheet AS.2. Students will create their own cash flow sheet for a given quarter.

Now that we have looked at an example for our DVD Company, let's try one out on our own. When you receive this activity sheet, choose one quarter and complete a cash flow sheet for your own enterprise. Remember, a service-based entrepreneurship will vary slightly from a product based entrepreneurship. So that we can make any changes, make sure you complete this worksheet in pencil! What can I clarify? Please begin!

Circulate around the room and assist students in creating income estimates for each month. Make sure that they include all of the necessary information including the number of units sold, selling price and an accurate label of each month.

Give students time to complete worksheets. Maneuver about the room to assist as necessary. When students near completion, allow them to compare their cash flow sheets with their neighbors for accuracy and to make sure no information was omitted. At the end of the period, collect their completed work and correct them so they will have feedback the next class meeting.

As you have seen before, another pair of eyes can be of great assistance. Let's take five minutes to check a partner's cash flow for accuracy and make sure they have not left anything out.

Review/ Summary:

<u>Newton e-Moment</u>

After receiving a new idea, concept, or process, students think of "why" questions about the information learned. After learning about atomic structures, students might ask, "Why is the nucleus in the middle?" "Why must there be an equal number of protons and neutrons?" "Why do electrons orbit?" The Newton e-Moment challenges students to ask why questions which review themes central to the lesson.

Wow! It is very impressive that you have worked so hard on your new business today, and thanks for assisting your partners throughout the process. Take one last moment to think of a question that you would have from today's lesson. What would you need to know in order to help a friend or family member create a cash flow statement?

For some classes, teachers may need to provide some sort of incentive to solicit questions and responses. For example, two points for asking a thoughtful question, and four points for answering it. Write the questions on the writing surface and give students a moment to think, and then allow peers to answer. Continue as time permits or until there are no more questions.

Thanks for the thoughtful responses. You are one-step closer to completing the financial documents necessary to start your business. Next time, we will put together the last piece of the puzzle and you will have most of the financial portion of your business plan done! After this next step, you will even be ready to approach your investors/partners, or even the bank with your proposal to fund your enterprise.

Application:

- **Extended classroom activity:**
  *Have students complete an entire year of **cash flow statements** by quarter; have them expand the statement they completed in class by three more quarters.*
  Invite a banker guest speaker to your class to talk about loans and financial matters.

- **FFA activity:**
  Participate in the Farm Business Management Career Development Event.

- **SAE activity:**
  Exploratory SAE—Have students contact a local agribusiness and interview them about using a cash flow and balance sheet in their business.

Evaluation:

Use the rubric below to evaluate students' cash flow statements. Make any necessary comments and pass the worksheets back to students for revisions.

Cash Flow Rubric:

CATEGORY	**0- 1 point (below basic)**	**2 points (basic)**	**3 points (good)**
Math and Number Sense	Numerous mathematical errors create issues understanding the chart.	One mathematical error, does not distract from understanding of chart.	Free from mathematical errors.
Grammar	Many spelling errors and poor grammar takes away from chart effectiveness. Poor or inconsistent punctuation.	Mostly free from spelling and grammatical errors.	Free from any spelling or grammatical errors.
Cash Income	1 or 2 obvious examples listed with income listed.	2 or more income sources listed with accurate estimate of income.	2 or more sources listed with match equations and accurate income estimate.
Cash Paid for Expenses	1 or 2 obvious examples listed with reasonable costs.	3-5 examples listed with reasonable costs listed.	5 or more, complete lists of appropriate examples with accurate costs listed.

TM.1

Creating My Cash Flow Statement

Look at business quarters:

Quarter 1: Jan-Mar
Quarter 2: Apr-Jun
Quarter 3: Jul-Sep
Quarter 4: Oct-Dec

Most cash flow statements are set up by quarter. Let's create our cash flow for January through March 2009.

Agri-Know DVD Company

Cash Flow for Quarter 1 (Jan-Mar) 2009

Cash Income			
Sell 1,000 units of agriculture DVDs @$20.00		$20,000.00	
Sell 200 DVD cases @ 1.99 each		$398.00	
Total Cash Received			**$20,398.00**
Cash Paid for Expenses			
Packaging Equipment Repairs	$500.00		
Marketing Expenses	$2,000.00		
Depreciation (on all equipment)	$1,000.00		
Labor Costs	$4,000.00		
Rent on building	$3,000.00		
Insurance	$1,500.00		
Total Expenses			**$11,500.00**
Net Cash for Period			**$8,898.00**

Some things to note:

Remember, variable costs like raw materials (blank DVDs and cases) should have already been included in the cost per unit.

This is an estimate into the future. An actual cash flow statement would be much more accurate and complete.

The depreciation figure comes from the equipment purchased to run the business; it is depreciated over time using the straight-line method.

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AS.2

Name of your company here: ________________________

Cash Flow for Quarter 1 (Jan-Mar) 2009

Cash Income

Sell _________ units of ______________ @$_____________ $___________

(you may not need to use the next few lines, if not just skip them)
Sell _________ units of ______________ @$_____________ $___________

Sell _________ units of ______________ @$_____________ $___________

Sell _________ units of ______________ @$_____________ $___________

Total Cash Received *(just add the totals above in the last column)* **$___________**

Cash Paid for Expenses
The following lines are only examples. You may use the provided space to add more, skip any lines that do not apply to you or write N/A

Equipment $________

Marketing Expenses $________

Depreciation (on all equipment) $________

Labor Costs $________

Rent on building $________

Insurance $________

____________________ $________

____________________ $________

____________________ $________

____________________ $________

Total Expenses **$__________**
Net Cash for Period *(subtract total expenses from total cash received)* **$__________**