

## TEACHING TIP

### **LESSON: PROCESS COSTING: Weighted Average vs. FIFO Method**

#### *Abstract*

*Thanks to technology, even old-time lessons can become an opportunity for students to practice critical thinking while opening their minds to abstract thinking. Process Costing is such a traditional lesson. And Excel provides a vehicle to explore process costing in two applications: Weighted Average method and the FIFO method. In this lesson, students are given the assignment to prepare a production cost report using the two mentioned cost flow assumptions. The critical thinking element enters into the instructions when students are told to produce the two reports using only one template. As a result of this assignment, students study process costing from the ground up as they construct their template and explore the interconnectedness of two different cost flow assumptions. Today's students need to understand concepts in order to be able to respond to changing information needs while still maintaining an ethical base.*

I give my students the following instructions for the semester's second Excel project in their Cost Accounting Course. The instructions provide a rationale as to why the assignment is structured in this manner.

**INSTRUCTIONS FOR Cost Accounting**

**Excel Project #2 (USING HORNGREN TEXT CHAPTER 17)**

One benefit of using an Excel based worksheet appears with a second application of the same problem. In other words, the initial time spent creating an Excel-based worksheet template is an investment. You reap the rewards of this investment as you reuse the worksheet. You witnessed this benefit doing the assignment for Chapter 2. In this Chapter 17 assignment you will see the benefit of organizing one template to do two different applications (namely weighted average and FIFO process costing).

**Required:                    Problem 17-35 (modified)**

- SUGGESTION:**
1. Organize your template in the manner done in class that enables a one schedule approach to calculating weighted average and FIFO equivalent units.
  2. Use a multiplier to distinguish weighted average from FIFO. Use a "1" to identify FIFO that will eliminate previous month work (beginning work in process inventory) when calculating equivalent units. Use a "0" to identify the weighted average method that will retain work done in previous month (beginning work in process inventory) to calculate relevant equivalent units.
  3. Your goal is to be able to make two distinctive data calculations using the same template. Therefore you will be submitting two printouts using only the one general-purpose template.
  4. Your challenge will be to organize the costs for both the beginning WIP Inventory and for the current month in a manner similar to the way you organized equivalent units in item 2 above. In other words, the equivalent unit cost numerator contains beginning inventory costs with the weighted average method. While the equivalent unit cost numerator rejects last month's costs when the FIFO method selected.



**PRODUCTION COST REPORT**

DEPARTMENT NAME:

**FORMING DEPARTMENT**

MONTH AND YEAR

**APRIL, 2004**

**FOR WEIGHTED AVG. METHOD PUT A "0" IN FIELD "G7"  
FOR FIFO METHOD PUT A "1" IN FIELD "G7"**

1

Beginning Work in Process

Ending Work in Process

% Completed for Direct Materials

100.00%

% Completed for Direct  
Materials

100.00%

% Completed for Direct

Materials

ted for Conversion Costs

40.00%

% Completed for Conversion

25.00%

	<u>Physical Units</u>	<u>Equivalent Whole Units</u>	
		<u>Direct Materials</u>	<u>Conversion Costs</u>
Beginning Work in Process Inventory	300		
Units started into production - current month	2200		
Units to Account For	2500		
Transferred out to Finished Goods Inventory	2000	2000	2000
Ending Work in Process Inventory	500	500	125
Units Accounted For	2500		
Total Weighted Average Units		2500	2125
Less Work Done in Previous Month		-300	-120
Total FIFO Equivalent Whole Units		2200	2005
<b>Unit Cost Denominator (0 = W. Avg.; 1= FIFO)</b>		<b>2200</b>	<b>2005</b>

	<u>Total Costs</u>	<u>Direct Materials</u>	<u>Conversion Costs</u>
Beginning Work in Process Inventory	\$9,625	\$7,500	\$2,125
Current Month's Production Costs	112,500	70,000	42,500
Total Costs To Account For	\$122,125	\$77,500	\$44,625
<b>Unit Cost Numerator (0 = W. Avg.; 1 = FIFO)</b>		<b>\$70,000</b>	<b>\$42,500</b>
Divide by Equivalent Whole Units		2200	2005
<b>Equivalent Unit Cost (0 = W. Avg.; 1 = FIFO)</b>	<b>\$53.02</b>	<b>\$31.82</b>	<b>\$21.20</b>

**Cost Application**

<b>Transferred out To Finished Goods Inventory</b>	<b>\$103,566</b>
Ending Work in Process Inventory:	
Direct Materials	\$15,909
Conversion Costs	2,650
<b>Total Ending Work In Process Inventory</b>	<b>18,559</b>
Total Costs Accounted For	\$122,125