

Lesson Plan
CAWS
AAR Summa Technology: June 15-19 2009
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Objective: Students will create a Purchase Order schedule for each Sub Part in order to complete the Customer order on time. Take into consideration the *make & purchase* lead times. AAR Summa Technology does not want the material in stock more than 2 weeks in advance due to the cost of storing inventory.

Customer Order

QTY	U/M	Description	Due Date	Lead Time to Make
10	Ea	Finished Part	12/1/2009	2 Weeks
20	Ea	Finished Part	1/1/2010	2 Weeks
30	Ea	Finished Part	3/1/2010	2 Weeks
40	Ea	Finished Part	5/1/2010	2 Weeks

Bill of Material for “Finished Part”

QTY Per	U/M	Sub Part A	Lead Time to Purchase
5	Ea	Plate	1 Week
4	Ea	Bracket	2 Weeks
3	Ea	Bar	3 Weeks
2	Ea	Tube	4 Weeks

Procedure:

1. Study the tables listed above.
2. The manufacturing process produces a finished container made for the military that is called a “CROP”.
3. Each crop is produced by assembling many component parts. The first table tells how many crops are on order for four particular dates. Two weeks notice is necessary to get the crops assembled and ready for shipment.
4. The second table shows: a) how many parts are used on each crop, b) what the part is called, and c) how long it takes to get the parts after an order has been placed.

Lesson:

- A. How many plates are needed to assemble 10 crops? Keeping in mind that it takes 1 week to ship the plates and 2 weeks to assemble the crop, when should they order the parts?
- B. How many brackets are needed to assemble 20 crops? Keeping in mind that it takes 2 weeks to ship the brackets and 2 weeks to assemble the crops, when should they order the brackets?
- C. How many bars are needed to assemble 30 crops? Keeping in mind that it takes 3 weeks to ship the bars and 2 weeks to assemble the crops, when should they order the bars?
- D. How many tubes are needed to assemble 40 crops? Keeping in mind that it takes 4 weeks to ship the tubes and 2 weeks to assemble the crops, when should they order the tubes?

Evaluation:

- A. Production for AAR Summa Technology is 10 crops per shift. They work 3 shifts per day for five days a week. That means they plan on producing 150 crops per week. Do you think it would be a problem for the person responsible for purchasing parts if workers increased production to 11 completed crops per shift? Explain.
- B. If the shipping schedule plans for 150 completed crops per week, what would happen if several workers miss work often? Their absenteeism causes production to fall to 140 finished crops per week. Explain how this could be a problem?
- C. Do you think teamwork and attendance are important roles in the production process at AAR Summa Technology? Are they important roles in any manufacturing process? Why?