



K-W-C

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DESCRIPTION: K-W-C is a strategy used during the problem solving process. It allows students to filter the information they already **K**now about a problem, **W**hat they **W**ant or need to know about the problem, and the rules or **C**onditions they need to apply.

DIRECTIONS: Before an activity in class where word math problems will be used give each student a copy of the K-W-C chart or have them recreate it on a piece of paper.

HOW TO USE: since many math related problems in agriculture involve solving a multi-step problems this chart is an excellent way to help students break down the information they are given in a word problem. Use this chart anytime they need to think through the steps of a math problem. The first few times you use the chart you will need to walk students through the process. An example of how it can be used is shown below. It can be modified to fit many different types of math problems related to the agriculture industry.

A black copy of the chart is available on the second page of this document.

THESE ACTIVITIES ARE ALIGNED TO THE FOLLOWING STANDARDS:

Common Core-Math Practices

- MP1: Make sense of problems and persevere in solving them.
- MP2: Reason abstractly and quantitatively.
- MP5: Use appropriate tools strategically.
- MP7: Look for and make use of structure.

EXAMPLE:

Problem: Jim has a 12-row header combine to harvest 350 acres of corn. The combine harvests 11.2 acres per hour using 1.2 gallons of diesel fuel per acre. The current fuel price is \$3.95/gallon. How long will it take to harvest all the corn? What will be the total cost of fuel?

What do I <u>know</u> for sure?	What do I <u>want</u> to do, figure out or find out?	Are there any special <u>conditions</u> , rules or tricks I have to watch out for?
• Total of 350 acres • Combine harvests 11.2 acres/hour • Uses 1.2 gallons/acre • Fuel costs \$3.95/gal	How long will it take? How much will ALL the fuel cost?	There are 2 separate problems to answer. I cannot solve for fuel costs until I know how much fuel will be needed.
Solution: $350 \text{ acres} / 1.2 \text{ acres/hr} = 31.25 \text{ hours to harvest corn}$ $350 \text{ acres} \times 1.2 \text{ gal/acre} = 420 \text{ gal}$ $420 \text{ gal} \times \$3.95/\text{gal} = \$1,659 \text{ for fuel}$		

NAME: _____

K-W-C

What do I <u>know</u> for sure?	What do I <u>want</u> to do, figure out or find out?	Are there any special <u>conditions</u> , rules or tricks I have to watch out for?
Solution:		

Aligned to the following standards:
MP1; MP2; MP5; MP7