

Name: _____ Date: _____

ANDY WORKS FOR CHARITY

Andy wants to make money to donate to buy books for an orphanage in Iraq. If he earns \$40.00, he can buy book sets for a class for a whole year! Complete the chart below to help Andy plan how to make the money.

Use the following constraints to organize the information. When you think you have an answer for Andy, check off each one to be sure.

_____ Andy must raise between \$40.00 and \$45.00

_____ He must work at all three jobs listed below for at least 1 hour.

_____ Andy cannot work at any one job more than 5 hours.

Type of Job	Hourly wage
babysitting	\$5.00 per hour
yard work	\$3.00 per hour
dog walking	\$2.00 per hour

Use the graphic organizer below to help you plan Andy's work schedule for one week.

Job	Hourly Wage	# of Hours Worked	Total Earned
			\$
			\$
			\$
		Total Earned:	\$

Did you check off all of the constraints above? Is your work correct?

Checkpoint! Are all of the constraints correct? Is your math correct?

Worksheet #2

EXPLAIN how you solved the problem. Use complete sentences! Remember to use time sequence words to organize your ideas. (First, Then, Last, etc.) Everyone in your group must be able to tell the teacher how you got your answer.

Checkpoint! Complete Sentences? Everyone can explain?

CHALLENGE!

1. Which job should Andy do the most often in order to earn the most money? Why?

2. If Andy worked for a whole month on the schedule you created, and donated it all to buy books, how many class book sets would he be able to donate?

Answer: _____

Show your work:

3. Why do you think it's important to help others? List 2 reasons:

a. _____ b. _____

BANKER'S WORKSHEET

Put the play money in each column to keep track

Job #1 Money earned	Job #2 Money earned	Job #3 Money earned
TOTAL: \$ _____	TOTAL: \$ _____	TOTAL: \$ _____

Title:	“Andy Works for Charity”
Grade level/course:	Grade 4/5
Time Frame:	45 – 60 min.
Content Objective:	Students will correctly solve a money problem using constraints and a graphic organizer. Students will also build problem-solving skills
Language Objective:	Students will use complete sentences with time sequence words to fully explain their answers, both verbally and in written form. Vocabulary words/phrases: at least, between, constraints, hourly wage, per hour, orphanage, donate
Higher Order Thinking:	Students will use variables to find the correct solution. All students in a group must be able to explain the solution. Challenge questions are included for those groups that finish successfully ahead of time. See procedures for suggested H.O.T. questions.
Materials:	Worksheets #1 and #2, pencils OPTIONAL: play money, Worksheet #3 (See “Variation”)
Initiation:	Have you ever done work and gotten paid for it? Have you ever donated to a charity? Do you know someone who has? Today we’re going to work in groups (or pairs) to help someone plan out a money schedule to so he can help others.
Procedures:	<ol style="list-style-type: none"> 1. Review cooperative learning standards. 2. Hand out worksheets #1 and #2 and discuss. 3. Students to work cooperatively to complete assignment. Teacher should pass out Think and Hint cards as needed. Sample H.O.T. questions: <i>What strategy are you using to solve this problem?</i> <i>Is there another strategy you could use?</i> <i>Is there only one solution to this problem?</i> 4. When they think they have the correct solution, groups should raise their hands for the first checkpoint. If successful, tell them to move on to explanation portion on Worksheet #2. Remind them to use time sequence words and math vocabulary. Also, everyone should be able to explain the solution. 5. When students have successfully completed the explanation portion, they may move on to the Challenge! portion or work on Think cards. 6. Discuss and display a variety of possible solutions on the board in whole group. Discuss why and/or why not solutions worked or did not work. (Use H.O.T. questioning strategies for discussion.) 7. Discuss any Challenge! questions that were completed.

Closure: What are some new words or phrases that we learned about today?
Who can tell me what they mean? We learned about using a graphic organizer to help us organize our information. How could this strategy us with other problems like this?

Student Work Products: Completed worksheets

Assessment: Whole group discussion; worksheets graded with rubric (0-3 points)

Differentiation: Challenge! questions, Think Cards, Hint Cards (see attached page)

Variation: Use play money as a manipulative to help students understand how to solve the problem. Students may need to have the teacher model how to figure the amount of money earned per job and/or how to count with money. Use Worksheet #3 and assign someone in each group to be the "Banker". The Banker is responsible for counting the amount of money made for each job and finding the total amount earned by Andy.

<p style="text-align: center;">think</p> <p>Can you find another solution to this same problem? How many solutions do you think there might be? Why?</p>	<p style="text-align: center;">think</p> <p>If Andy worked for a whole year with the same money schedule, how many class sets of books could he donate?</p>	<p style="text-align: center;">think</p> <p>Why is it important that people donate their time and/or money to help others? How could you help other people?</p>	<p style="text-align: center;">think</p> <p>If an orphanage has over 115 children in it and each class can have 22 students, how many classes would need book sets?</p>
<p style="text-align: center;">hint</p> <p>Did your group multiply the number of hours worked by the amount per hour to find the total pay for each job?</p>	<p style="text-align: center;">hint</p> <p>Did Andy make between \$40.00 and \$45.00 in all?</p>	<p style="text-align: center;">hint</p> <p>Did Andy work for at least 1 hour for every job?</p>	<p style="text-align: center;">hint</p> <p>Did Andy work for no more than 5 hours for every job?</p>
<p style="text-align: center;">hint</p> <p>Try this to help you find the total money for each job:</p> <p>(# hrs) x (\$) = total \$</p>	<p style="text-align: center;">think</p> <p>What if Andy could make \$10.00 per hour cleaning dirty street gutters? How long would he have to work earn enough money?</p>		