



Hunt for Spell Breakers

Introduction

Objective:

Students will solve word problems that have multiple steps to help Prince Fredrick free Rapunzel.

Academic Content Standards:

- ❖ National Council of Teachers of Mathematics: Number, Number Sense and Operations
 - *Students understand numbers, ways of representing numbers, relationships among numbers and number systems.*
 - *Students understand the meaning of operations and how they relate to one another.*
 - *Students compute fluently and make reasonable estimates.*
- ❖ Ohio Academic Content Standards for Mathematics: Number, Number Sense and Operations
 - *Students demonstrate number sense including an understanding of number systems and operations and how they relate to one another. Students compute fluently and make reasonable estimates using paper and pencil, technology-supported and mental methods.*
 - *Benchmarks: K, L and M (4th Grade)*
 - *Benchmark: I (5th and 6th Grades)*
- ❖ Ohio Academic Content Standards for Social Studies #6 Mathematical Processes Standard
 - *Embedded within the grade level indicators.*

Getting Started

Materials:

- Scratch paper
- Pencil
- "Spell Breaker" handout

Vocabulary:

- Add
- Subtract
- Multiply
- Divide
- Quantity

Lesson

Orientation Activity:

The teacher will copy a class set of the "Spell Breaker" handout and distribute to students.

Learning Activity:

Students will work individually or in small groups to help Prince Fredrick solve the stated problems in order that he may free Rapunzel. Additional paper and pencils may be used in the problem solving.

Evaluation and Follow-Up

Assessment Tools and Methods:

Use the "Spell Breaker" handout as the assessment if the activity is completed as an individual assignment. Have groups present to the class how they solved the problems and what conclusions were drawn if the activity is completed as a group.

SPELL BREAKERS

When Prince Fredrick went looking for the items to break the witch's spells, he found a store that had everything he needed for the task. The problem is that the Prince could not buy the items he needed in the necessary quantities. Here is the list of items and their cost:

Blood worms	2 for \$8
Newt eyes	3 for \$10
Moonbeams	10 for \$50
Beak of woodpecker	3 for \$4
Toad wart.....	6 for \$2

The owner of the shop will not sell the items listed in any other quantities other than what is listed...not even for a prince. So, help Prince Fredrick solve the following problems so that he may break the witch's spell.

- 1) Rapunzel told the Prince that he would need the items of six bloodworms, an eye of newt, one dozen moonbeams, one woodpecker beak and the wart of a toad to break the spell. What is the least amount of money Prince Fredrick will need to spend to get all of these items?

- 2) Prince Fredrick is not sure what he will need to do with the items once he gets back to Rapunzel. So, he decides to bring back twice as many items as is needed in case a mistake is made with the first set of items. How much will Prince Fredrick spend for these items? Which of the items will there be extras, and how many extras will Prince Fredrick have?

- 3) After purchasing what he needed to break the spell, Prince Fredrick headed back to the tower to free Rapunzel. The Prince wondered how much more money he would have saved if the shopkeeper had sold him each item on Rapunzel's original list at a cost per individual item. Help the Prince calculate the cost of each individual item. When you have these costs, calculate the amount Prince Fredrick would have spent on just those items he originally needed (21 items in total).