Math Story Problems Come to Life

MATH

Book Builder

Overview

Students turn a word problem into an illustrated story book, making the quantities and the question visible on the page.

Steps for Teachers

1. Give students a word problem, or have them invent one at their grade level
2. Students identify what is known, what is unknown and what operation connects them
3. Students plan pages: the setup, each step of the change, and the question
4. Students write each page so the numbers appear in both the words and the picture
5. Students use actors and objects on the page to show the quantities being counted, joined or shared
6. Students make the question the second-to-last page, and put the worked answer on the very last page
7. Students trade tablets and solve each other's problems before turning to the answer page

Example

A student's book opens with twelve apples on a tree. On page two a storm knocks five to the ground. On page three a neighbour takes three of the fallen ones. The second-to-last page asks: 'How many apples are still on the tree, and how many are on the ground?' The last page shows 7 and 2, with the subtraction written out.

Grading Rubric

Criteria	Excellent	Proficient	Developing
Mathematical Accuracy	The problem is solvable, the numbers are consistent and the answer is correct	The problem works with a small arithmetic slip	The problem is unsolvable or the numbers contradict each other
Representation	Pictures show the quantities accurately; a reader could solve it from the art alone	Pictures mostly match the numbers	Pictures don't match the quantities in the text
Clarity of the Question	The question is unambiguous and clearly the point of the book	The question is present but buried or vague	It is unclear what the reader is being asked
Book Craft	Text is easy to read, art supports every page, and the layout is consistent throughout	Pages are readable with some crowding or uneven placement	Text overlaps art or is hard to read; layout is inconsistent