

# Book Title: Ten Flashing Fireflies

## by Philemon Sturges

### Grade Levels: K-3

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#### Learning Outcomes:

##### Kindergarten

A4 Represent and describe numbers 2 to 10, concretely and pictorially.

A5 Compare quantities, 1 to 10, using one-to-one correspondence

##### Grade 1

A9 Demonstrate an understanding of addition of numbers with answers to 20 & their corresponding subtraction facts concretely, pictorially & symbolically by:

- using familiar and mathematical language to describe additive and subtractive actions from their experience
- creating & solving problems in context that involve addition & subtraction
- modeling addition and subtraction using a variety of concrete & visual representations, and recording the process symbolically

##### Grade 2

A9 Demonstrate an understanding of addition (limited to 1 and 2-digit numerals) with answers to 100 and the corresponding subtraction by:

- using personal strategies for adding and subtracting with and without the support of manipulatives
- creating and solving problems that involve addition and subtraction

##### Grade 3

A9 Demonstrate an understanding of addition & subtraction of numbers with answers to 1000 (limited to 1, 2 and 3-digit numerals) by:

- using personal strategies for adding and subtracting with & without manipulatives
- creating and solving problems in context that involve addition and subtraction of numbers concretely, pictorially and symbolically.

#### Materials:

- Bags of counters as needed (20 unifix cubes for k and 1, 50 units cubes for 2 and 3)
- Book: [Ten Flashing Fireflies](#) by Philemon Sturges
- Story Problem Think Board
- Story Problem worksheets – grade specific
- Story Problems – grade specific

## Lesson Focus 'Result Unknown' Problems:

1. Discuss learning intention: "I can write an equation that shows how I solved a story problem."
2. Warm-up students with an estimating game – 'flash' on the screen images of fireflies and have them estimate and later count the number of fireflies. Give time for students to share their strategies for estimating and/or Subitizing.
3. Read the story, Ten Flashing Fireflies. Students could act out or model the story with paper and unifix cubes as the story is being read.
4. Use a piece of construction paper to represent the jar and unifix cubes to represent the fireflies and explain to the class that you are going to make a firefly story problem for them to solve. Place some cubes on the paper and some beside it. (Select numbers that are appropriate for your grade level.)

I see 4 fireflies inside the jar.  
I see 5 outside the jar.  
How many fireflies are there altogether?
5. Give the children an opportunity to discuss their strategies, then record their thinking on the Think Board (electronically or on an overhead) an equation that represents the way they solved the problem.
6. Repeat for:

There were 8 fireflies inside the jar.  
The children took 3 fireflies out of the jar.  
How many fireflies were left inside the jar?
7. Have pairs or small groups of students take the problem papers – one at a time to solve. A variety of addition and subtraction problems are purposefully included – all result unknown.
8. Independent practice – complete attached sheet – recording equation and solution on the sheet but completing the work on the story board.
9. Have students debrief, first with a turn and talk and then whole group, the strategies they used to help them decide how to solve the problems.
10. Ticket out the door: 'Which type of problem did they find easier to solve – a subtraction or an addition?'