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Stella's parents brought home their new baby and Stella thinks he might be a duck!

Ages: 3 to 6 years

ATOS Level: 2.5

Lexile: 500L

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# Early Math Project

## **My Brother the Duck**

Is Stella's new brother really a duck?

What is STEAM? Learning through Science, Technology, Engineering, the Arts, and Mathematics. Through STEAM, children problem solve, innovate, create, and collaborate.

**STEAM Topics in this Book:** classification, evidence collection, scientific method

#### **Activities To Do Together:**

Before you read the book with your child:

- Read the title of the book to your child. Ask, "Do you think Stella could have a duck as a little brother?"
- Encourage your child to recall a time when they mistakenly identified one thing for another. What happened?

While reading the book:

- When the word hypothesis appears in the story, discuss what this means. One way to explain a hypothesis is that it is an educated guess or a guess based on information you already know. Scientists use experiments to test whether their hypothesis is correct.
- Ask your child why Stella thinks her brother is a duck.
   What evidence does Stella use to prove her hypothesis?
- Encourage your child to point to the duck-like features in the illustrations that Stella notices.
- Ask your child if they think Drake is a duck? Why or why not?

When you have finished reading the story:

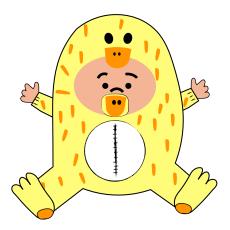
- Ask your child what finally convinced Stella that her brother was not, in fact, a duck.
- Together, investigate what baby animals look like. Do they always look similar to their parents? How are they similar to their parents, how are they different?
- Encourage your child to come up with a hypothesis and design an experiment together to test it. For example, a hypothesis could be: Plants grow better when they are kept moist.

#### **Questions for STEAM Thinking:**

- 1. Compare ducks and humans. How are we the same and how are we different?
- 2. Why do you think Stella thought her new little brother was a duck? What evidence did she consider?
- 3. How could you convince Stella that her brother could not be a duck? What facts would you use?
- 4. What do you think Stella meant at the end of the book when she said, "Stella Wells, fledgeling scientist, had another hypothesis to test."?
- 5. What hypothesis would you like to test? How would you test it?

#### **Early Math Project Resources:**

Visit My Brother the Duck Activities (www.earlymathca.org/ My-Brother-the-Duck)



#### Vocabulary

**STEAM words found in the story:** drake,
evidence, fact, first,
hypothesis, inconclusive,
notice, prove, research,
scientist, second, test

### Related STEAM

words: categorize, characteristics, offspring

# Words to build reading comprehension:

bassinet, bill, broadbilled, bundle, conceded, ducklings, erupt, expert, flair, fledgling, guess, incredible, noteworthy, obviously, odd, scrawny, squawking, unacceptable, waddling, webbed, wing it

**Related Books:** Ada Twist, Scientist by Andrea Beaty

Click this link to the World Catalog or enter bit.ly/3GygSbK in your browser, to find My Brother the Duck in the public library.

## STEAM EXPLORERS: BOOK GUIDE

Age Level	Related  Preschool Learning Foundations, Science,  Next Generation Science Standards (NGSS)
Preschool/ TK	Science: Observation and Investigation 1.1 Demonstrate curiosity and raise simple questions about objects and events in their environment. 1.2 Observe objects and events in the environment and describe them. 1.4 Compare and contrast objects and events and begin to describe similarities and differences. 1.6 Make inferences and form generalizations based on evidence. Documentation and Communication 2.1 Record observations or findings in various ways, with adult assistance, including pictures, words, charts, journals, models, and photos; 2.2 Share findings and explanations which may be correct or incorrect, with or without adult prompting. Properties and Characteristics of Living Things 1.1 Identify characteristics of a variety of animals and plants, including appearance and behavior, and begin to categorize them.
Kindergarten	NGSS Science and Engineering Practices: Asking Questions and Defining Problems; Planning and carrying out investigations; Analyzing and interpreting data; Constructing Explanations and Designing Solutions; Engaging in Arguments from Evidence
Grade 1	NGSS Performance Expectations: 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.  NGSS Science and Engineering Practices: Asking Questions and Defining
	Problems; Planning and carrying out investigations; Analyzing and interpreting data; Constructing Explanations and Designing Solutions; Engaging in Arguments from Evidence

