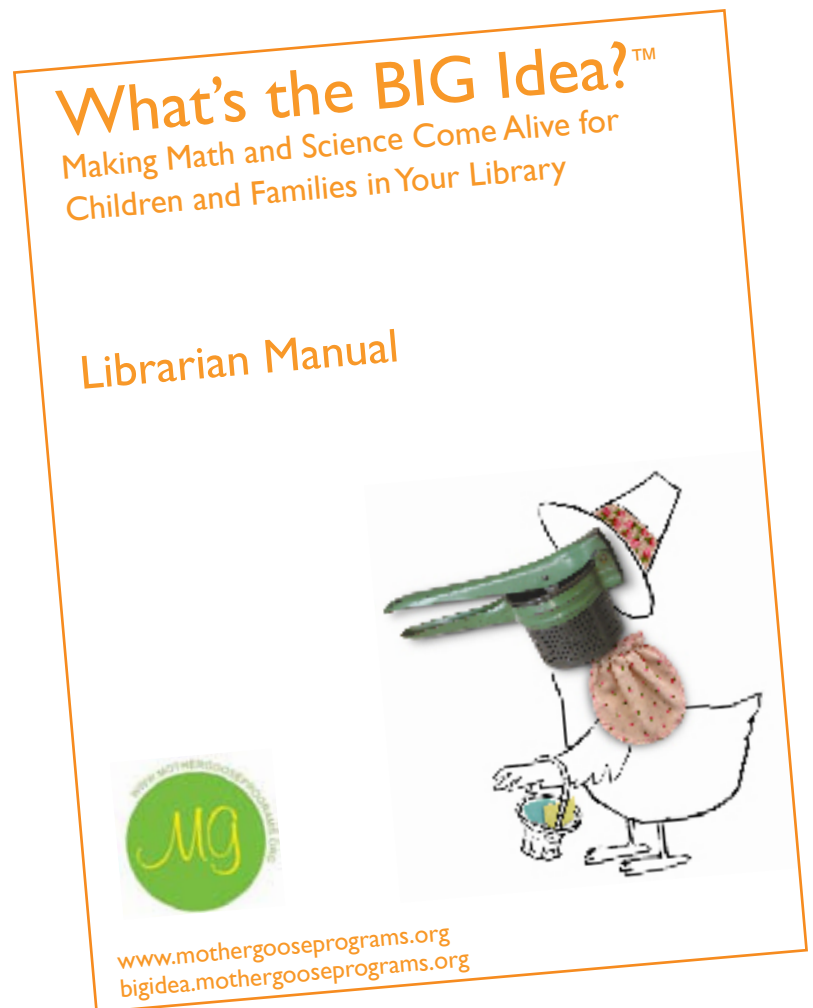


What's the BIG Idea?™

- **Get children excited about math and science**
- **Contribute to children's school readiness**
- **Use hands-on activities to make books come alive**
- **Increase the number of children attending your programs**
- **Meet national and local education standards**
- **Help children make sense of the world around them**
- **Have fun!**



Science and Math information from Mother Goose Programs:

**What's the BIG Idea?
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Educator Resource Manual**

**Mother Goose Asks "Why?"
Family Activity Guide**

**You Can Count on Mother Goose
Family Activity Guide**

www.mothergooseprograms.org

Process Skills of Science

Science as Inquiry Standard

Asking Scientific Questions

Collecting and Using Data

Communicating Information and Ideas

Designing and Making Models

Estimating and Predicting

Experimenting

Finding Patterns

Measuring

Noticing Change Over Time

Observing

Recognizing Relationships

Sorting and Classifying

Using Simple Tools of Science



Asking Open-Ended Questions

Connecting questions

What does that remind you of?

What do you notice about this character that reminds you of someone you know?

Predicting questions

What do you think will happen next if...?

Evaluating questions

What do you like about this? Why?

What don't you like? Why?

Attention-focusing questions to call attention to significant details

What do you notice about...?

What is it doing?

How does it feel?

Measuring and counting questions to generate more precise information

How many?

How much?

How heavy?

Comparison questions to foster analysis and classification

How are they alike?

How are they different?

Action questions to encourage exploration of properties and events

What would happen if...?

Problem-solving questions to support planning and trying solutions to problems

How could we...?

Reasoning questions to encourage reflection and to construct new ideas

What do you think?

Can you explain that?

What makes that happen?

Process Standards of Mathematics

Problem Solving

Communicating

Making Connections

Representing

Content Standards of Mathematics

Measurement

Understanding and using comparative words: more than, less than, bigger than, smaller than, shorter than, longer than, heavier than, colder than

Data Analysis, Statistics and Probability

Sorting objects to answer questions

Asking Open-Ended Questions

Connecting questions

What does that remind you of?

What do you notice about this character that reminds you of someone you know?

Predicting questions

What do you think will happen next if...?

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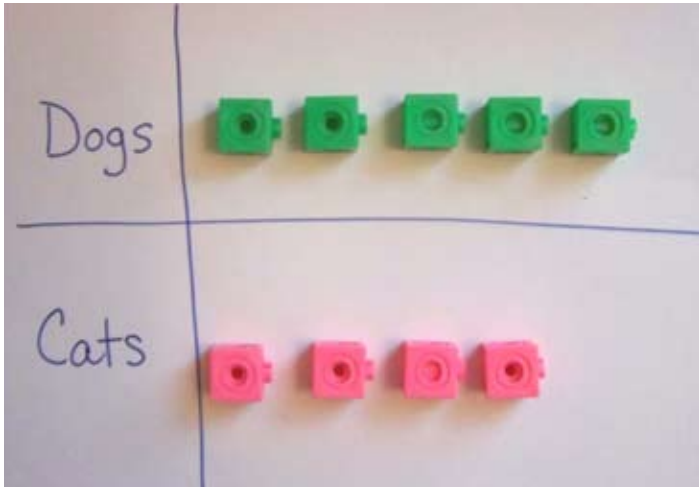
How could we...?

Reasoning questions to encourage reflection and to construct new ideas

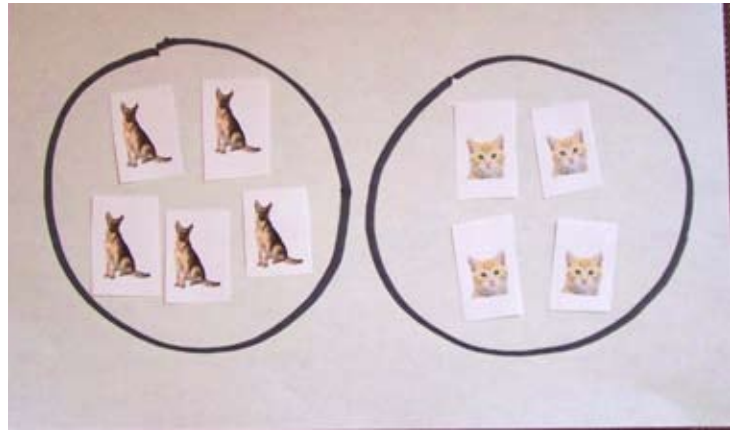
What do you think?

Can you explain that?

What makes that happen?

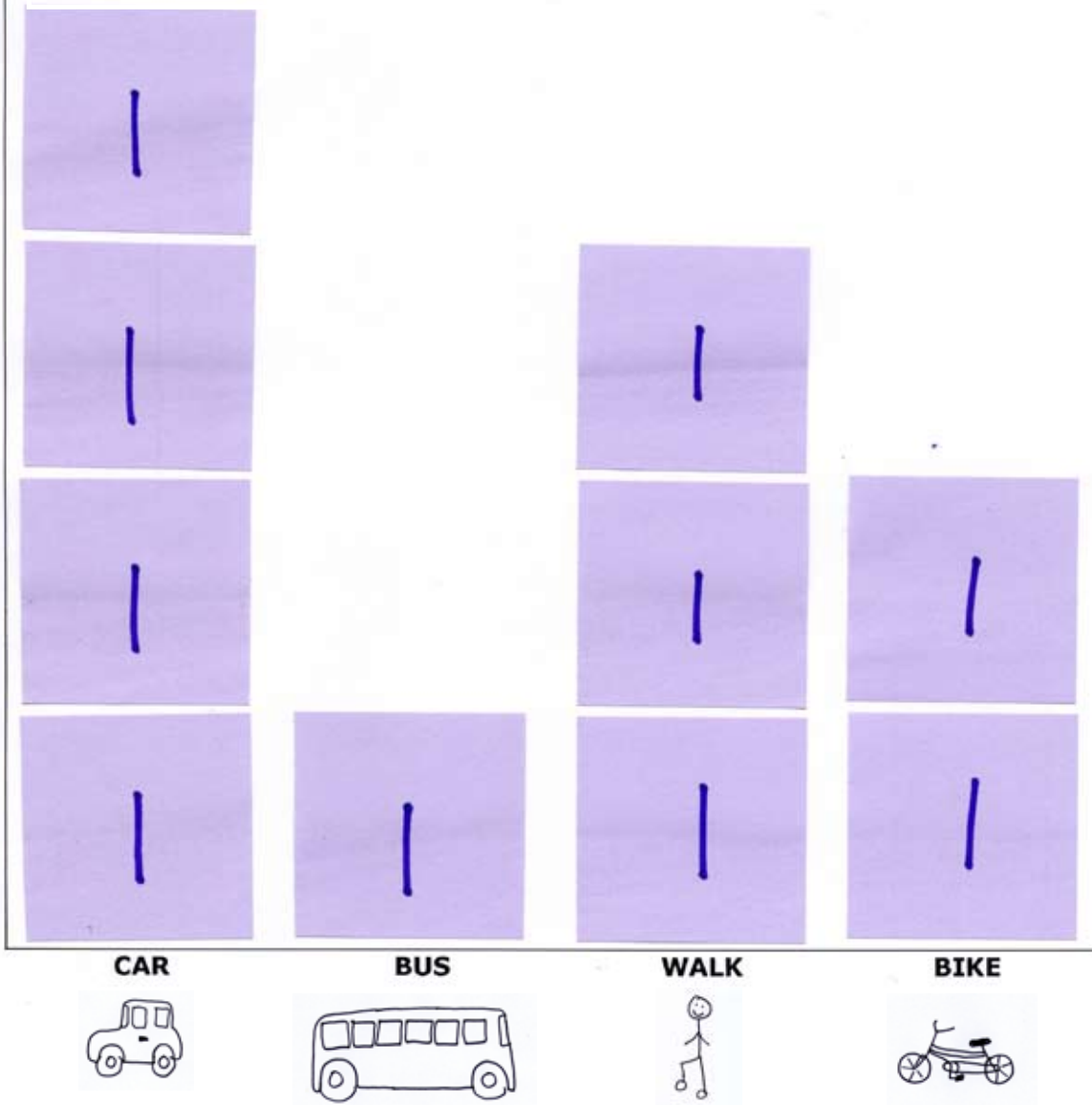


Which has more?



5 dogs...4 cats

HOW WE GOT TO THE LIBRARY TODAY



Data Collection and Graphic Representation

T- Charts help us analyze same and different between two objects or events.

Bar graphs help us compare things. We easily see less than, more than and same as.

Block Bar Graphs: 3-D bar graph made from building blocks or linking cubes can be arranged on paper, allowing each column of blocks to be identified in writing.

Pictographs are like bar graphs but pictures are used instead of bars.

Pie or circle graphs show how the whole collection of data is divided into parts or fractions having specific attributes.

Sorting Loops are shoelaces, yarn or string used for grouping sets of items.






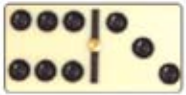


Tally chart: Each mark on a tally sheet represents one object.

Concept maps: A diagram that shows the relationships among themes and ideas.

Many measuring devices display information in a graphic manner: thermometers, calendars, schedules, clocks and auto dashboard displays are all visual representations of data being collected in a different way and place.

What's My Attribute?



ITEM	PREDICTION		WHAT HAPPENED	
	SINK?	FLOAT?	SINK?	FLOAT?
		X		X
	X			X
	X		X	
		X	X	
		X		X
	X		X	
		X		X
		X	X	






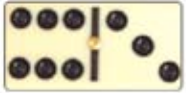


SINKERS

stone
penny
marble

FLOATERS

toy boat
feather

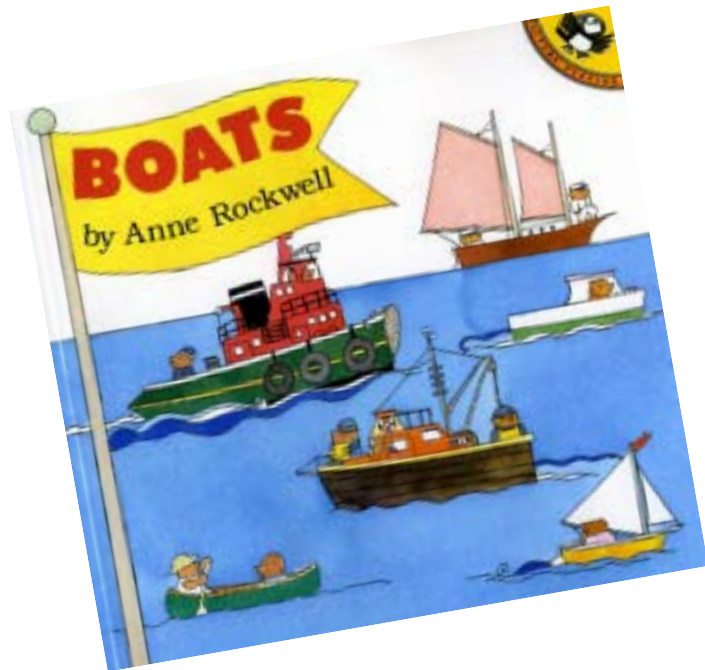
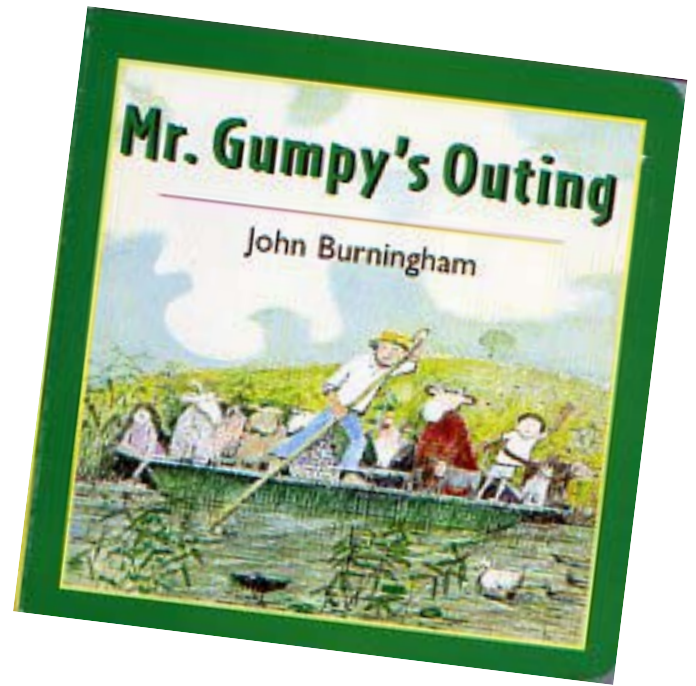
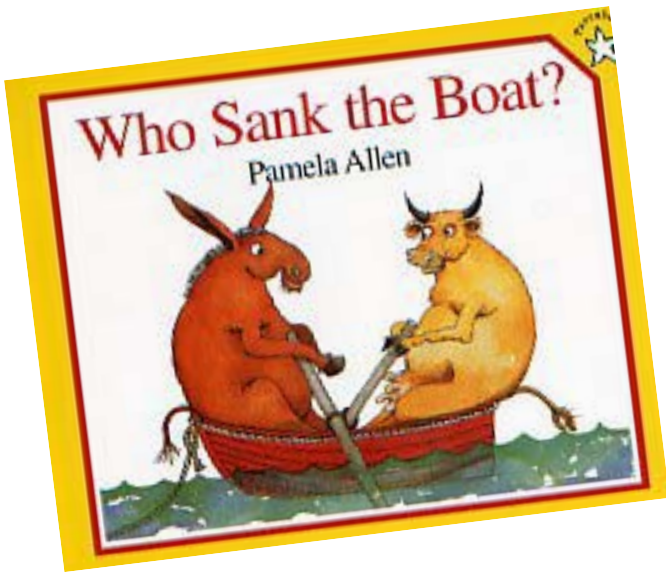


ITEM	PREDICTION		WHAT HAPPENED	
	SINK?	FLOAT?	SINK?	FLOAT?
		X		X
	X			X
	X		X	
		X	X	
		X		X
	X		X	
		X		X
		X	X	

What did we do in our Sink and Float investigation?



We:

- **asked questions**
- **explored materials**
- **made predictions**
- **tested those predictions**
- **collected and represented data**
- **communicated our findings**





How Much Cargo?

Boat/Name	estimated # of pennies	actual # of pennies
 Debbi	10	6
Sarah W. Knight	.50	25 \$1.40
Virginia	25	.54
Sara P. 	25	80
Eureka	25	
canoe ALMA	150	230 pennies
Clara II	100	81
	84	

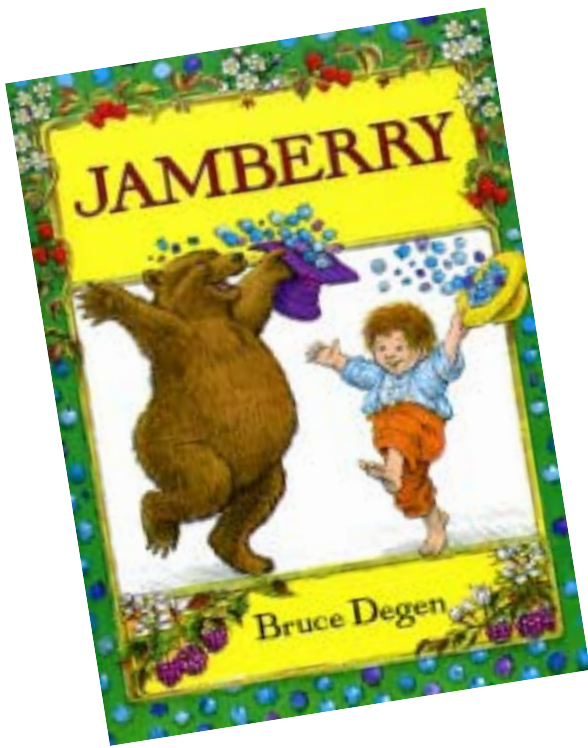
Boat/Name

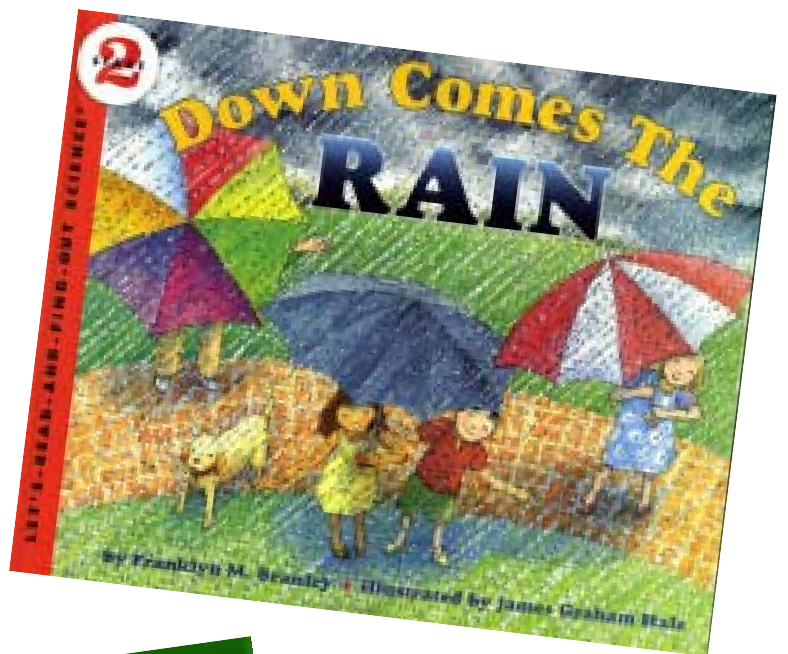
C. Knight
(Villereau)

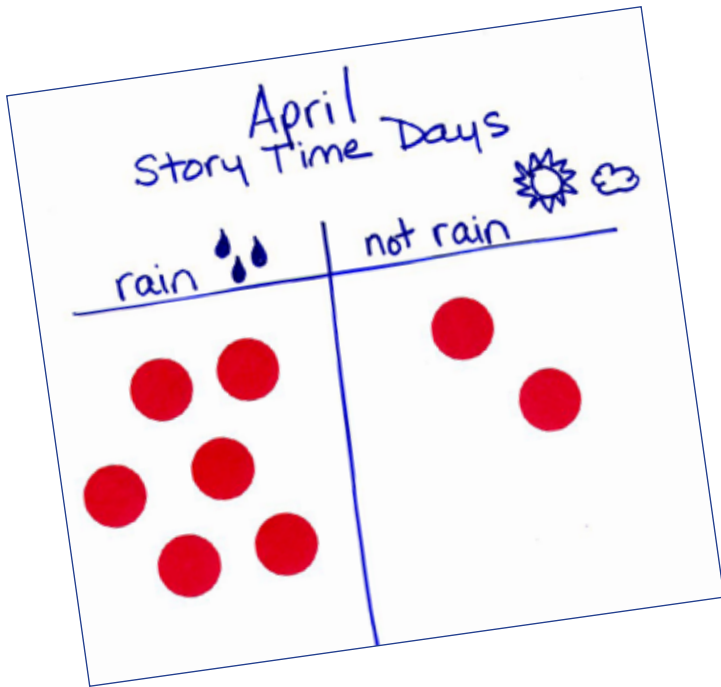
Leonath

Alma C.

H. Welliver





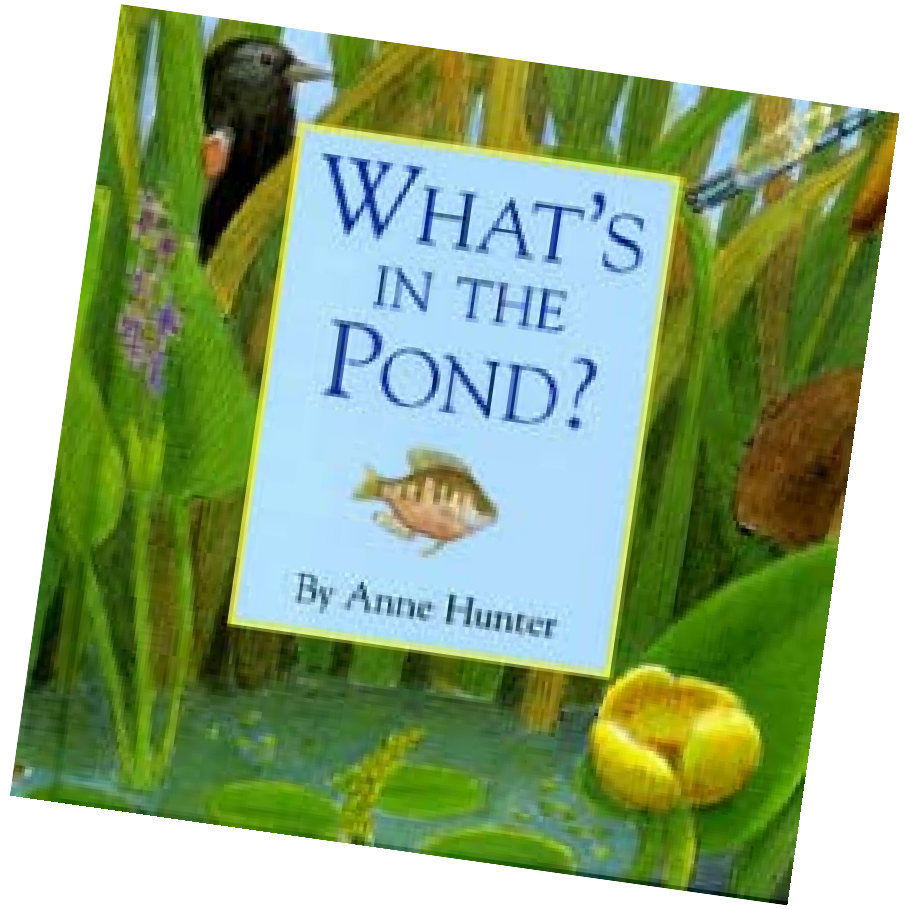
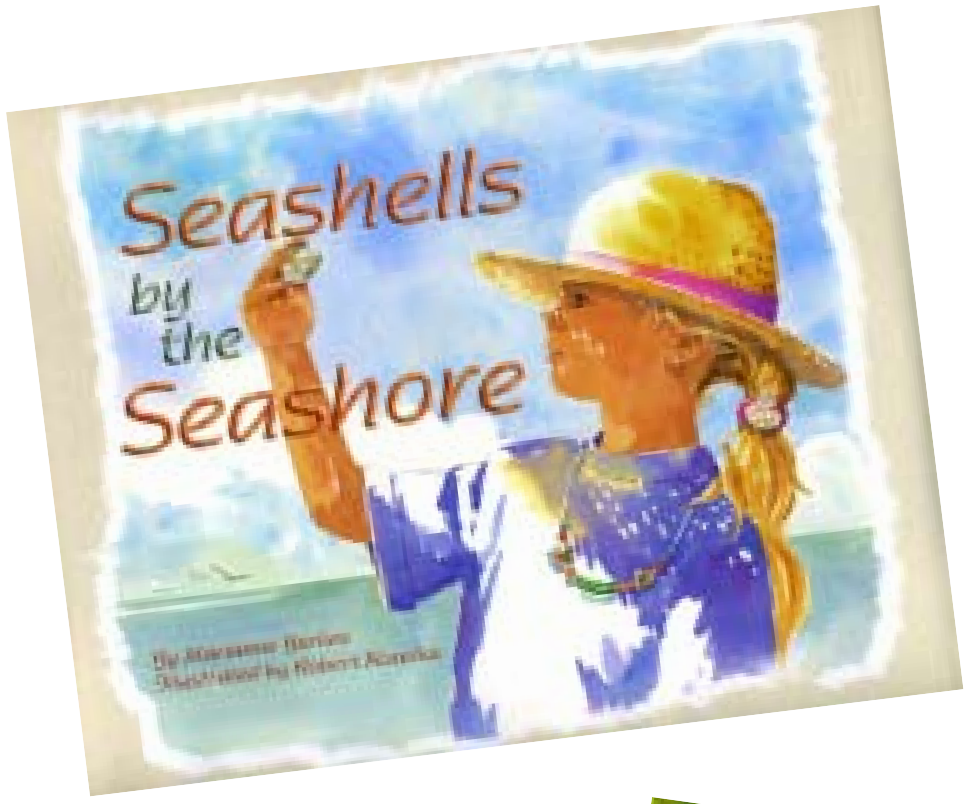


How Many...?

Children collect data and see how many times it rained on their story time day. Ask:

What do you notice about our T-chart?

Did we have more days with rain or without rain? How do we know?



Let's Try It Out in the **Water**

Hands-On Early-Learning Science Activities



by **Reynour Simon** and **Nicole Fautoux**
Illustrated by **Doug Cushman**

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Next webinar:

Finding Patterns Everywhere

August 18, 1:30 P.M.

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