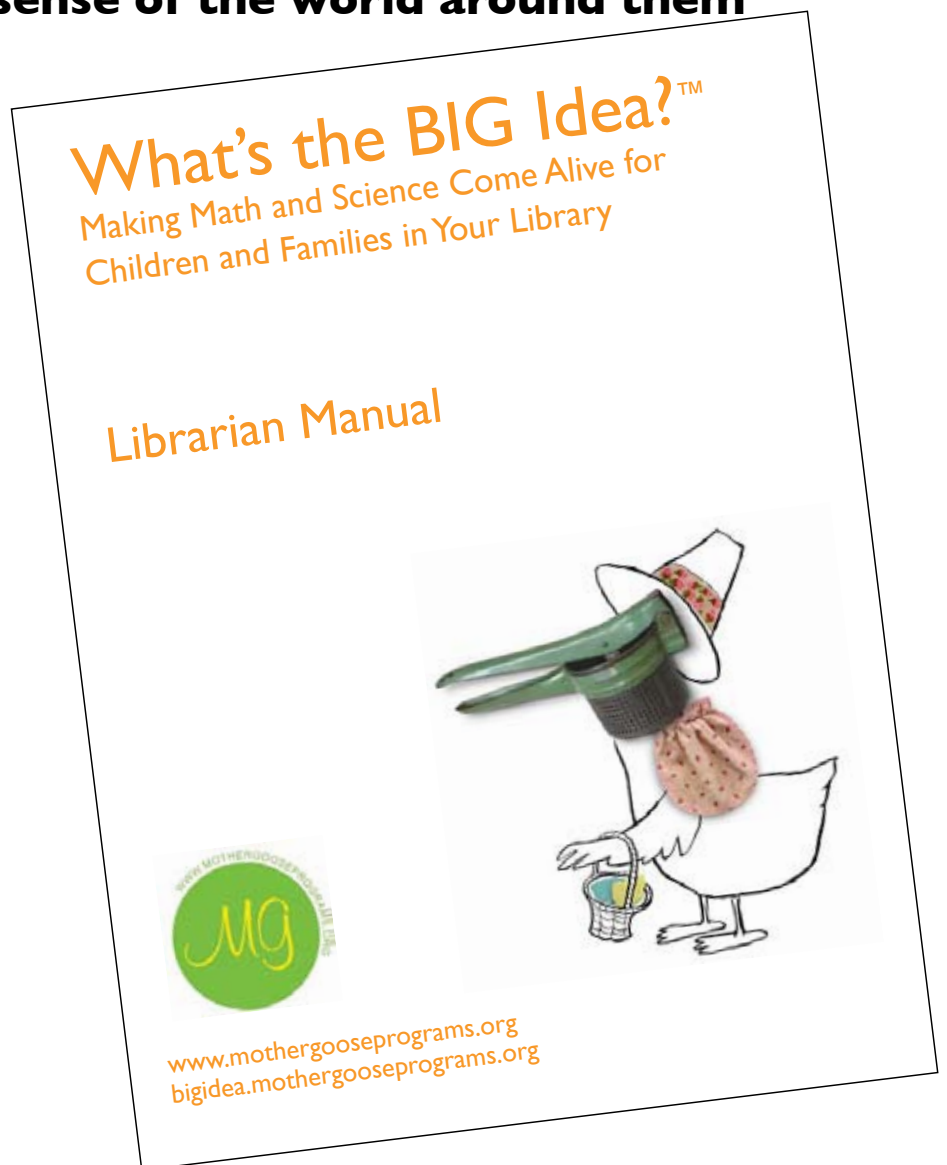


What's the BIG Idea?™

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



What is a Discovery Center?

Discovery Centers offer librarians an opportunity to engage children of all ages in hands-on exploration whenever they visit the library. Centers provide families with opportunities to talk, explore, and interact with each other. Children will experience centers at their different skill levels.



Encourage parents to join their children for activities in your Discovery Center.



If you have a small library, build a portable Discovery Center that you can move easily.

- **Build the center in an area with high visibility.** Try different places in the library.
- **Consider making a portable center** on a tray, wagon or cart.
- **Feature one activity** per Discovery Center.
- **Post simple clear directions** as needed.
- **Provide hands-on materials** including manipulatives, natural objects and everyday materials that encourage creativity, experimentation and learning.
- **Exhibit related fiction and non-fiction books** nearby.
- **Expand the visuals** by using pictures, labels, and questions or ideas.
- **Post a question or a challenge** for children and adults to think/talk about.
- **Post questions that are appropriate** for children at different developmental levels, from simple to more complex.
- **Offer different ways for children to record their responses** such as drawing, retelling, graphing, recording on take-home sheets, and photographing results or processes.
- **Provide pencils, crayons, plain paper, lined paper, graph paper, or even disposable or digital cameras** to help children record their observations, data, measurements, findings, or questions.
- **Change the center often—at least monthly.** Change the center over time by posting a new activity or challenge that can be done using the same materials.



Discovery Center

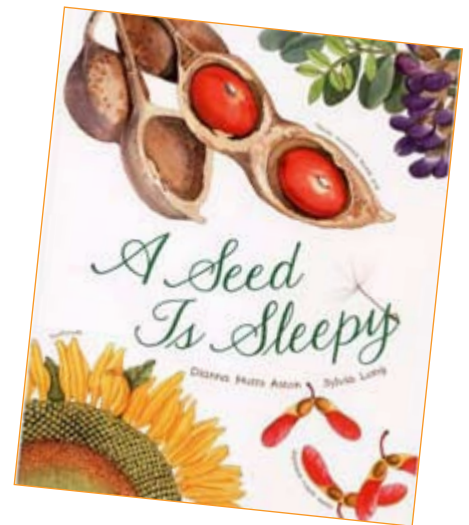
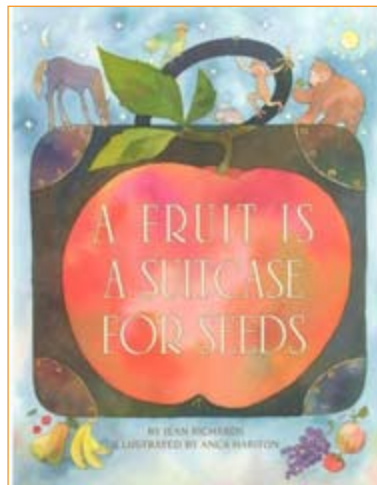
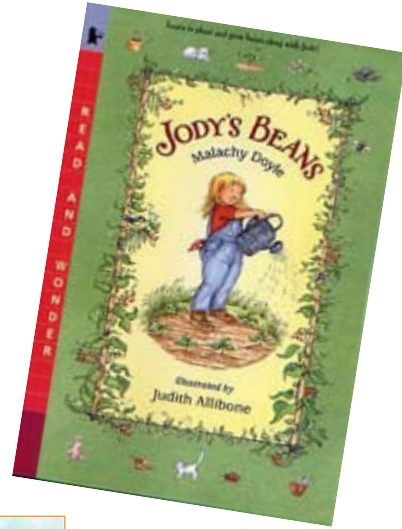
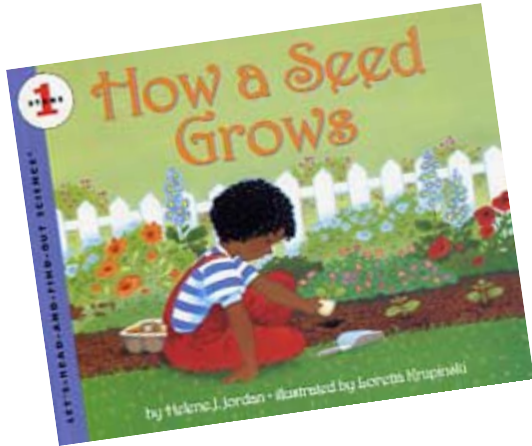
What Do You Notice About Our Plant?

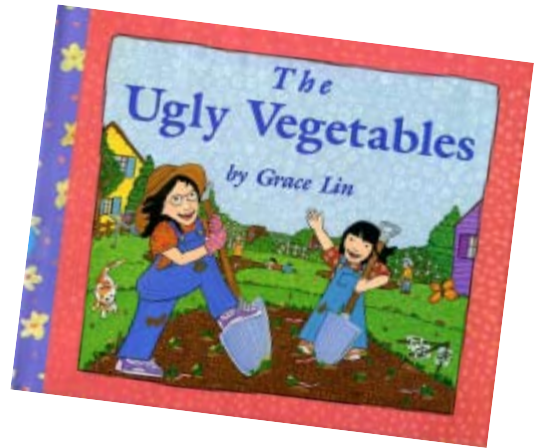
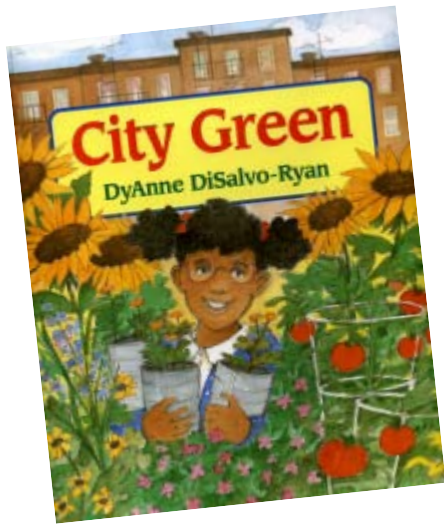
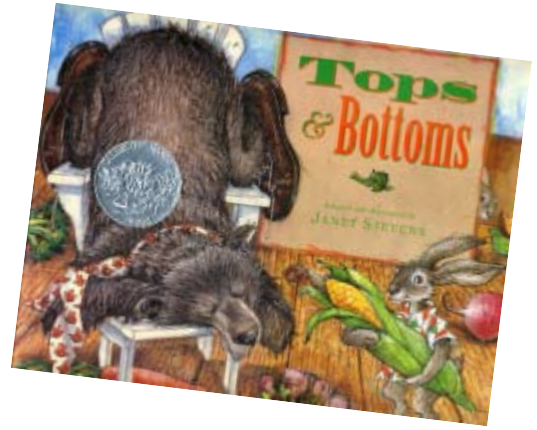
Display the plants you're growing and place a blank journal with the plant, along with measuring tools. Invite families to record observations (in words and drawings) about the plant every time they visit the library.

Some questions to ask: How has the plant changed? What do they notice? Include books about plant growth in your display.

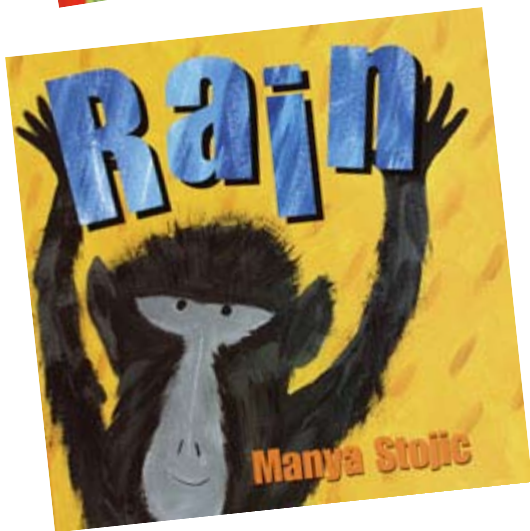


Books About Plants and Growth





Books About Weather







Discovery Center

What's the Weather Today?

Post a blank calendar page with spaces to post weather data. Display data collection tools such as thermometers, weather stamps, weather stickers and markers.

Encourage families to collect and post weather data on your weather chart each time they visit the library.

November 				1 	2 	3 
4  48 	5  52	6  44	7  48	8  37 	9  40 	10  34 
11  30	12  48 	13  46	14  47 	15  49	16  45	17  49
18  37	19  30 	20  29	21  	22	23	24
25	26	27	28	29	30	

Discovery Center

It's Five!

Display pom-poms, linking cubes, math cards, buttons, counters and other objects and challenge families to make sets that add up to 5, using as many of the objects as possible.

Make available paper and crayons so that families can represent their sets in many different ways.





Numbers and Operations

Recognizing and naming some written numerals.

Having a sense of quantity: knowing that the number name “three” and the symbol “3” mean three of something.

Counting: learning the sequence of number names (1, 2, 3).

Counting objects: learning to count an object only once, using one-to-one correspondence in counting objects and matching groups of objects.

Beginning addition: Adding two groups of concrete objects by counting the total.

Beginning subtraction: Taking away one group of concrete objects from another by taking some away and counting the remainder.

Comparing: understanding ideas such as more than, less than, and the same as and having a general idea that some numbers stand for a lot and some numbers mean a little.

Discovery Center

Measuring the Library

Display a variety of standard and non-standard measuring tools and challenge families to estimate and measure objects and distances in the library. Include paper and writing utensils for recording data.

Some challenges: How far would you estimate the circulation desk is from the table? How long is the table? How tall is the children's librarian?

Tell families to select either a unit of measure (standard unit or non-standard), find an object or distance to measure, make an estimation and then measure.

What could they measure at home?

Measure Me!





hexagon



trapezoid



square



rectangle

triangle



rhombus



rhombus



circle

Discovery Center

Shapes in this Room

Select one shape, look around the room and go on a Shape Search.

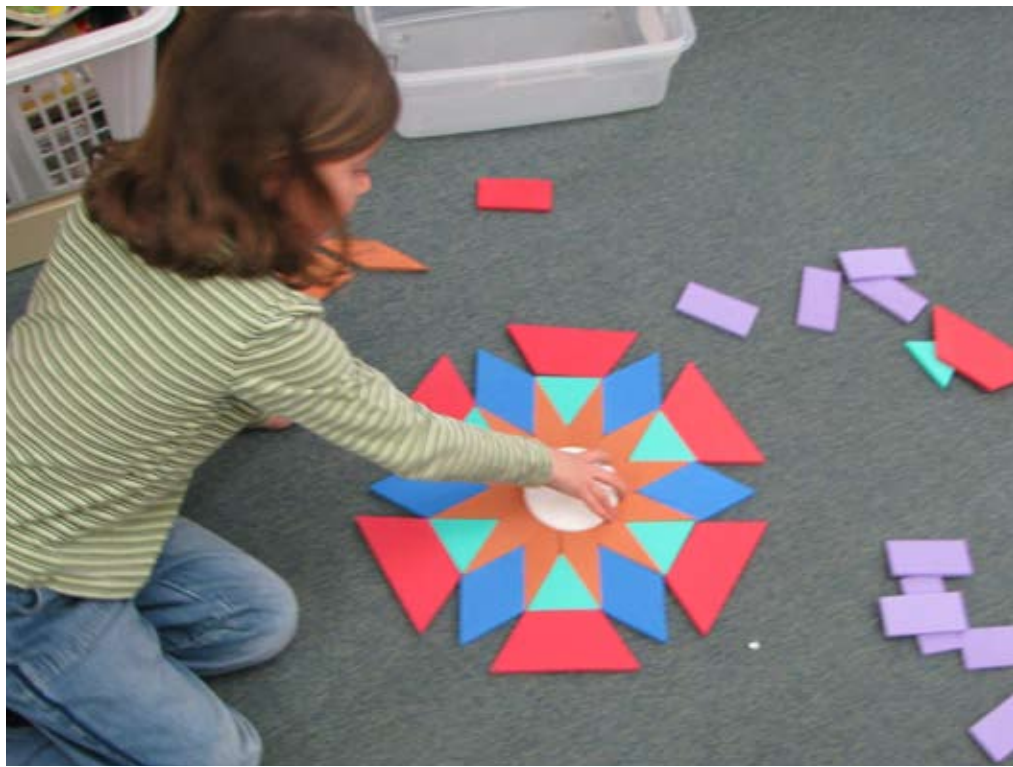
How many of this shape can you find?

How are the shapes you found in the room different from the shape you selected?

How are they the same?

To represent data:

Draw or list some of the objects you identified in the room.



Discovery Center

Tangram Shapes Challenge
for older children and adults

What's needed: Sets of tangrams

Use all 7 tangram pieces to:

Build...a triangle
a rectangle
a trapezoid
a parallelogram

Discovery Center

Take the Tangram Challenge!

What's needed: Sets of tangrams

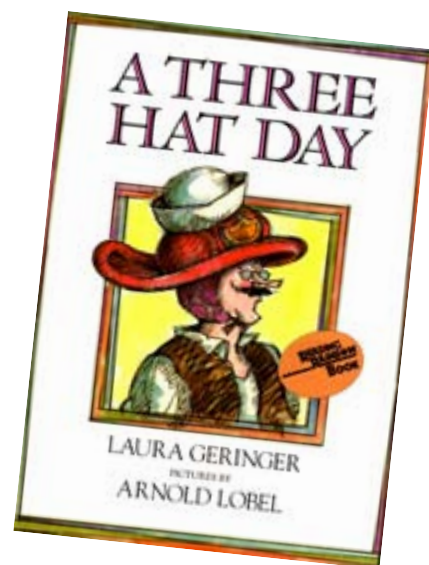
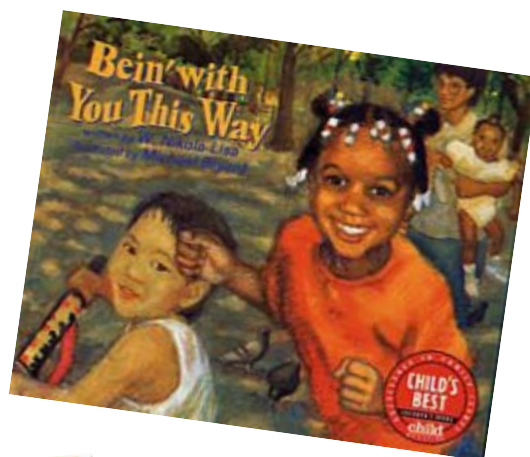
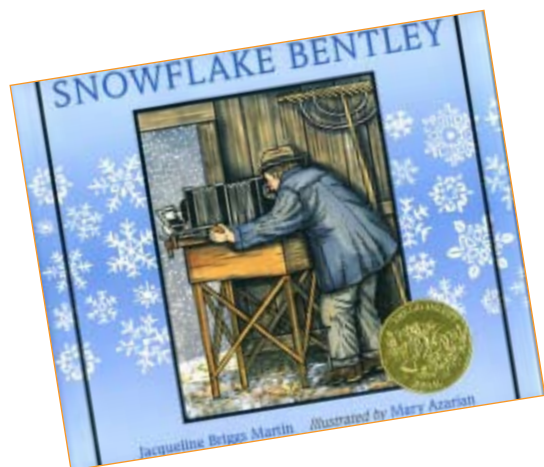
This is a very challenging activity for all ages.

Make a square, using...

- one tangram piece
- two tangram pieces
- three tangram pieces
- four tangram pieces
- five tangram pieces
- all seven tangram pieces



Books About Sorting and Collecting



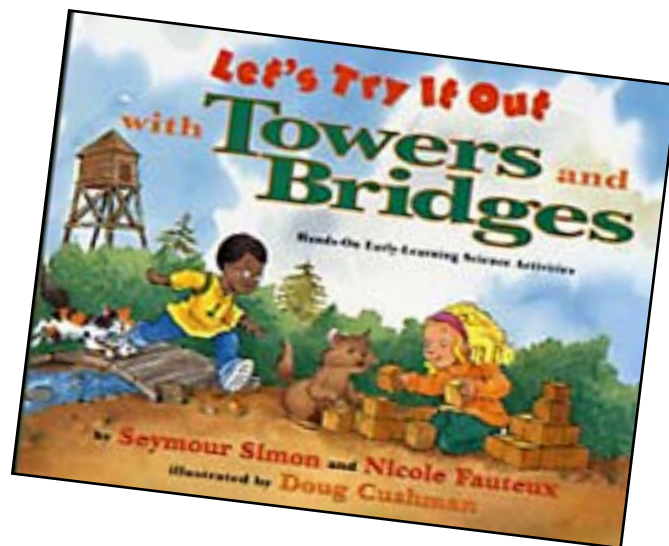
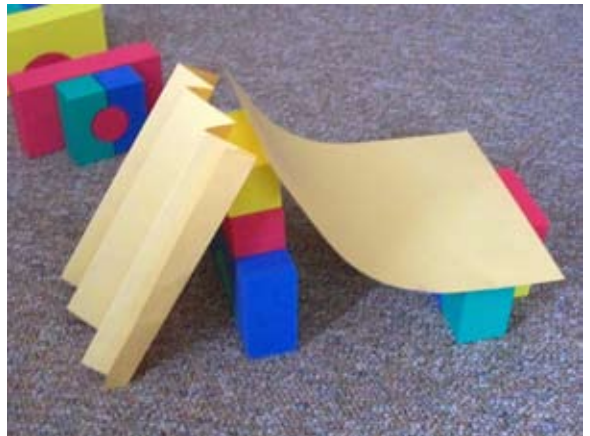
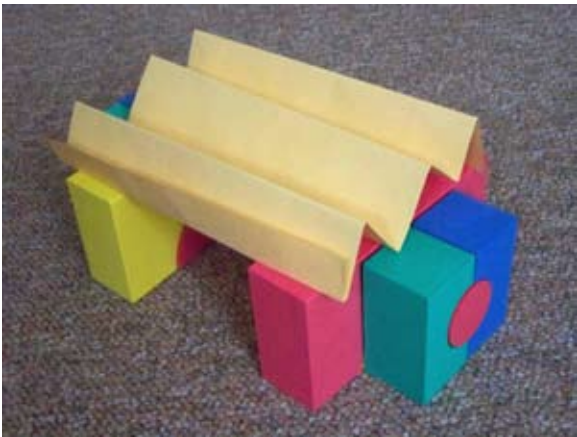
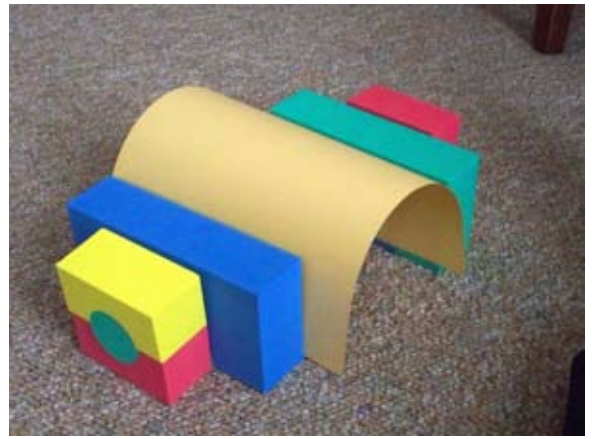
Discovery Center

What's My Rule?

Working with a partner, explore the items and choose an attribute to sort by, without telling your partner the attribute. Put your groups (sets) into sorting loops. For example: objects made from wood, objects not made from wood.

Ask your partner: What's my sorting rule?

Take turns choosing attributes, making sets and testing each other's observation skills.





Straws and Connectors
available from

www.mothergooseprograms.org

Checklist

How will the Discovery Center capture interest? (Type of materials, active involvement, chance to share ideas, etc.)

What math and science standards/skills will participants use?

How will you incorporate data collection and graphic representation?

What ages is it most suitable for: A young child? Child/parent together? Older child?

How could you adapt it for another age group?

How will the Discovery Center encourage conversation? Help share ideas?

Are there community resources that could enhance this Discovery Center?

Process Skills of Science

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



Webinar Archive

at www.mothergooseprograms.org

**What's the BIG Idea?
An Overview**

**Same and Different:
Sorting Together**

**Make a Splash with
What's the BIG Idea?
at your Library**

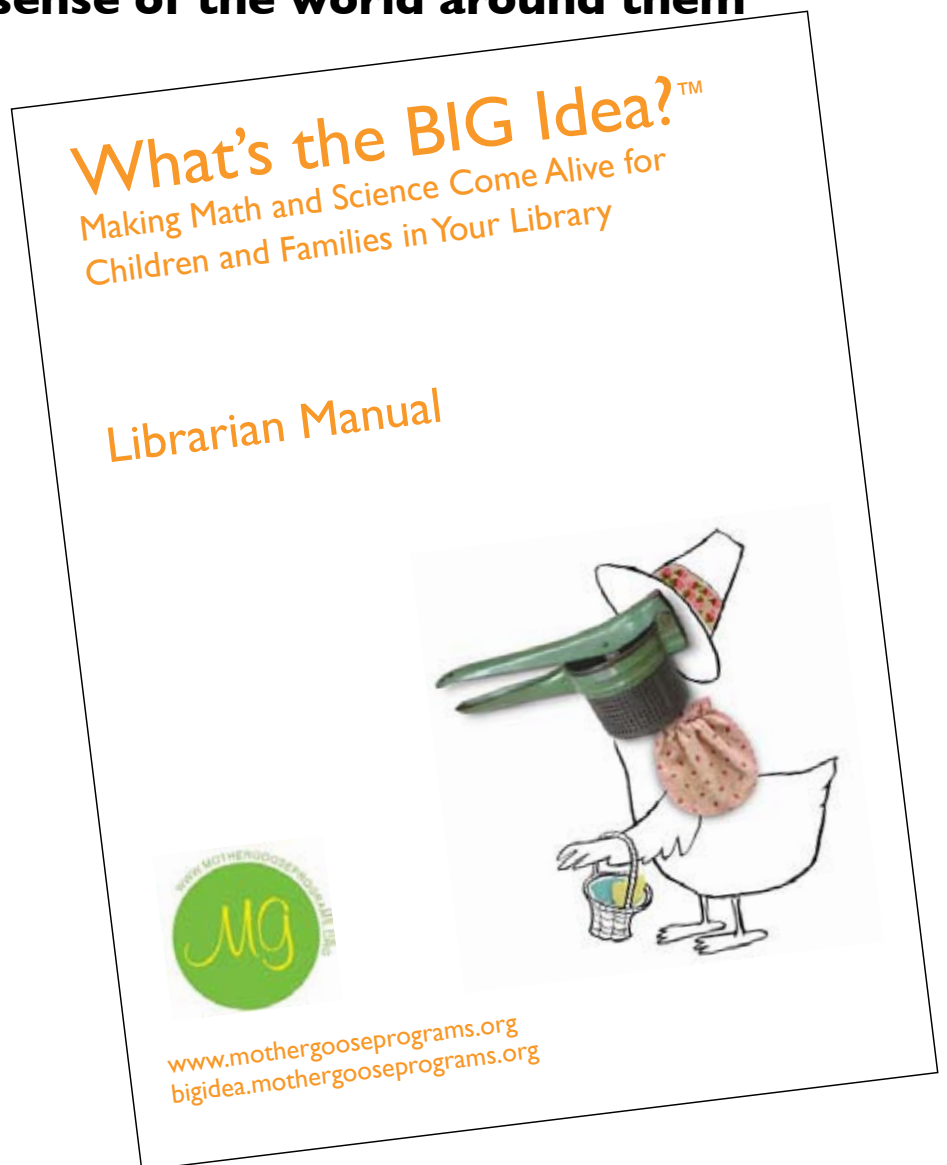
Finding Patterns Everywhere

**The Shape of Things:
Geometry for Young Children**

**More Than Counting
Numbers & Operations**

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Next webinar:

**Data Collection and
Graphic Representation**

**Thursday, April 7, 2011
1 P.M. EDT**

www.mothergooseprograms.org