

## Math Concepts and Activities

Math Concepts	Apply to Book	Your Storytime
<p><b><u>Content</u></b></p> <ul style="list-style-type: none"> <li>• Numbers and operations: counts, quantifies, connects numerals with their quantities</li> <li>• Patterns, Relationships, Functions: knowledge of patterns, sorts by characteristics, matching, function of various objects</li> <li>• Geometry and Spatial Relationships: recognizes and names shapes, various shape orientations, spatial relationships (above, below, between, on, in); sense of self in space</li> <li>• Comparison and Measurement: compares (more, less) and measures (standard and non-standard measures)</li> <li>• Time and Sequence: developing an understanding of the concept of time, especially in terms of daily routines and putting objects and events in order/sequence</li> </ul>		
<p><b><u>Process</u></b></p> <ul style="list-style-type: none"> <li>• Problem solving: guessing, estimating, asking for help Figuring out, envisioning alternative not provided</li> <li>• Representation: using graphs and pictures</li> <li>• Communication: using language of mathematics</li> <li>• Connections: applying math in different situations</li> </ul>		

### Some ways to apply the concepts:

- Math-related event in a story
- Book that lends itself to problem solving ideas
- Use math-related vocabulary words
- Count: people in room, related to book or rhyme
- Think aloud to show how you reason
- Matching and/or sorting activity by characteristic(s)
- How are things alike and different—visually (same character on different pages), size, weight, function?
- How can you sort? Activity for sorting?
- When separating or sorting, which has more? Which has less?
- Can you rearrange objects or people to show the children how addition and subtraction work?  
possible flannel board activity
- Create a visual by making a picture or design a graph to represent classification activity
- Use numerals—cardinal, ordinal (show order—first, etc.)
- Noting the order—first, second, next, then, last (for story or for storytime activities)
- Talk about fractions—half, quarter, whole
- What shapes in pictures? Using flannel board, draw in the air; include 3-D shapes
- Describe spatial relationships—position words (above, between, next to, behind, etc.)
- Action songs or activities that help children position themselves and parts of their bodies in space
- Note patterns
  - in story—use pattern to guess what will happen or be said next
  - clap or move to a pattern
  - visual patterns
- What sequence of events can you describe?
- What tools are used to explore or measure: how big, weight, volume
- Use vocabulary words of comparison like more than, bigger than, heavier than, etc.?
- Describe that has attributes like long, short, tall, cold, heavy
- Compare objects by characteristics such as size, weight
- What can you measure using standard and non-standard (straws, paperclips, feet) tools?
- What objects can you bring in to sort and match?
- Can you guess/estimate how much or how many there are of something?
- What can you do to explain how time has passed?
- Can you chart something using a graph, bar or pie chart?
- What can you keep track of over time that is related to your environment? May be a home activity