

Bibliography: Pattern Recognition in Stories: Linking Literacy and Maths in the Early Years

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As a beginning storyteller, I found that identifying the pattern of a folktale I liked helped me learn to tell it. I don't tell picture books but many are based on such patterns. They encourage early readers to engage with and respond to the story.

When I tell, I rely on creating pictures in the imaginations of the listeners. Many children with difficulties are visual learners and for them a great picture book is a boon. The Web also helps by offering some engaging, interactive sites.

Here are some classic picture books that present lots of choices as to how to interact with them and scaffold children's oracy, literacy and maths ... as well as lists of websites for patterning activities, songs and rhymes.

Repetitive sequence (some with rhyme)

One sentence or refrain is repeated eg. CARLE, Eric. Have you seen my cat?

ALBOROUGH, Jez. *Watch out, big bros coming!* (and other titles)

BLAKE, Quentin. *Mister Magnolia*

BRYANT, Sarah Cone. *The Gingerbread man*

BROWNE, Eileen. *Handa's surprise*

BURNINGHAM, John. *Come away from the water, Shirley.*

CARLE, Eric. *The Very busy spider* (and other titles)

CARLSTROM, Nancy. *Jesse Bear, What Will You Wear?*

COWLEY, Joy. *Hairy bear*

FOX, Mem. *Hattie and the fox* (and other titles)

HILL, Eric. *Where's Spot?*

HOBERMAN, Mary Ann. *A House Is a house for me.*

JINKS, Catherine. *You'll wake the baby!*

LESEIG, Theo. *Please try to remember the first of October!*

MARTIN, Bill Jr. *Brown bear, brown bear what do you see?*

VAUGHAN, Marcia K. *Wombat stew*

WADDELL, Martin. *Farmer Duck.*

Familiar Cultural sequence

Knowledge of existing sequences is brought to school from the child's cultural background, eg number, days of the week, daily routines etc.

ANNO, Mitsomaso. *Anno's counting book*

CARLE, Eric. *The Bad-tempered ladybird*
The Tiny seed
Draw me a star
 DALE, Penny. *Ten out of bed*
 FRENCH, Simon. *Guess the baby*
 GLEESON, Libby. *Where's Mum?*
 HAWKINS, Colin. *Mr Wolf's week*
 HIRST, Robert. *My place in space*
 JACK, Lynette. *When Giddy's been acting the goat*
 LESTER, Alison. *Ernie dances to the didgeridoo*

Chronological Sequence

Events in the story show an obvious time lapse.

AHLBERG, Alan. *The Adventures of Bert*
 ALLEN, Pamela. *The Potato people*
 BROWN, Ken. *What's the time, Grandma Wolf?*
 De PAOLA, Tomie. *Charlie needs a cloak* (and other titles)
 FRENCH, Jackie. *Diary of a wombat*
 HUTCHINS, Pat. *Rosie's walk*
 MATTHEWS, Penny. *A Year on the farm* USC
 ORMEROD, Jan. *Sunshine* USC
 PRATER, John. *On Friday something funny happened* USC
 ROENNFELDT, Robert. *A Day on the avenue* -> ??
 SENDAK, Maurice. *Where the wild things are*
 WAGNER, Jenny. *John Brown Rose and the Midnight Cat*
 WATSON, Joy. *Grandpa's shorts* (and other titles)
 WHEATLEY, Nadia. *Luke's way of looking*
 WIESNER, David. *Tuesday*

Cumulative sequence (often includes chronological sequence)

Each new line or episode adds a new item before repeating everything that went before. eg Old Macdonald had a farm.

ALLEN, Pamela. *Who sank the boat?*
 ARDEMA, Verna. *Why mosquitoes buzz in people's ears?*
 ASBORGNESON, Peter. *The Runaway pancake*
 BURNINGHAM, John. *Mr Gumpy's outing*
 CARLE, Eric. *Rooster's off to see the world*
 EMBERLEY, Ed. *Go away, big green monster*
 FOX, Mem. *Shoes from Granpa*
 HAYES, Sarah. *This is the bear and the scary night* (and other titles)
 HOPKINS, Perrin. *Desert dessert*
 HUTCHINS, Pat. *Goodnight owl*
 MCKEE, David. *A Bee in Ben's bonnet*

MAHY, Margaret. *When the king rides by*
 ORMEROD, Jan. *Chicken Little* (and other versions)
 SLOBOKINA, Esphyr. *Caps for sale*
 SUTTON, Eve. *My cat likes to hide in boxes*
 TOLSTOY, Alexei. *The Great big enormous turnip*
 ROSEN, Michael. *We're going on a bear hunt*
 VIPONT, Elfrida. *The Elephant and the bad baby*
 WILD, Margaret. *Chatterbox*
 WEST, Colin. *"Hello, great big bullfrog!"* (and other titles)
 Wood, Audrey. *The Napping house*
 KENT, Jack. *The Fat cat*

Interlocking sequence (some with repetition)

Each new line of an episode relates back to the previous one. The sequence breaks when a solution is found and the pattern ends. eg nursery rhyme *The Old woman and her pig*

ALLEN, Pamela. *Fancy that!*
 AHLBERG, Janet and Allan. *Each peach pear plum*
 BROWN, Ruth *A Dark, dark tale*
 The Big sneeze
 CREBBIN, June. *Into the castle*
 HAYES, Sarah. *This is the Bear*
 HOOPER, Meredith. *The Story of a woolly jumper*
 This is the house that Jack built
 The Old woman who swallowed a fly

Problem-centred sequence (some with repetition)

A problem is identified at the beginning of the story and one or several solutions are tried until resolution when the story ends like FOX, Mem. *Possum magic*

AARDEMA, Verna. *Who's in Rabbit's house?*
 ARMITAGE, David and Rhonda. *The Lighthouse keeper's lunch*
 BOURGEOIS, Paulette. *Franklin Fibs*
 CLEMENT, Rod. *Grandad's teeth*
 FOX, Mem. *But where is the green sheep?* (and other titles)
 FRENCH, Jackie. *Hairy Charlie and the pumpkin*
 GRAHAM, Amanda. *Picasso, the green tree frog*
 GRAHAM, Bob. *Has anyone here seen William?*
 HOLZWORTH, Werner. *The Story of the little mole who knew it was none of his business*
 HUTCHINS, Pat. *The Doorbell rang*
 JENNINGS, Paul. *Rascal the dragon* (series)
 MOFFAT, Frank. *Farmer Beans and the pantry frog*

NILAND, Deborah. *Annie's chair*
 RODDA, Emily. *Where do you hide two elephants?*
 SALMON, Michael. *The Pirate who wouldn't wash*
 SHANAHAN, Lisa. *Bear and chook*
 STEIG, William. *Sylvester and the magic pebble*
 THOMPSON, Colin. *Puzzle duck*
 WADDELL, Martin. *Owl babies.*
 WELLS, Rosemary. *Noisy Nora.*
 WILD, Margaret. *Bim Bam Boom*
 Little Humpty

Rhyme and Rhythm

Text is carried along by a dependable regular rhyme which encourages prediction and spontaneous joining in. eg SEUSS, Theodore Geisel, *Green eggs and ham*

ALLEN, Pamela. *The Pear in the pear tree* (and other titles)
BEMELMANNS, Ludwig. *Madeline* (series)
BODSWORTH, Nan. *A Nice walk in the jungle*
DODD, Lynley. *Hairy MacLary of Donaldson's Dairy* (series)
EMBERLEY, Ed. *Drummer Hoff*
FOX, Lee. *Ella Kazoo will not brush her hair*
GAG, Wanda. *Millions of cats*
GRIFFITHS, Andy. *The cat on the mat is flat.* (Short stories)
HAWKINS, Colin. *Jen the hen* (and other titles)
HUGHES, Shirley. *Alfie in the dark*
KNOWLES, Sheena. *Edward the Emu*
ODGERS, Sally. *Dreadful David*
SENDAK, Maurice. *Chicken Soup with Rice*
SEUSS, Theodore Geisel. *Horton Hatches the egg* (and other titles)
STICKLAND, Paul and Henrietta. *Dinosaur roar!*

Other ...

BAKER, Jeannie. *Belonging* (Compare and Contrast / Change)
 CLEMENT, Rod. *Counting on Frank* (Calculate and solve problems)
 HUTCHINS, Pat. *Changes, Changes* (and other titles)
 HOBAN, Tana. *Cubes, cones, cylinders & spheres*
Construction zone

See also: listings from your local library Eg
Concept books: Picture Book Subjects from Paramatta City Council library's
listing includes Going to the doctors, Shapes, Bedtime, Moving house etc
<http://legacy.parracity.nsw.gov.au/library/parrakidsmatta/conceptbooks.shtml>

Some useful online sources on Patterning for teachers

BLACK, Jenni. *Creative approaches to Mathematics across the curriculum*.

http://nrich.maths.org/public/viewer.php?obj_id=4770

includes links to other websites galore eg See Fibonacci patterns in plants

<http://www.mcs.surrey.ac.uk/Personal/R.Knott/Fibonacci/fibnat.html>

Exploring language: picture books

http://english.unitecology.ac.nz/resources/resources/exp_lang/picture_books.html

Improving Fluency through group literary performance (unit of work)

Focuses on the repetition, rhythm, and rhyme of (Bill) Martin's works

http://www.readwritethink.org/lessons/lesson_view_printer_friendly.asp?id=793

Maths picture books and in literature

www.emr.vic.edu.au/Downloads/mathpicturebooks.doc

McDonald, Sheri and RASCH Sally *Picture Books + Maths = Fun in Booklinks*, American Library Association. Chicago. 2004. p 9 – 14. (US titles)

<http://www.ala.org/ala/booklinksbucket/PictureBooksPlusMath.pdf>

The Minister's Cat and circle games including *Picture consequences*

http://www.teachingenglish.org.uk/think/methodology/circle_games.shtml

Party games including *Categories*

<http://www.give-presents-find-gifts.co.uk/partygames-Categories.html>

Pattern recognition in Defining Reasoning and Proof (Teaching Mathematics K-2)

http://www.learner.org/channel/courses/teachingmath/gradesk_2/session_04/section_03b.html

**Patterns in picture books*

<http://www.carolhurst.com/subjects/math/patterns.html>

Rebus mini books sample

http://store.atozteacherstuff.com/download-now/atoz_rebuspack.html

Rebus puzzles

http://www.fun-with-words.com/rebus_puzzles.html

Songs – call and response, action, circular, hand games etc

<http://alumni.media.mit.edu/~kristin/songbook/Songbook.html>

Teaching early mathematical skills: Songs for teaching

<http://www.songsforteaching.com/numberscounting.htm>

Websites on Patterning for Children

Caterpillar: Mathematics enrichment: Cambridge University
http://nrich.maths.org/public/viewer.php?obj_id=5742

Copacabana School Maths webpage with links to websites on Patterning
http://www.copacabana-p.schools.nsw.edu.au/Get_Smart_Maths_s2.htm

Curious George – pattern play
http://pbskids.org/curiousgeorge/parentsteachers/activities/pc_pattern_play.html

Kididdles complete song list
<http://www.kididdles.com/lyrics/allsongs.html>

Mother Goose Rebus rhymes
<http://www.enchantedlearning.com/Rhymes.html>

Nash's Adventures: Yrs 5 – 7: Maths adventures (cartoons): Sports Day
http://www.bbc.co.uk/schools/digger/5_7entry/5_7.shtml

Nursery rhymes: tales to learn by (Snaith Primary School, UK)
<http://home.freeuk.net/elloughton13/rhymes.htm>

Singalong songs (Midis and lyrics)
<http://kids.niehs.nih.gov/music.htm>

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BOWEN, Donna. *Mathematics in picture books and in literature*. Downloaded 10 August 2007. www.emr.vic.edu.au/Downloads/mathpicturebooks.doc

GADANIDIS, George and Hoogland, Cornelia. *Mathematics as story*. Faculty of Education, University of Western Ontario 2002. Downloaded 3 July 2007.
<http://publish.edu.uwo.ca/george.gadanidis/pdf/math-as-story-x.pdf>

HURST, Carol. *Patterns and Picture books*. Downloaded 10 August 2007.
<http://www.carolhurst.com/subjects/math/patterns.html>

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PHILP, Meg. *Resources to support the Writing Process: Emergent and Early writer and readers*. in *Reviewpoint 37*. Library & Resource Services, Queensland Department of Education, 1987.