Curriculum Laboratory
Teaching Ideas Showcase: “Toy and Movable” or “Pop-Up” Books...3 Cross Curricular Crafts

For further assistance using any of the resources in the Lab, please ask at the Curriculum Lab Information Services Desk. Visit our site through U of L Library's main page http://www.uleth.ca/lib.

This website is part of a presentation given by the author in elementary classrooms and at various teacher's conventions. It provides the user with a veritable cornucopia of pop-up card templates for classroom use, and much more. Each set of handouts represent increasingly complex pop-up pages for your students to make:

- a trio of generic pop-up card templates for any subject, based on 3 common types of pop-ups
- small crawling and flying animals pop-up card handouts for students,
- an egg theme pop-up book template

Though the second two sets of handouts mentioned above are science related, the actual pop-up pages they contain can easily be adapted to work for any subject.

Thank you to the Grade 1-4 students at Lomond School, the Grade 3 classes at Vulcan Prairieview School, and the Grade 2 students at Westminster School, for inviting me to "try out" these pop-up activities. Thank you also to my 2010 Education 2500 students for team teaching with me at these schools.

Mr. Glaister, author of this webpage, creatively uses the worm pop-up craft to create hair for himself, and shows a life cycle poster created by an Ed 2500 student:
Objectives

- Define "toy and movable books (i.e. pop-up books)," and the different types of movable pages which can be found in these types of books
- Advantages and disadvantages of toy and movable books
- Survey the history of toy and movable books
- Look at the potential cross curricular connections in creating a toy and movable book pages
- Understand how to properly handle these types of books
- Survey (and enjoy) some of the best toy and movable books from the Curriculum Laboratory collection
- Survey (and share) some of the best books, based on either the eggs craft, or the small crawling and flying creatures craft.
- Create one of 3 types of pop-up crafts, increasing in complexity:
  - 3 Generic pop-up card templates, for any subject, representing 3 major types of pop-ups: "3D," "door or flap," and "talking mouth" pop-ups
  - create 1 of 5 small crawling and flying creatures pop-up cards, based on the grade 2 Alberta science curriculum
  - a toy and movable book sampler, based on the eggs theme, suitable for grades 2 to 3 science.

List of Materials

General supplies:
- Masking tape and scotch tape
- scissors for each group
- Pencil crayons or crayons, and a black felt pen
- Glue sticks
- White sheets of paper
- Scotch tape

Introduction to toy and movable books:
- Books listed in this handout, or similar ones, grouped by the 9 types of toy and movable books
- One egg and two rags to clean up the mess!

Create 1 of 3 pop-up card templates, which can be used for any topic in the curriculum:
- "3D" Pop-Up Template
- "Talking Mouth" Template
- "Door or Flap" Pop-Up Template

Create 1 of 5 pop-up cards, based on the small crawling and flying creatures topic for grade 2 science in Alberta:
• Definitions poster for small crawling and flying creatures
• Recommended books that deal with small crawling and flying creatures, similar to the ones listed in this handout.
• Pop-up cards crafts for grade 2 science:
  o Worms
  o Mollusks
  o Crustaceans
  o Arachnids
  o Insects

Create a toy and movable book sampler, based on the eggs theme, suitable for grades 2 to 3 science:
• Books that deal with the subject "eggs," similar to the ones listed in this webpage.
• Worksheets: "Toy and Movable Books Sampler Worksheets"
• Worksheets: "Storyboard Exercise: What Words Will I Use In My Story?"
• Materials for front and back cover, and title page

Advantages and Disadvantages Of Pop-Up Books

Roxane Holmes, teacher with the Horizon School Division, discusses the use of toy and movable books in the classroom.

• Advantages:
  o These types of books can help bridge the gap between subject content and literature, e.g. mathematics and literature, or science and literature
  o They can help bridge the gap between the abstract world of literature, and the concrete world of real objects.
  o In a world saturated with media, these types of action books can bridge the gap to more involved, better quality literature.
  o Popular with children, including reluctant readers.
  o Great medium to enhance more traditional instruction.
  o Promote hands-on learning: "I hear and I forget, I see and I remember, I do and I understand (ancient Chinese proverb)."
  o Books of this type appeal to children because of their incongruity, their surprise element.

• Disadvantages:
  o These types of books can have low literary quality, because the emphasis is often on the pop-up elements, the story or textual content may be of lesser quality. In fact, children often ignore the text, and only deal with the pop-up elements!
o Are the toy and movable parts there for the sake of being there, or do they add something to the whole, something more than words or 2D pictures would not do just as well, if not better?

o These books are fragile. Students need to treat them very gently.

**History of “Toy and Movable” Books**

- 2500 B.C. -- The first books were Egyptian papyrus scrolls. Papyrus was too brittle to fold, like our books today, so they were rolled up.
- 800 A.D. -- Accordion books were published.
- 1500s -- The first pop-up books were published.
- 1760s -- Robert Sayer created flap or door books.
- 1885-1910 -- The first golden age of toy and movable books. Nister and Meggendorfer were well known authors of these types of books.
- 1980s-present -- The second golden age of toy and movable books. Many of these books are assembled outside the country, since each may have up to 100 individual parts that need to be put together.

- Bonn, Franz. TITLE *The children's theatre: a reproduction of the antique pop-up book*. Four pop-up illustrations depict scenes from family theater versions of Little Red Riding Hood, Hansel and Gretel, the Nativity, and Christmas Eve. CURLB 792 Bon *Cinderella*. NOTE Originally issued in series: Dean & Son's pantomime toy books: with five set scenes and nine trick changes. CURLB 398.2 Cin

- Nister, Ernest. TITLE *Images pour enfants sages*. NOTE "Ce livre est la reproduction de l'album The Children's Tableaux, publie a Londres en 1896, par Ernest Nister"--Back cover. CURLB 843.8 Nis

**Potential Curriculum Connections**

**Science** topic 2E: Small crawling and flying animals

**Science** topic 3E: Animal life cycles

**Art**, grades 1-6 (Taken from the Elementary Art Program of Studies, p. C1):

- **REFLECTION**--responses to visual forms in nature, designed objects and artworks. It includes analyzing structures in nature, assessing designed objects, and appreciating art.

- **COMPOSITION**--organization of images and their qualities in the creation of unified statements. In Composition, the image-making skills developed in Depiction are employed to create integrated artworks.

- **EXPRESSION**--use of art materials as a vehicle or medium for saying something in a meaningful way. In Expression, the focus is on purpose, theme and subject matter, as well as on media and techniques.
Mathematics: K-12 Shape and Space (3-D Objects and 2-D Shapes) Strand, Shape and Space (Transformations) Strand, Shape and Space (Measurement) Strand

English Language Arts: According to Alberta Education's Program of Studies, "students will listen, speak, read, write, view and represent" to achieve 5 general outcomes:

• explore thoughts, ideas, feelings and experiences,
• comprehend and respond personally and critically to oral, print and other media texts,
• manage ideas and information,
• enhance the clarity and artistry of communication, and
• respect, support and collaborate with others.

Students at Vulcan Prairieview School exploring the “The Traveling Bug Box,” (Oversize 595.7 Tra) including bug examples and bug glasses, so they can see the world through the eyes of a bug:
The “Care and Feeding” of Pop-Up Books: An Object Lesson

• Hold an egg in your hand, which happens to be the subject of the toy and movable book sampler on this website.
• Ask the students to compare an egg and a pop-up book:

<table>
<thead>
<tr>
<th>EGG:</th>
<th>POP-UP BOOK:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>Food for the brain</td>
</tr>
<tr>
<td>Life</td>
<td>Gives life to information</td>
</tr>
<tr>
<td>Hard outer shell (Protection)</td>
<td>Cover of book</td>
</tr>
<tr>
<td>Fragile inside</td>
<td>Handle very gently (Don’t pull too hard on tabs, etc.)</td>
</tr>
</tbody>
</table>

• Have a student break the egg in your hand, and compare the results to handling toy and movable books roughly.

Browse and Classify Some of the Best Pop-Up Books

Pictures of Lomond School Grade 1-4 students browsing the pop-up books:
Pictures of Vulcan Prairiewood School Grade 3 students browsing the pop-up books:

Left: Mr. Glaister seems to be covered in bugs, as a student tries the magic glasses included in a pop-up book.

Right: Mr. Glaister looks down the rabbit hole in the Alice In Wonderland pop-up book.
Directions:
- In 9 groups, take 10 minutes to browse these 9 types of toy and movable books.
- In 10 minutes, be prepared to share your favorite page from one of the books.
- Keep in mind that a good page in a toy and movable book should add something that ordinary words or pictures could not do alone. For example, does the page allow you to interact more with the subject than an ordinary book would?

There are 9 types of pages found in these books:

1) Pop-Up Pages: Pictures literally pop-up off the page at you, when you open the page.

   Carle, Eric. TITLE The very hungry caterpillar pop-up book. Eric Carle’s classic tale, now available as a delightful pop-up book. ULCUR Car

   Crowther, Robert. TITLE Robert Crowther's amazing pop-up house of inventions: hundreds of fabulous facts about where you live. CURLB 609 Cro

   Faulkner, Keith. TITLE The wide-mouthed frog: a pop-up book. NOTE A wide-mouthed frog is interested in what other animals eat--until he meets a creature that eats only wide-mouthed frogs! CURLB F Fau

   Hawcock, David. TITLE The amazing pull-out pop-up body in a book. CURLB 611 Haw

   Jones, Frances. TITLE Nature's deadly creatures: a pop-up exploration. NOTE Text and pop-up illustrations depict six of the world's deadliest creatures, including the scorpion fish, black widow, and cobra. CURLB 591.6

   Sabuda, Robert. TITLE Alice's adventures in wonderland. F Sab

   Sabuda, Robert. TITLE Brava Strega Nona. The wonderfully wise Srega Nona shares the six ingredients that make life magical in magnificent pop-up spreads. F Sab

   Stickland, Paul. TITLE Truck jam. NOTE Pop-up pictures depict several trucks engaged in various activities such as pouring sand, getting stuck in traffic, and being towed. CURLAB F Sti

   Willems, Mo. TITLE Big frog can’t fit in. NOTE Big frog really, really wants to fit in. But how? Will someone please show her? ULCU F Wil

2) Accordion Pages: Long or big pages, to show extra size.

   Arnosky, Jim. TITLE Wild tracks! A guide to nature’s footprints. NOTE Features GIANT fold-out pages of LIFE-SIZED PRINTS! ULCUR 591.470 Arn
Bergen, David. TITLE Life-size dinosaurs. NOTE Fold out pages provide life size facts about dinosaurs. CURLB 567.91 Ber

Carle, Eric. TITLE Papa, please get the moon for me. NOTE Monica's father fulfills her request for the moon by taking it down after it is small enough to carry, but it continues to change in size. Some pages fold out to display particularly large pictures. CURLB F Car

Day, Trevor. TITLE Youch! it bites!: real-life monsters, up close. NOTE Close-up photographs and text about dangerous insects, snakes, reptiles, fish, and other animals. Includes movable flaps. CURLB 591.65 Day

Jenkins, Steve. TITLE Prehistoric actual size. NOTE What is it like to come face-to-face with the ten-food-tall terror bird or the world's largest meat-eater? In this "actual size" look at the prehistoric world, which includes two gatefolds, readers will meet these creatures.


Young, Ed. TITLE Mouse match: a Chinese folktale. NOTE Printed on both sides of one continuous sheet bound at front cover, folded accordion style with the original Chinese story on the other side. CURLB 398.2 You

De Bourgoing, Pascale. TITLE The egg. NOTE Some pages are transparency overlays. CURLB 591.33 Deb Gr.3
De Bourgoing, Pascale. TITLE The ladybird. NOTE Some pages are transparency overlays. CURLB 595.76 Deb Gr.2

dePaola, Tomie. TITLE Brava Strega Nona! A heartwarming pop-up book. NOTE The wonderfully Strega Nona shares the six ingredients that make life magical in magnificent pop-up spreads. It is a glorious celebration of life and love, family and friends. CURLB F DeP

Edwards, Richard. TITLE Amazing animal alphabet. NOTE Brief verses describe animals in alphabetical order and illustrations provide clues to their identities, which can be checked by lifting the flap on each page. CURLB 590 Edw

Hill, Eric. TITLE Spot's first walk. NOTE A puppy finds many animals and surprises when his mother sends him out on his first walk. Flaps conceal parts of the illustrations. CURLB F Hil

Kaner, Etta. TITLE Who likes the sun? and Who likes the wind? NOTE Young readers will open the flaps to find the science of the sun or wind clearly explained. CURLB 523.7 Kan
Schwartz, David. TITLE *Where in the wild? Camouflaged creatures concealed...and revealed*. NOTE There are many sneaky species in this book -- many of them hidden in plain sight! Lift the flaps. Did the animals fool you? CURLB 591.472

Seeger, Laura. TITLE *The hidden alphabet*. An alphabet book in which windows open to reveal the letters hidden within each picture. CURLAB 421.1 See

Simmons, Jane. TITLE *Daisy's hide-and-seek : a lift-the-flap book*. CURLB F Sim

4) Shape and Feel Pages: Pages are shaped, or feel, like real objects. (You can search the library catalogue using these subject headings: textured books.)

Ahlberg, Janet. TITLE *The jolly postman or other people's letters*. NOTE A Jolly Postman delivers letters to several famous fairy-tale characters. Each letter may be removed from its envelope and read separately. F Ahl

Bolton, Anne. TITLE *Pyramids and mummies*. NOTE With a pyramid design and an interior that is as packed with surprises as the real thing. I call it a museum-in-a-book. ULCUR 932 Bul

Campbell, Rod. TITLE *Misty's mischief*. NOTE Brief text and illustrations follow the adventures of Misty the cat as she climbs trees, teases the dog, plays with kittens, and finally curls up to take a nap. CURLB F Cam

Carle, Eric. TITLE *The very busy spider*. NOTE The farm animals try to divert a busy little spider from spinning her web, but she persists and produces a thing of both beauty and usefulness. The pictures may be felt as well as seen. CURLB F Car

Carle, Eric. TITLE *The very hungry caterpillar pop-up book*. NOTE Eric Carle’s classic tale, now available as a delightful pop-up book. ULCUR F Car

Cottin, Menena. TITLE *The black book of colors*. NOTE This title invites readers to imagine living without sight through remarkable illustrations done with raised lines and descriptions of colors based on imagery. Braille letters accompany the illustrations and a full Braille alphabet offers sighted readers help reading along with their fingers. CURLB 535.6 Cot

Drake, Ernest. TITLE *Dragonology: The complete book of dragons*. NOTE This book purports to be a facsimile of an original, published on a print run of 100 copies in 1895. I call it a museum-in-a-book. CURLB 398.2454 Dra

Ehlert, Lois. TITLE *Hands*. NOTE Book covers are life-sized photographs of work gloves with interior page flaps and shapes. CURLB F Ehl

Pelham, David. TITLE *Sam's surprise*. See also *Sam's Sandwich* and *Sam's Pizza*. While supposedly helping his sister Samantha make a delicious sandwich, mischievous Sam sneaks
some rather unpleasant ingredients into it. Features flaps and unfolding illustrations. CURLB F Pel

Van Fleet, Matthew. TITLE Fuzzy yellow ducklings: fold-out fun with textures, colors, shapes, animals. NOTE Uses fold-out illustrations and simple text to introduce different textures, colors, shapes, and animals. CURLB F Van

Wells, Rosemary. TITLE Goodnight Max. NOTE On board pages, with materials to touch and feel. CURLB F Wel


5) Step-cut Pages: Smaller pages that hide something behind them

Carle, Eric. TITLE The very hungry caterpillar. CURLB PBK F Car Also, The very hungry caterpillar pop-up book. CURLB F Car.

Hooper, Meredith. TITLE Seven eggs. NOTE Presents seven different eggs whose contents are revealed when the reader lifts the flaps on which they are drawn. CURLB F Hoo

Jonas, Ann. TITLE Where can it be? NOTE A child looks all over the house for her missing blanket. Uses flaps to reveal what the child finds behind closed doors. CURLB F Jon

Scarborough, Kate. TITLE Hornets' nest. NOTE Follows the step-by-step process of a hornets' nest being built. Features step-cut pages to emphasize the way things get bigger as they grow. CURLB 595.798 Sca

6) Hole Pages: A hole shows a secret behind it

Ehlert, Lois. TITLE Color zoo. NOTE Introduces colors and shapes with illustrations of shapes on die-cut pages that form animal faces when placed on top of one another. NOTE Caldecott Honor book, 1990. CURLB 152.14 Ehl Emberley, Ed. TITLE Go away, big green monster! NOTE Die-cut pages through which bits of a monster are revealed are designed to help a child control nighttime fears of monster. CURLB F Emb

Hoban, Tana. TITLE Take another look. NOTE By viewing nine subjects both in full-page photos and through die-cut pages, the reader learns that things may be perceived in different ways. CURLB 152.14 Hob

Seeger, Laura Vaccaro. TITLE One boy. NOTE Instructing young readers in the ways of the world while moving them with magic is the method beautifully realized in the die-cut concept books of Laura Vaccaro Seeger. ULCUR 512.72 See
Sis, Peter. TITLE Madlenka’s dog. NOTE With his considerable wit and charm Peter Sis uses lift-up flaps and peek-through windows to take us on another delightful romp around Madlenka’s city block. CURLB F Si.

7) Other formats -- Multiple Format Toy and Movable Books, including:

Pull-Tab Pages: Pull a tab to move an object.

Wheel Pages: Turn the wheel and see what happens.

Baum, L. Frank. TITLE The wonderful wizard of Oz. NOTE A pop-up version of the classic story with a shorter version of the text. CURLB F Bau

Cony, Frances. TITLE Old McDonald had a farm. NOTE Includes tabs, flaps, and dials to manipulate. CURLB 782.42 Con

Crowther, Robert. TITLE Robert Crowther's most amazing hide-and-seek alphabet book. CURLB 421.1 Cro

Crowther, Robert. TITLE Robert Crowther's pop Goes the weasel! And 25 more pop-up nursery rhymes. CURLB 398.8 Cro

Crowther, Robert. TITLE Robert Crowther's Pop-up Olympics. CURLB 796.48 Cro

Dahl, Roald. TITLE Charlie and the chocolate factory pop-up book. NOTE Explore Willy Wonka’s amazing world with this unique pop-up, pull-tab, lift-the-flap edition of Roald Dahl’s much-loved story. ULCUR F Dah

Grinberg, Delphine. TITLE Construction. CURLB 690 Gri

Kish, Ely. Dinosaur babies. Movable features depict a variety of dinosaurs in different stages of development, from hatchlings to juveniles ready to migrate with the herd. 567.91 Kis

Sabuda, Robert. TITLE The Christmas alphabet. CURLB 394.2663 Sab

Van Fleet, Matthew. TITLE MOO. Ingeniously designed flaps and pull tabs, accompanied by pettabel textures, offer a flock of interactive fun. ULCUR 636 Van

Willems, Mo. TITLE Big frog can't fit in. CURLB F Wil
8) **Eye Trick Pages:** Helps us see objects in a new and surprising way

Bolton, Linda. TITLE *Hidden pictures.* CURLB 701.1 Bol. NOTE Every picture tells a story, but some tell more than one...if you know exactly where and how to look...the magic of art and the delightful visual riddles.

Anno, Mitsumasa. TITLE *Anno's magical ABC: an anamorphic alphabet.* CURLB 421.1 Ann

Edwards, Wallace. TITLE *The painted circus: P.T. Vermin presents a mesmerizing menagerie of trickery and illusion guaranteed to beguile and bamboozle the beholder.* CURLB 152.148 Edw. The circus is back in town, and this time it's a show-stopping tour de force conjured by the weird and wonderful artistry of award-winning Wallace Edwards. CURLB 152.148 Edw

Gardner, Beau. TITLE *The turn about, think about, look about book.* NOTE Presents graphics that can be viewed in four different ways by holding the book on each side. CURLB 152.14 Gar

Gukova, Julia. TITLE *All mixed-up! : a mixed-up matching book.* NOTE Composed of split pages that can be mixed and matched to form different pictures. CURLB F Guk

Jennings, Terry. TITLE *101 amazing optical illusions: fantastic visual tricks.* NOTE Provides simple instructions for creating a variety of visual tricks. CURLB 152.148 Jen


Jonas, Ann. TITLE *Round trip.* NOTE Black and white illustrations and text record the sights on a day trip to the city and back home again to the country. The trip to the city is read from front to back and the return trip, from back to front, upside down. CURLB F Jon

Oakley, Graham. TITLE *Graham Oakley's magical changes.* NOTE Illustrations without text depict a variety of humorous situations. Pages cut horizontally across the middle enable the reader to mix up the scenes. CURLB F Oak

Simon, Seymour. TITLE *Now you see it, now you don't.* NOTE This classic book allows readers to explore dozens of visual riddles, perform amazing optical experiments, and learn how artists use optical illusions to make their work more life-like—or create original worlds. CURLB 152.148 Sim
9) How to Make Toy and Movable Books: Shows you how to make your own pop-up or toy and movable books.


Carter, David A. *The elements of pop-up : a pop-up book for aspiring paper engineers*. CURLB 745.54 Car


Irvine, Joan. *Easy to make pop-ups*. CURLAB 745.54 Irv

Irvine, Joan. *How to make pop-ups*. CURLB 745.54 Irv

Irvine, Joan. *How to make holiday pop-up cards*. NOTE Provides instructions for making pop-ups for special events, particularly holidays which kids are involved in celebrating and for which they exchange cards. CALL 745.54 Irv

Irvine, Joan. *How to make super pop-ups*. CURLB 745.54 Irv

Johnson, Paul. *Get Writing! Creative book-making projects for children*. Includes templates for zigzag, origami, 4 page and 16 page books, as well as projects for many types of pop-up books: shape books, topsy-turvy books, surprise cards, pop-up theatres, accordion books, etc. 741.64 Joh


Silver, Donald M. *Lift & look science : mini-books and manipulatives* NOTE 15 reproducible flap books, fold-outs, pull-throughs, and mini-books that make science come alive for young learners. NOTE For grades K-2. CURLB 502 Sil

Valenta, Barbara. *Pop-o-mania : how to create your own pop-ups*. NOTE Provides instructions for creating all kinds of pop-up pictures, books, invitations, and more. CURLAB 745.54 Val
Students Making Pop-Up Crafts

Each craft, below, represents increasingly complex pop-up pages for students to make:

- a trio of generic pop-up card templates for any subject, based on 3 common types of pop-ups
- small crawling and flying animals pop-up card handouts for students, and
- an egg theme pop-up book template, using most of the major types of pop-ups

Craft #1: Create 1 of 3 Generic Pop-up Cards Using Templates

(Good For Any Subject Or Special Occasion!)

These pop-up templates are not complete in and of themselves: they need a subject or special occasion to be added to each one. The 3 templates represent some of the more common types of pop-ups:

- "3D" Pop-Up Template
- "Talking Mouth" Template
- "Door or Flap" Pop-Up Template

Before students create pop-up cards from these templates, they need to provide the following information:

- The students need to draw and label at least 2 pictures related to their school subject or special occasion.
- The students need to write down 5 sentences related to their pictures, representing information on their subject or special occasion.
- They will use these pictures and information to complete one of these pop-up card templates.

Each template has 3 types of instructions that will help students complete the cards:

1. Text instructions are found on the card templates themselves.
2. If the text instructions are not clear for the students, page 1 of each template includes pictures with the instructions.
3. Note the "Key" found on each card, which gives you very useful hints on when and where to fold, cut, or pull or push out a pop-up element.

Students can pick one of the above pop-up card templates, and, armed with their pictures and information, start creating!
Craft #2: Small Crawling and Flying Animals or Life Cycles

Pop-Up Cards: Researching Your Topic

Below are some recommended books related to the five types of small crawling and flying creatures crafts students can create. The groups can browse their own library under the Dewey Decimal numbers below, or perhaps use some of these books from the Curriculum Laboratory collection:

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Dewey Decimal</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dewey, Jennifer Owings</td>
<td>Once I knew a spider</td>
<td>F Dew</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Spinelli, Eileen</td>
<td>Sophie’s masterpiece</td>
<td>F Spi</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Carle, Eric</td>
<td>The very busy spider</td>
<td>F Car</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>West, Thomas</td>
<td>Zoe’s webs</td>
<td>F Wes</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Jenkins, Steve</td>
<td>What do you do with a tail like this?</td>
<td>573.87 Jen</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Parsons, Alexandra</td>
<td>Amazing poisonous animals</td>
<td>591.65 Par</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Sill, Cathryn</td>
<td>About Arachnids</td>
<td>595.4 Sil</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Scarborough, Kate</td>
<td>Spider’s nest</td>
<td>595.44 Sca</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Simon, Seymour</td>
<td>Spiders</td>
<td>595.44</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Berger, Melvin</td>
<td>Spinning spiders</td>
<td>595.44 Ber</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Kalman, Bobbie</td>
<td>The life cycle of a spider</td>
<td>595.44 Kal</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Coster-Longman, Christina</td>
<td>Creepy crawlies</td>
<td>595.7 Cos</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Parsons, Alexandra</td>
<td>Amazing spiders</td>
<td>595.44 Par Gr. 2</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Howitt, Mary Botham</td>
<td>The spider and the fly</td>
<td>821.8</td>
<td>Arachnids</td>
<td></td>
</tr>
<tr>
<td>Author</td>
<td>Title</td>
<td>Collection</td>
<td>Subject</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------</td>
<td>------------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>Carle, Eric</td>
<td>A house for hermit crab</td>
<td>F Car</td>
<td>Crustaceans</td>
<td></td>
</tr>
<tr>
<td>Wiesner, David</td>
<td>Flotsam</td>
<td>F Wie</td>
<td>Crustaceans</td>
<td></td>
</tr>
<tr>
<td>Peet, Bill</td>
<td>Kermit the hermit</td>
<td>F Pee</td>
<td>Crustaceans</td>
<td></td>
</tr>
<tr>
<td>Knutson, Barbara</td>
<td>Why the crab has no head</td>
<td>398.2 Knu</td>
<td>Crustaceans</td>
<td></td>
</tr>
<tr>
<td>Smithyman, Kathryn</td>
<td>What is an arthropod?</td>
<td>595 Smi</td>
<td>Crustaceans</td>
<td></td>
</tr>
<tr>
<td>MsDonald, Megan</td>
<td>Is this a house for hermit crab?</td>
<td>595.3844 McD</td>
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**Craft #2: Small Crawling and Flying Animals or Life Cycles**

**Pop-Up Cards: Create The Cards**

- **Definitions poster for small crawling and flying creatures**. The students will need a copy of this poster to fill in the blanks on each card, once they have completed the card.
- Pop-up cards crafts for grade 2 or 3 science:
  - **Worms**
  - **Mollusks**
  - **Crustaceans**
- Arachnids
- Insects

The instructions for each card are included. The cards could be integrated into a introduction or review book for the unit.

Vulcan Prairieview Grade 3 students making pop-up cards to learn about life cycles:
Samples of Completed “Small Crawling And Flying Animals” Pop-Up Cards:
Researching Your Topic

Before each of the 9 groups can create their own toy and movable book page on the topic, "Who Lays Eggs?" they need to find pictures and information on the different kinds of animals that lay eggs. The groups can browse their own library under the Dewey Decimal numbers below, or use some of these books from the Curriculum Laboratory collection:

Isenbart, Hans-Heinrich. TITLE A duckling is born. NOTE Follows the development of a mallard duckling from the mating of his parents to his first swim, less than an hour after birth. CURLB 598.41 Ise
Heller, Ruth. TITLE Chickens aren't the only ones. NOTE A pictorial introduction to the animals that lay eggs, including chickens as well as other birds, reptiles, amphibians, fishes, insects, and even a few mammals. CURLB 591.16 Hel
Kalman Bobbie & Smithyman, Kathryn. TITLE *The life cycle of a spider.* NOTE Presents information about spiders, including different species, reproduction, differences between males and females, and some ways to protect spiders from environmental damage. CURLB 595.44 Kal

Lauber, Patricia. TITLE *What's hatching out of that egg?* NOTE Text and illustrations introduce a variety of eggs and the animals that hatch out of them. Includes ostrich, python, bullfrog, and monarch butterfly eggs among others. CURLB 591.39 Lau

Mound, L. A. (Laurence Alfred) TITLE *Amazing insects.* CURLB 595.7 Mou Gr.2

Pope, Joyce. TITLE *Reptiles.* NOTE Describes the physical characteristics and habits of lizards, snakes, crocodiles, turtles, and other reptiles. CURLB 597.9 Pop

Seed, Deborah. TITLE *The amazing egg book.* CURLB 574.33 See

Selsam, Millicent Ellis. TITLE *A first look at bird nests.* NOTE An introduction to the many places birds make their nests, such as chimneys, cliffs, bushes, traffic lights, and window ledges, and the unusual things that might be built into the nests. CURLB 598.256 Sel

Tesar, Jenny E. TITLE *Insects.* NOTE Examines the physical characteristics, senses, metabolism, and life cycle of insects and discusses how they fit into the food chain. CURLB 595.7 Tes Gr.2

Tesar, Jenny E. TITLE *Spiders.* NOTE Explores the physical characteristics, senses, metabolism, reproduction, and growth of spiders. CURLB 595.44 Tes

Wallace, Karen. TITLE *Imagine you are a crocodile.* CURLB 597.98 Wal

Watts, Barrie. TITLE *Birds' nest.* CURLB 598.8 Wat

Craft #3: “Who Lays Eggs” Pop-Up Book

Create The Pages

*Movie of Egg Pop-Up Book Sampler made by the Grade 1-2 Class at Lomond School*

Directions:
1) Give each of 9 groups one set of page sets 1 to 9 from: "Toy and Movable Books Sampler Worksheets."
2) Walk them through what the finished sampler may look like, by clicking on Lomond School sampler movie, above.
3) As a whole group, use the worksheets, as well as the "Storyboard Exercise: What Words Will I Use In My Story?" to write a story to go with the worksheets.
4) Have each group construct one of pages from the worksheets. HINT: It is easier to draw and color your toy and movable book pages before you do the cutting and folding, as outlined on each each page.

5) Page sets 10-12 are optional, as they are more difficult than some of the earlier page sets. 5) Glue the individual pages together back-to-back, to make a finished book. You may want to make a nice front and back cover for the book, and a title page.

**Search For Pop-Up Craft Ideas On The Web**

- Templates for the pop-ups in "The Elements of Pop-Up" (Click on the surprise box)
- A virtual history of pop-up and movable books
- Joan Irvine's How To Make A Pop-Up Page
- Robert Sabuda's Explore Pop-Ups
- The pop-up world of Ann Montanaro
- ThinkQuest's pop-up book instructions
- A variety of holiday pop-up card crafts from Enchanted Learning

**Works Cited:**


Prepared by Bill Glaister, Curriculum Lab Coordinator. First "field tested" in the classroom of Roxane Holmes, Teacher, Horizon School Division (and then other classrooms). Many thanks to her expert advice, and fantastic students, even if you did find the dead and decaying mouse right in the middle of reading and making pop-up books:
ODE TO YOUR CLASSROOM MOUSE (R.I.P)

Said the Lomond school kids to the dead mouse hidden in their classroom:

"Dead, dead mouse
Where are you?
You're in my nostrils,
But elsewhere, too!
We've searched the classroom
Through and through,
But still your perfume sticks like glue!"

Said the dead, dead mouse to the Lomond school kids:
"I'll be sure to show myself,
Your smelly pest,
But only when you have
A classroom guest!"
Thank you again for inviting me as your classroom guest.