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MAKING STAR BOOKS

Teaching patterns to learn about STEAM & systems

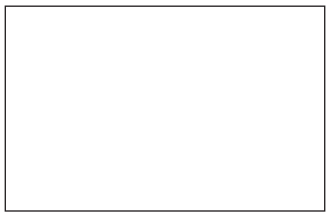
star book

TEMPLATE

fold

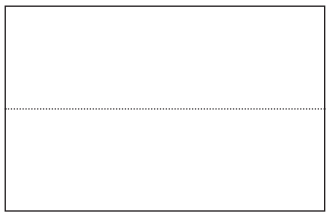
cut

5	4	3	2
6	7	8 **back cover**	1 **front cover**

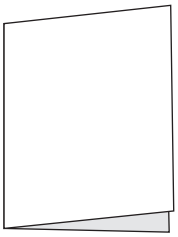


begin with a sheet of paper

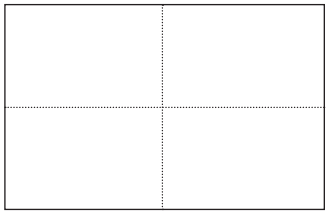
fold lengthwise



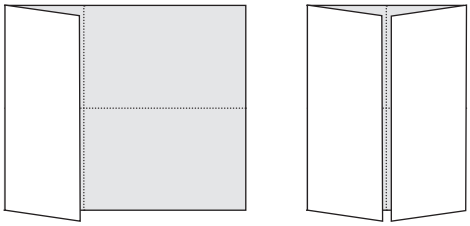
unfold, leaving a crease



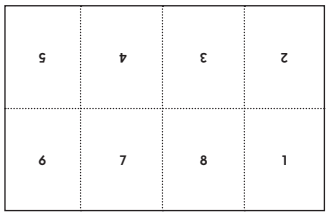
fold in half,
short edge to short edge



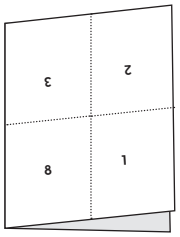
unfold, leaving a second crease



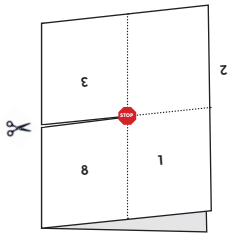
fold each short edge to the centre crease



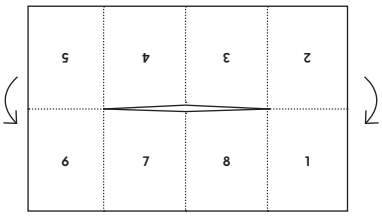
unfold, leaving two more creases



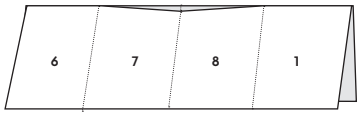
fold in half again,
short edge to short edge



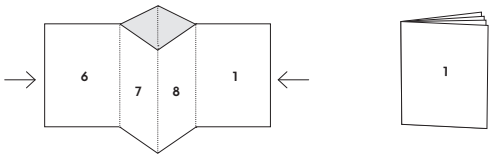
cut between centre panels
stop cutting in the middle



unfold, leaving two more creases



fold lengthwise again



press outer panels towards centre, until the gap
in the centre are forms a plus shape, then fold,
leaving front cover (panel 1) on top

Teaching to learn

Teaching can be one of the best ways to learn.

In this in-class project, students are invited to make a book, which together form a library of patterns. In effect, students will "teach" the reader.

One way to organize the project is for everyone to choose a different pattern to find. Alternatively, everyone could simply select an item and research (mostly through observation) what patterns form it, looking at structure, surface, and context. I have also asked classes to all work with a star theme, since stars have a lot of flexibility and scope as an item.

Learning outcomes

This project facilitates a wide variety of learning outcomes, but a natural fit would be math or STEAM material. Students should be able to connect at least one skill they are already confident about to the project's requirements, allowing them an entry point into the work to be completed.

Since these books are an intersection between math, systems, and creative or aesthetic expression, they may also be considered to be a simple design project. The goal of the project is to help the reader see and identify the pattern that the book-maker has been researching. An alternate goal is to study of a single item, like a leaf, and the book-maker is showcasing the different patterns that combine to form that item. In either case, the goal is to observe > apply that observation creatively > teach the reader.

Project materials

· paper (preferably tabloid)
· scissors (or X-acto knife + cutting mat + ruler)
· found natural item (like a leaf)
· drawing supplies: pens, pencils, etc.
· charcoal or an ink pad (optional)
· tape or glue (optional)

Digital option

Because the star book has a simple structure, for classes in which students are using layout software, this project could be made using scans, digital illustration, photos, or other digital material.

This is actually a great way to learn about simple book layout, because it teaches things like imposition and basic layout strategies.

This project also really lends itself well to rudimentary printing technologies, like typewriters or photocopiers.

However, it's nice to keep things simple!

Making a star book

A star book is a simple folded booklet that doesn't require any binding.

This book can be designed in a layout program or pre-folded and decorated by hand.

The maker folds a sheet of paper four times and then cuts it once. If you use a larger tabloid sheet, your booklet will have pages that are 11 x 14cm. If you start from a standard letter size sheet, you get a mini booklet with pages that are 7 x 11 cm.

Once the star book is folded, it makes a little booklet with a front cover, a back cover, and six pages in between.

The reason it is called a star booklet is the distinctive star shape the book has when you look at it from the top.

Design students might use some special tools to make one of these books, including a bone folder, which makes smooth folds. Also, design students often use a knife to cut paper, like an X-acto knife. However, I've worked with just my fingers and a pair of safety scissors. If you're careful, you can still make a very nice book.

The length of a starbook is well-suited to a little comic or 'zine, as well.

Process

1. Observing and collecting item
2. Examining shape of item, tracing or drawing
3. Examining surface if item, rubbing or drawing
4. Considering context of item: what systems and patterns is it connected with or found within?

Option: For a longer project a pressed plant could be included in the final spread

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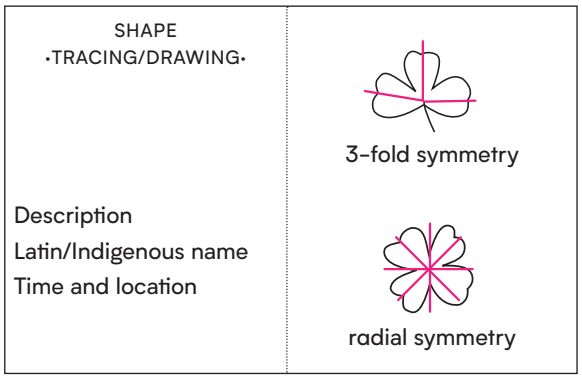
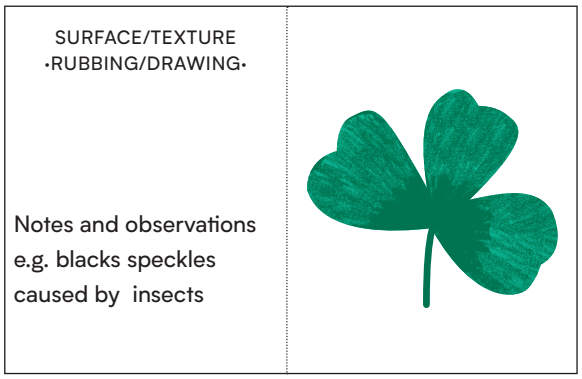
This project is adapted from *Wings, Waves, and Webs: Patterns in Nature* by Robin Mitchell Cranfield for Greystone Books

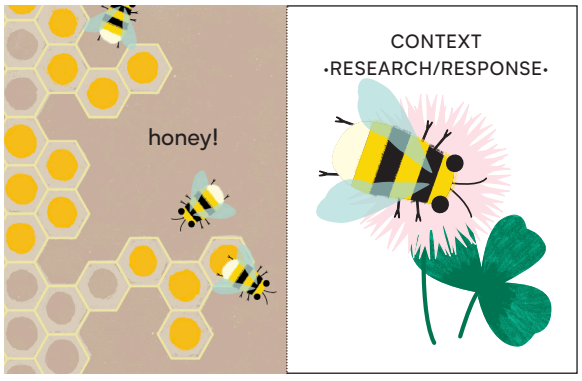
PAGE 1 / COVER



PAGE 2 PAGE 3



PAGE 4 PAGE 5



PAGE 6 PAGE 7

PAGE 8 / BACK COVER

Example

A book about a clover, found at UBC. Pages 2–5 are for more structured observation.

The student might discover leaf shape, serrated leaf edges, mottled colour, speckles, spots, or evidence of insects, symmetrical, or branching leaf patterns.

In context (pages 6–7), the student might discover the clover's relationship with honey production or with ground cover or with origin of the plant's location.