

Paper Engineering – Lesson 8

Bringing paper to life, from 2-Dimensional to 3-Dimensional



Project Learning Objectives:

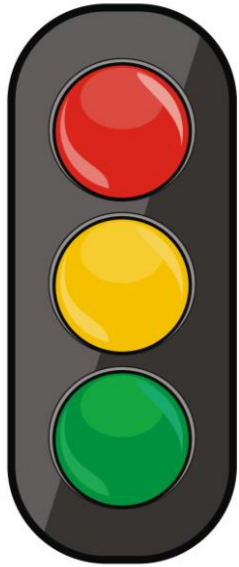
To create a 3D pop-up book suitable for a small child.

Week 1	Week 2	Week 3
Analysis of Pop-up books. Have a go at some basic pop-up techniques.	Explore the essential techniques for accurate pop-up. Continue to have a go. Introduce variations of pop-ups.	Using knowledge learnt so far, introduce mechanisms. Know the difference between them.
Week 4	Week 5/6	Week 7/8
Discuss key criteria for a good story or pop-up book. Plan the story using a storyboard.	Evaluate the story plan so far. Start to make the pop-ups and mechanisms for all the pages.	Finish the pages, with text and decoration. Create the cover and assemble the finished book.

Success criteria:

- ▶ (SC1) I can explain advantages and disadvantages of pop-up books
- ▶ (SC2) I can identify advantages and disadvantages of making 3D shapes from flat sheets.
- ▶ (SC3) I can describe how folding a flat (2D) sheet of paper makes it a 3D object.
- ▶ (SC4) I can describe how different cuts and folds can make different 3D shapes.
- ▶ (SC5) I can make a pop-up designs following instructions.
- ▶ (SC6) I can make a pop-up designs from a blank piece of paper.
- ▶ (SC7) I can identify the difference between pop-ups and mechanisms
- ▶ (SC8) I can create a short, fun story and make it into a pop-up book.

Introduction



Are you on track to finish?
What do you need to do today?
Have you moved nearer to the 'green' zone?

What needs to be on the cover of a book?
Design the front and back cover for your book, don't forget whether you're laying out in portrait or landscape!
Don't forget the spine of the book too!

<p>Back Cover</p>	<p>Spine</p>	<p>Front Cover</p>
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Book Cover

Synopsis
of what
the book
is about

Publisher's
details and
date

Price,
barcode

Spine: Book title, author
and Illustrator, publisher

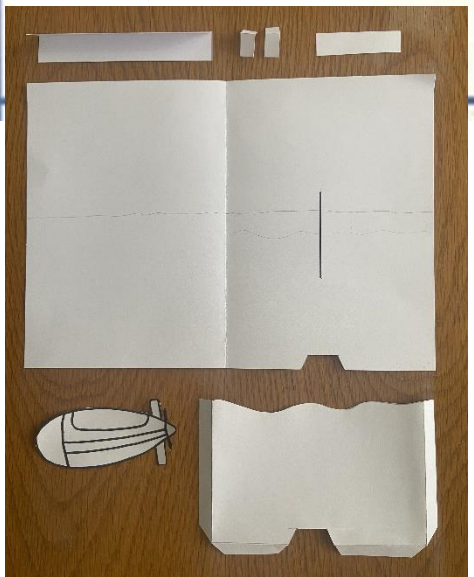
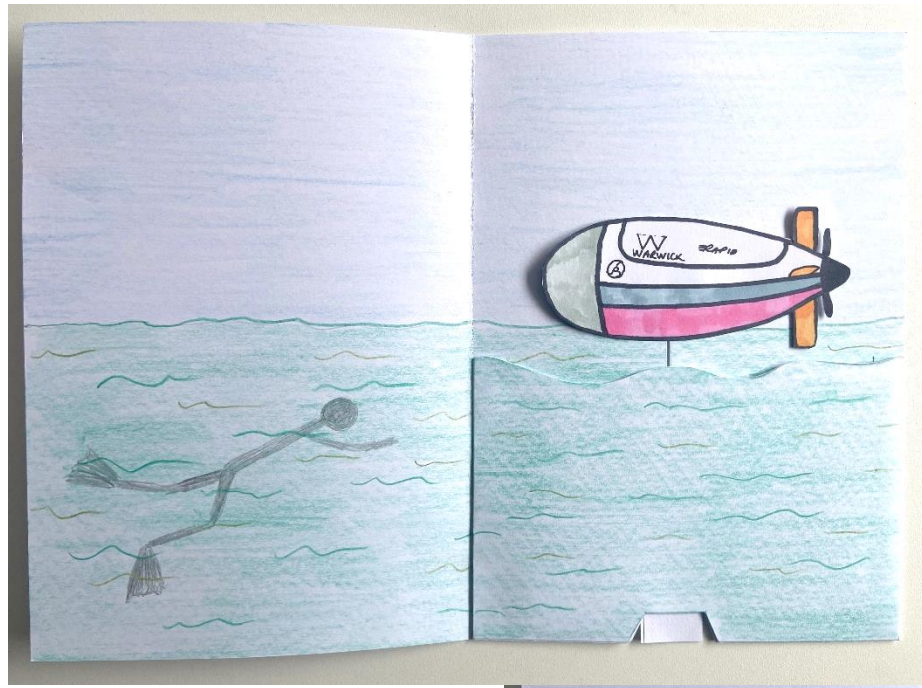
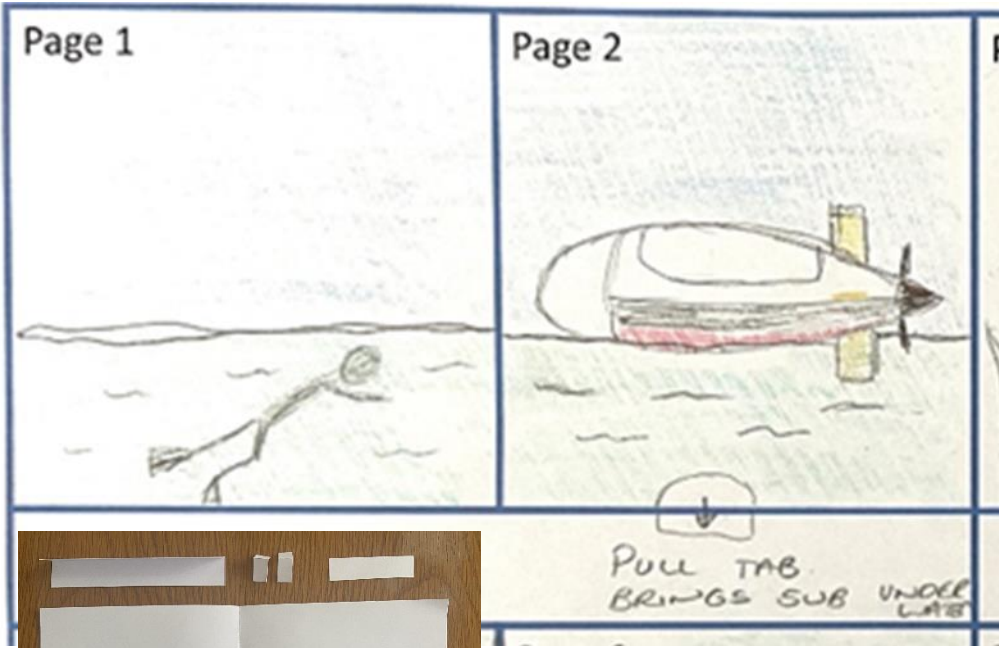
Book title

Image of
characters

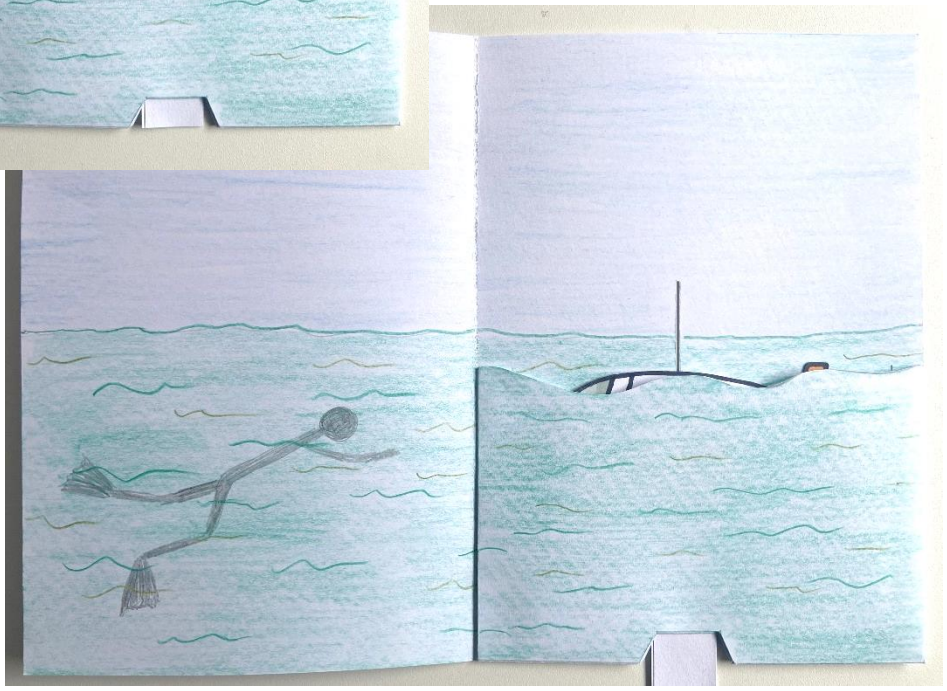
Author
and
Illustrator



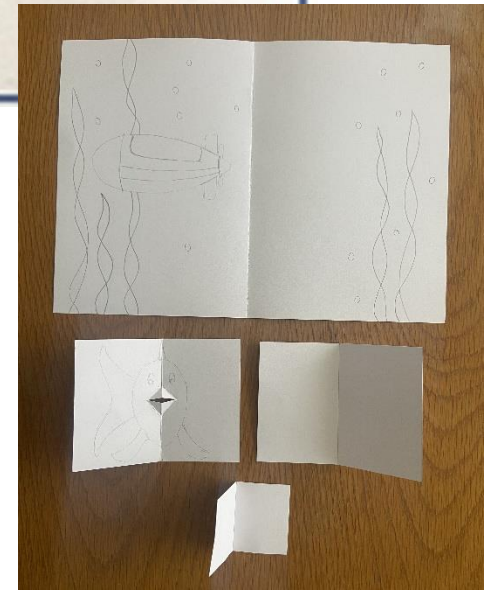
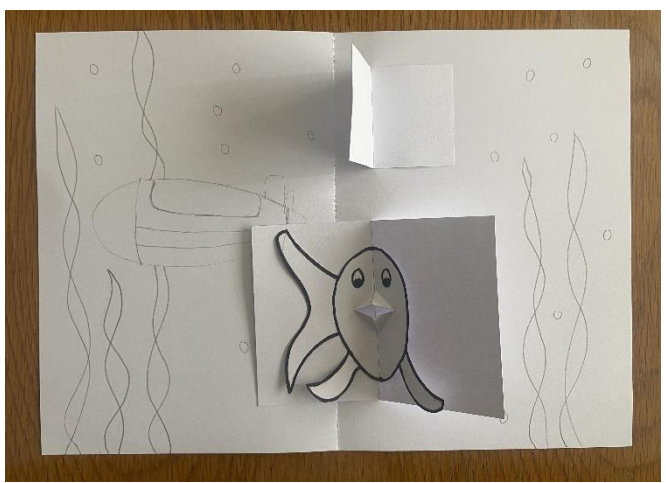
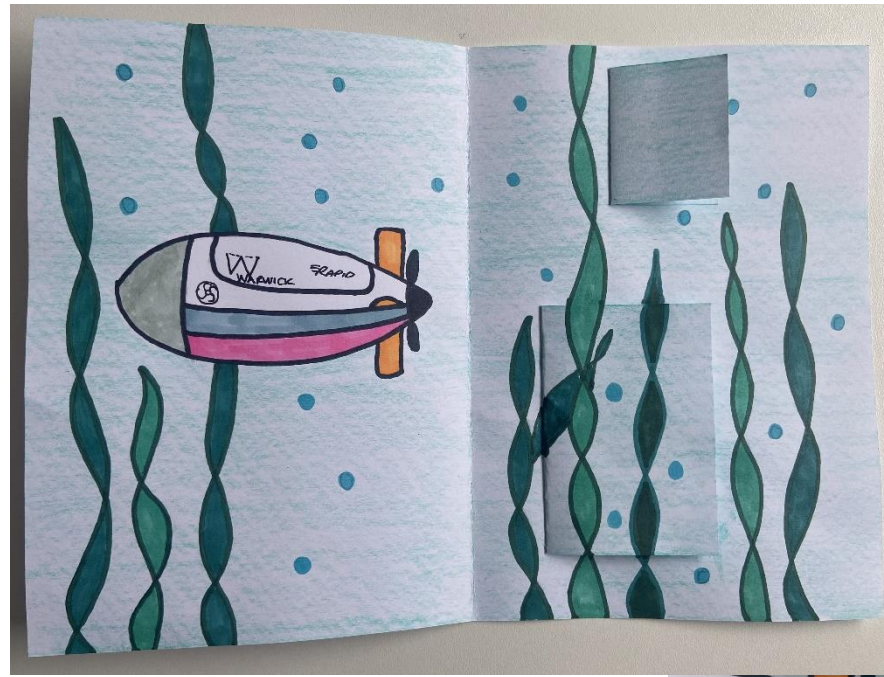
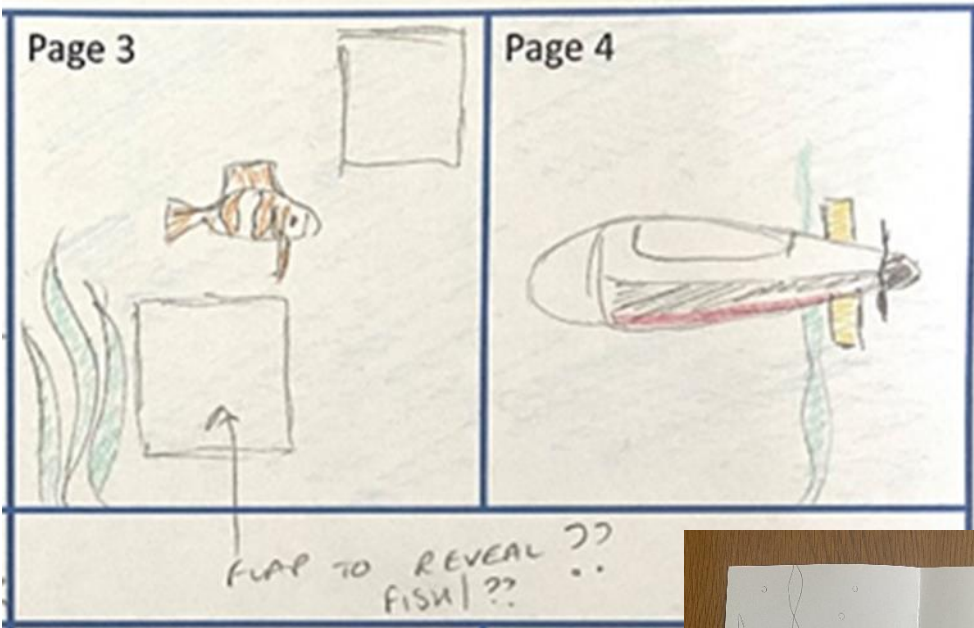
Finishing your pages



From storyboard to planning pop-ups and mechanisms to finished page.



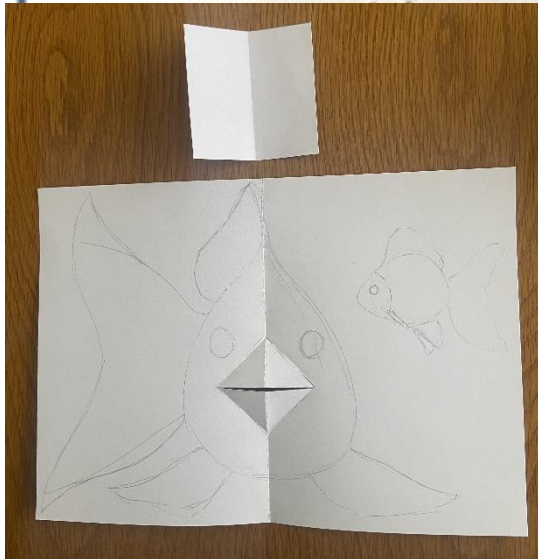
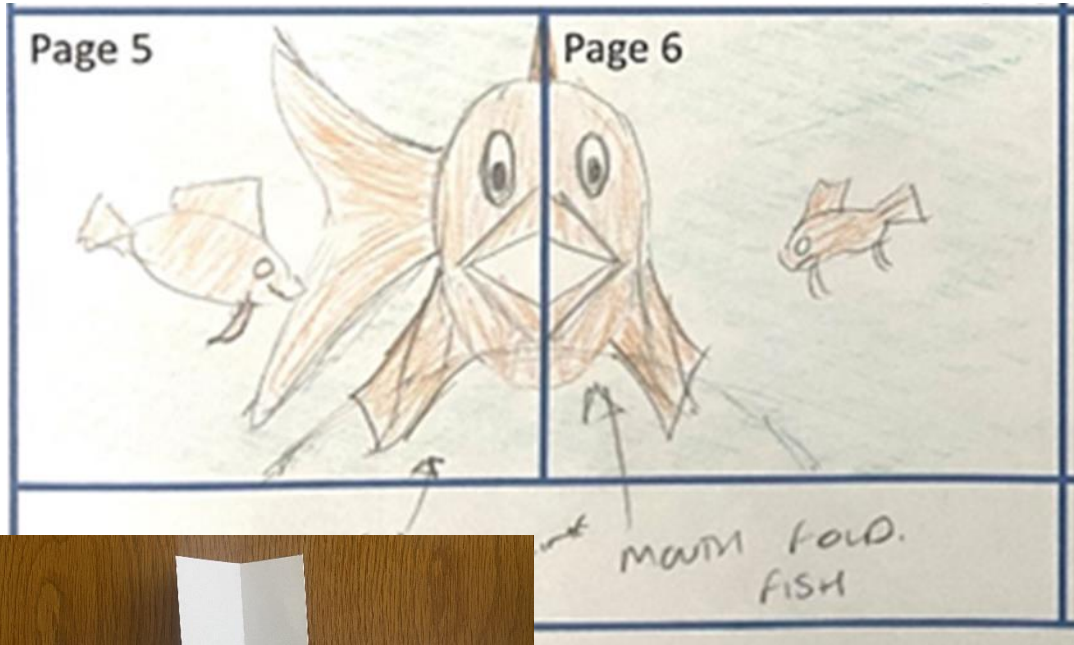
Finishing your pages



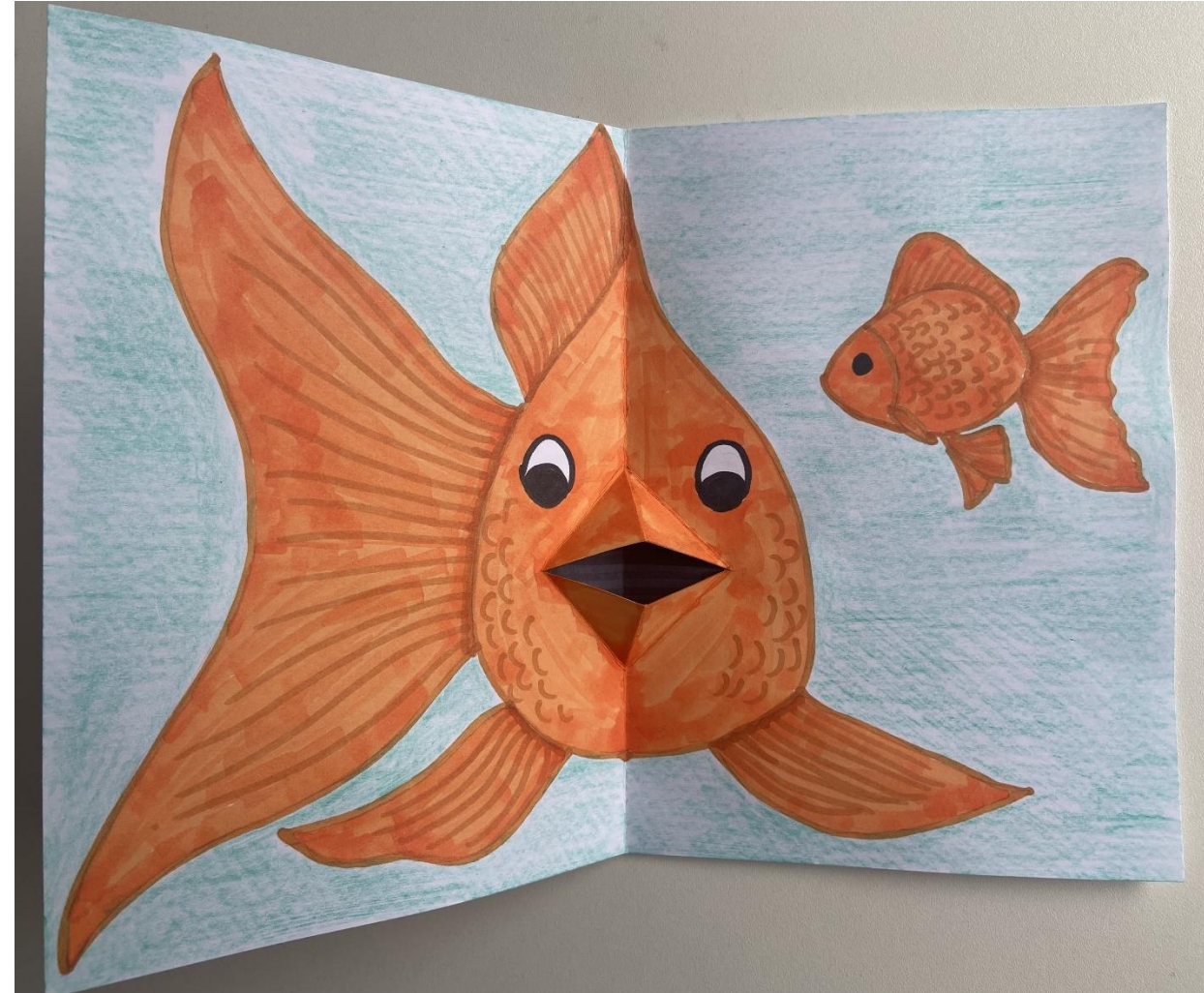
From storyboard to planning pop-ups and mechanisms to finished page.



Finishing your pages

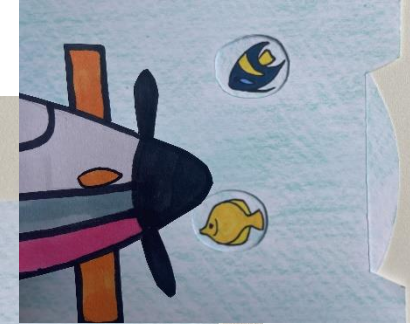
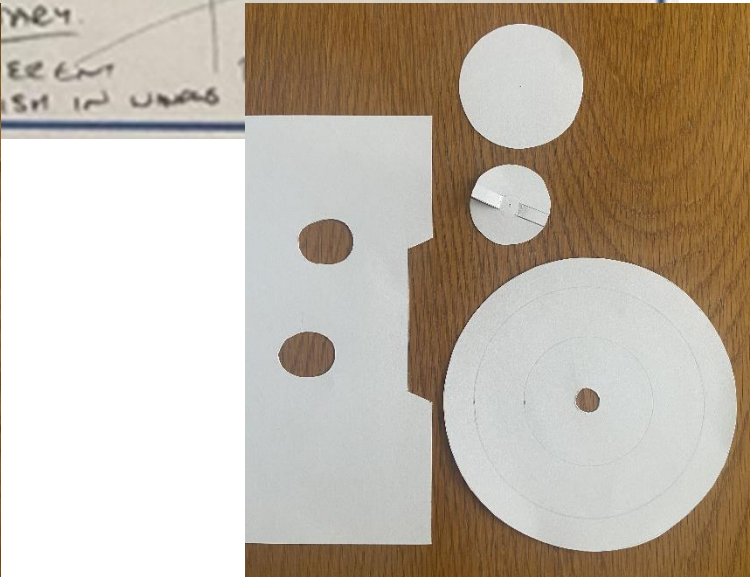
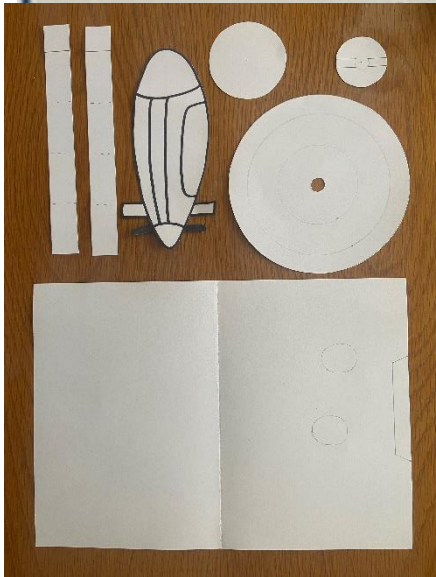
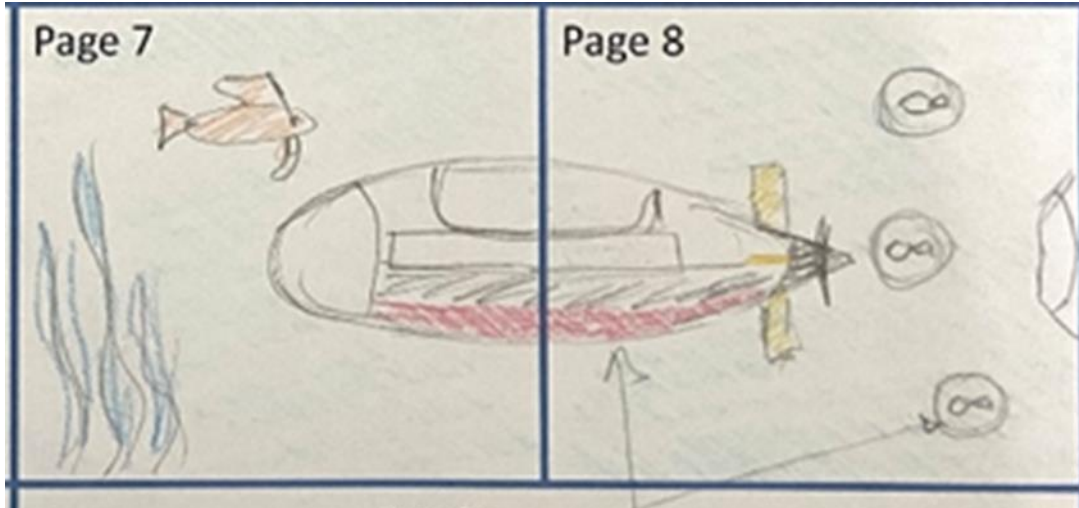


From storyboard to planning pop-ups and mechanisms to finished page.

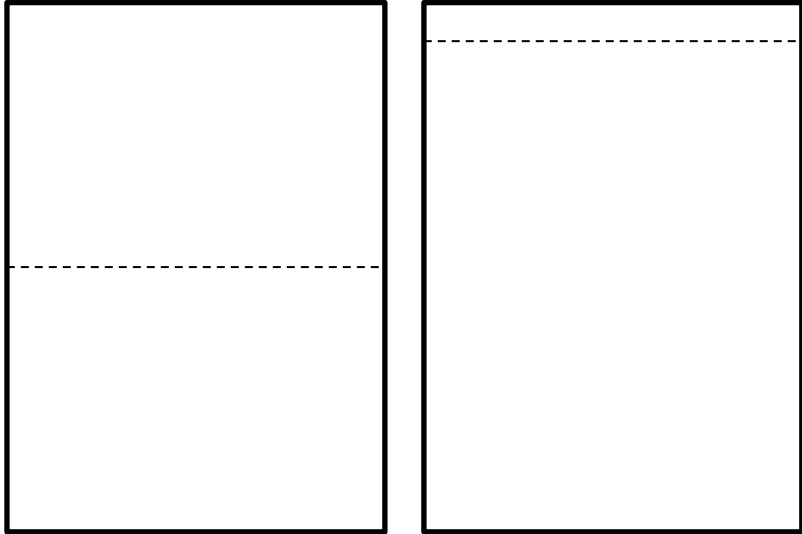


Finishing your pages

From storyboard to planning pop-ups and mechanisms to finished page.



Making your cover



You'll need 2 sheets of A4 card, cut one in half.

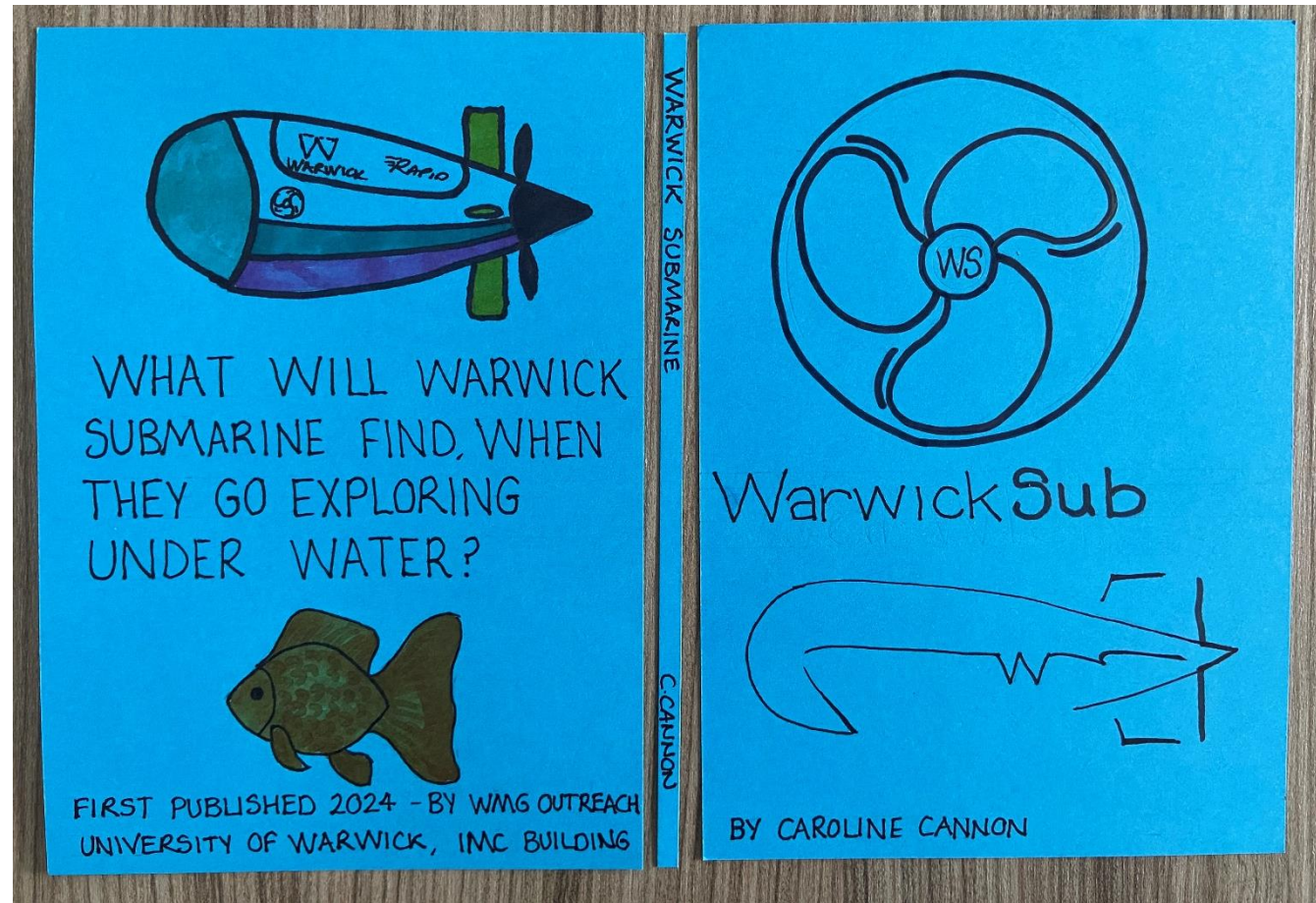
On the other, cut a strip off the short edge, this will be the spine, it's width will depend on how many pages you have made for your book

Decorate your front and back cover and the spine

Back Cover

Spine

Front Cover



Making your cover

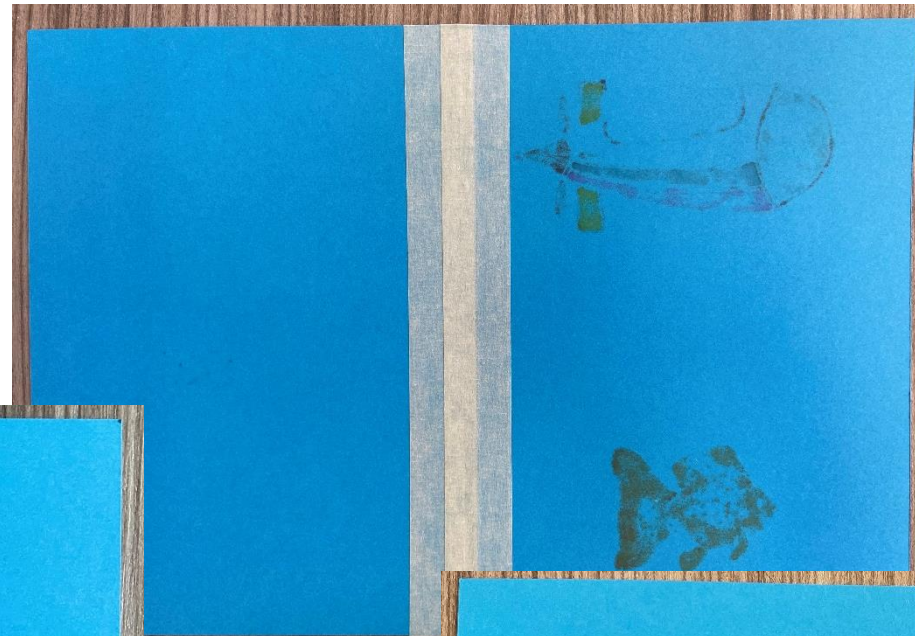
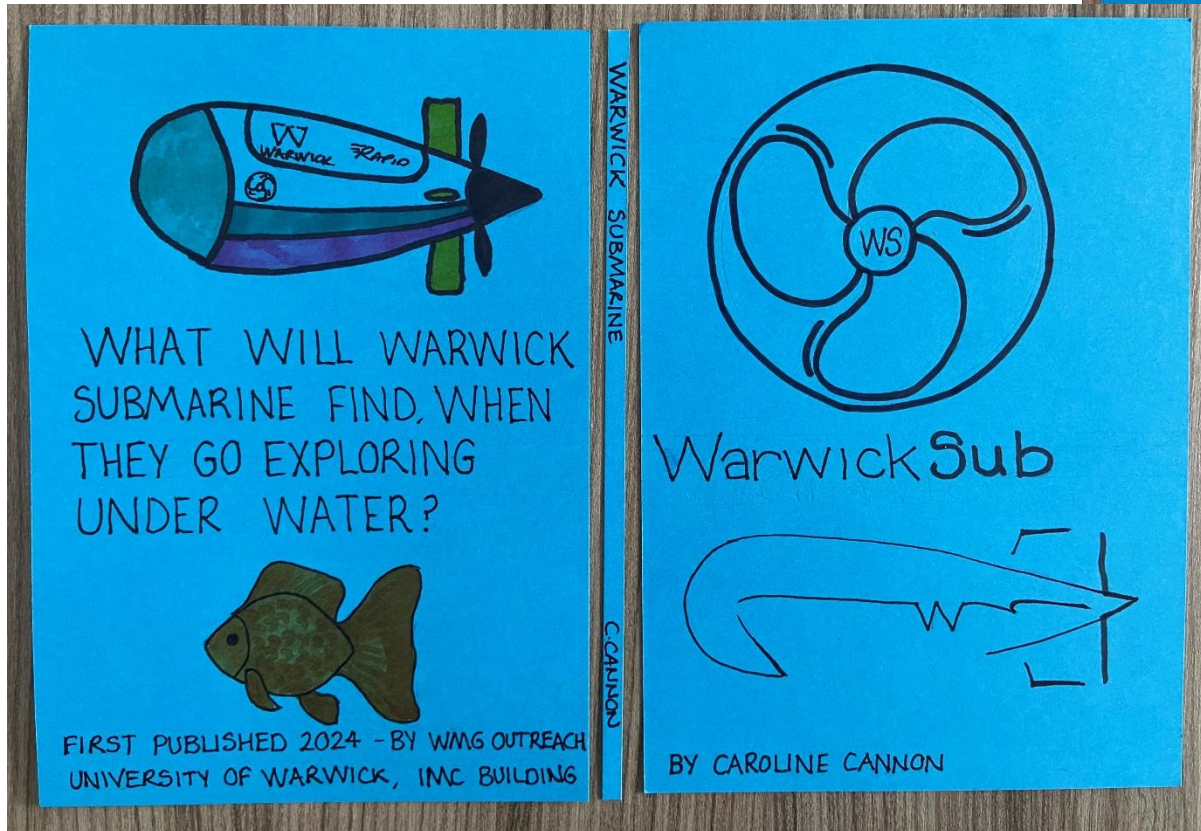
Back Cover

Spine

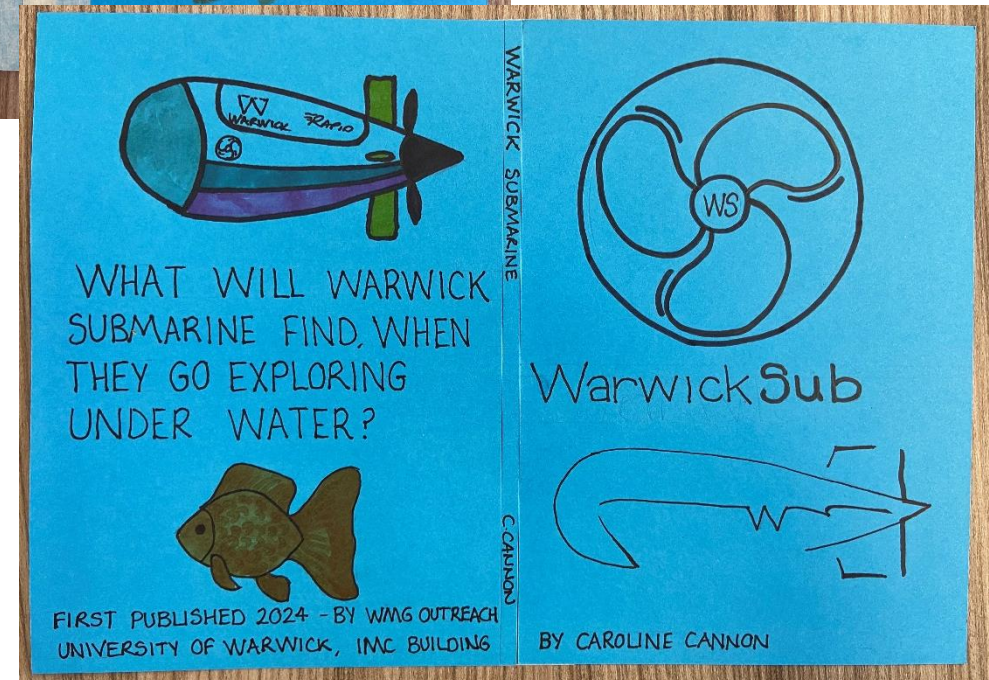
Front Cover



Layout the front cover, spine and back cover in the correct order



Attach with tape



FIRST PUBLISHED 2024 - BY WMG OUTREACH UNIVERSITY OF WARWICK, IMC BUILDING

BY CAROLINE CANNON

Putting your book together

Stick the pages together, with either glue or double-sided tape.

Be careful not to stick mechanisms down, so that they can't be operated

Paper Engineering: Warwick Submarine Pop-up Book

warwick.ac.uk/wmgoutreach/resources

wmgoutreach@warwick.ac.uk

Assessment

Let's evaluate our pop-up book and how you feel about making it?

EVALUATION

Question:	Your reflection:
Choice: Did you choose the right pop-ups and mechanisms?	
What went well: What's the best feature in your book?	
Favourite: Which pop-up / mechanism is your favourite?	
Challenge: Explain whether you found making pop-ups easy or hard?	
Peer review: Ask someone in the class to write their thoughts on your book.	
Even Better If: What would you do differently if you did this again?	
Overall Rating of creating pop-ups and mechanisms:	