

Please use our materials!

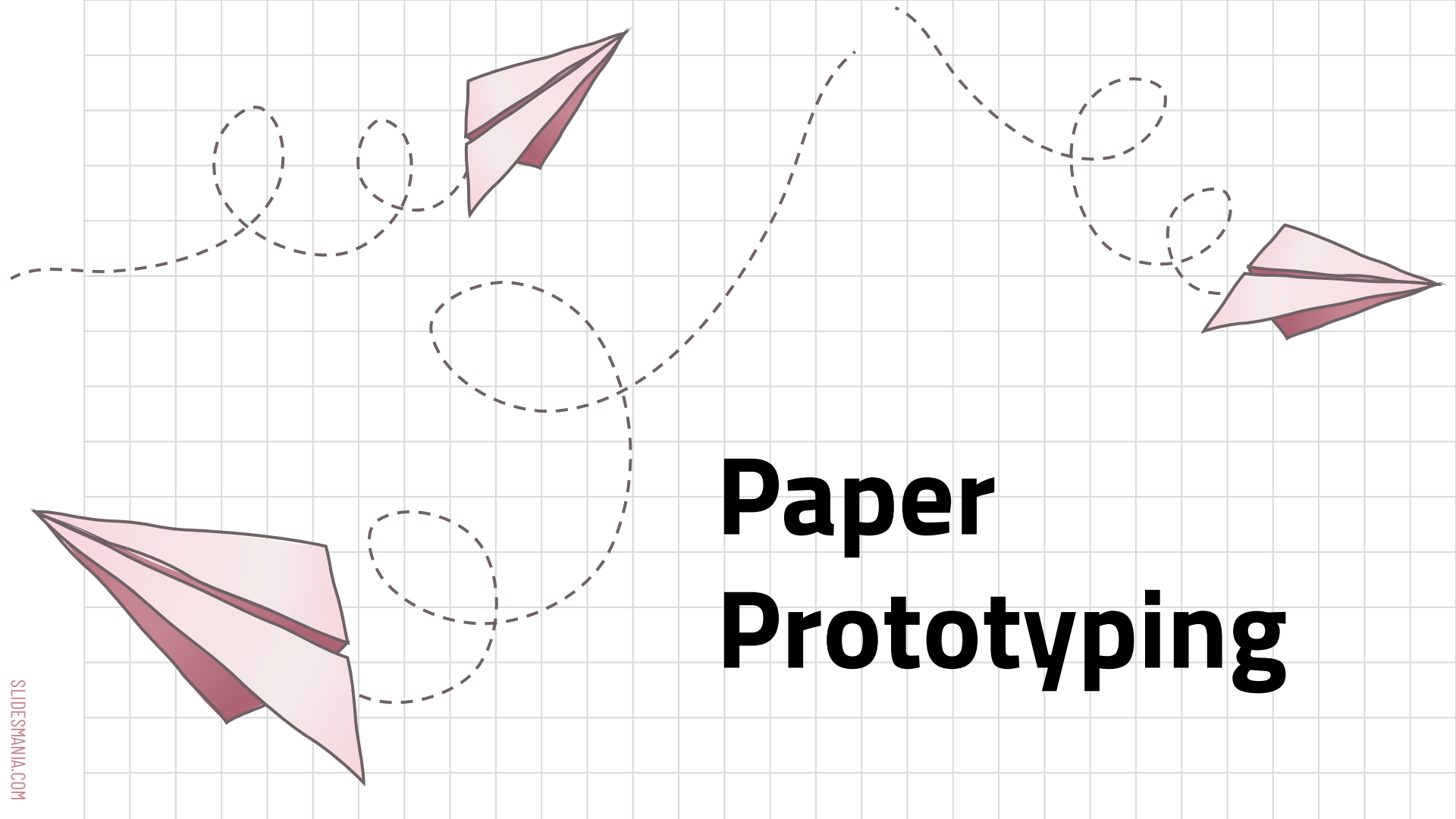
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We also humbly request that you email sarah.adams@olin.edu if you use these materials, as we are tracking their impact and how far they travel!

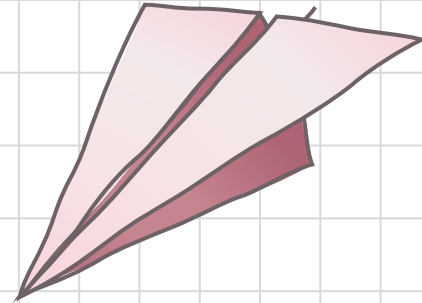
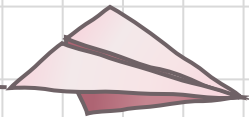


Paper Prototyping

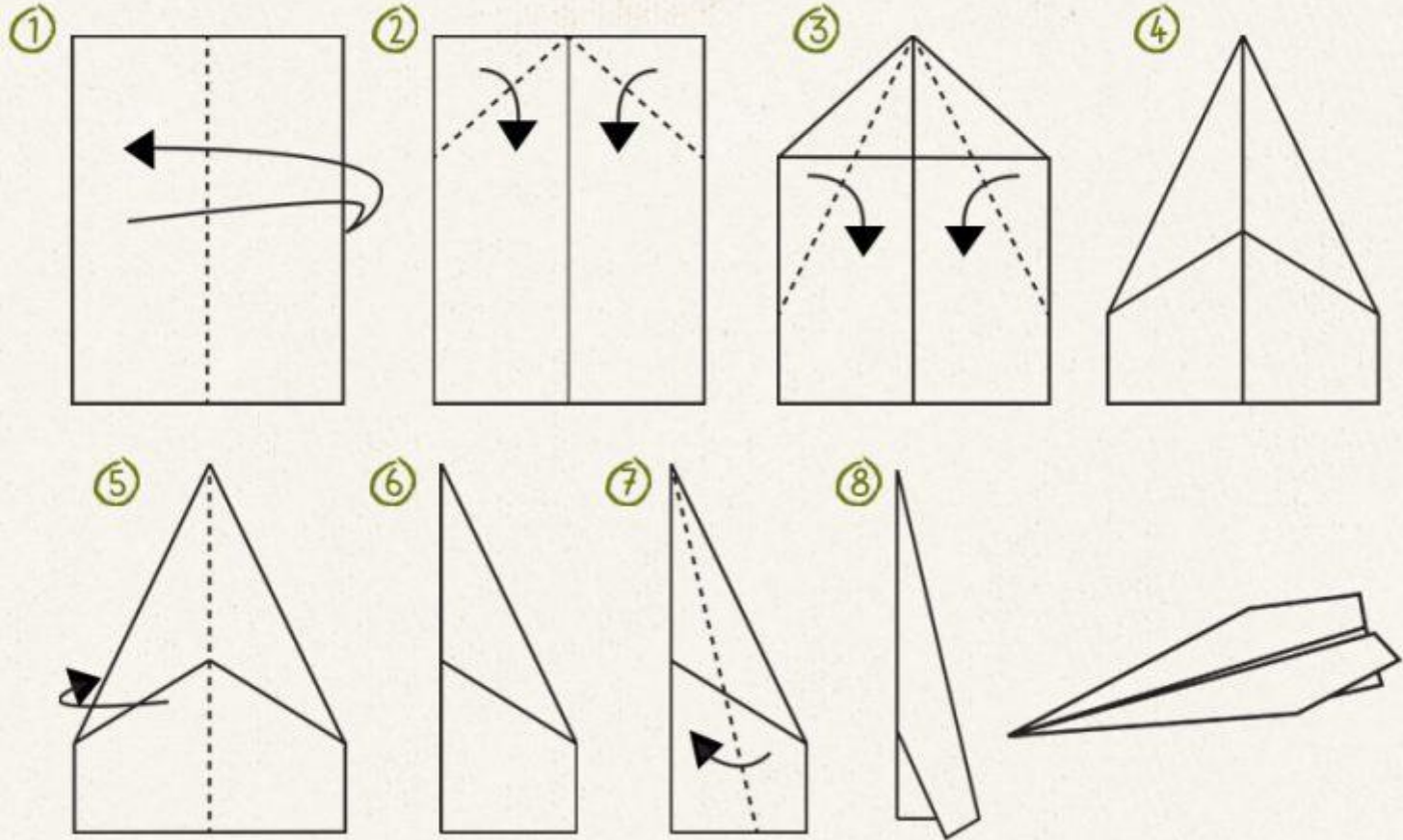


Let's make a paper airplane

Follow along
or
make your own!



PAPER AIRPLANE DIAGRAM

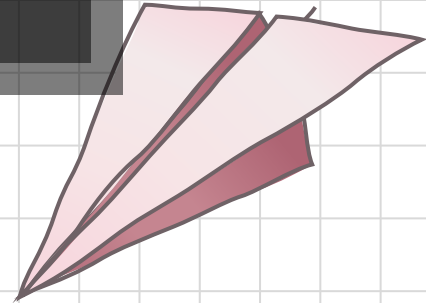
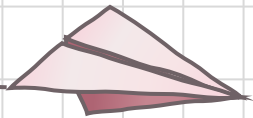


Test your plane

If you can, test your paper plane.

How did it work? What did you notice?

Share in the chat

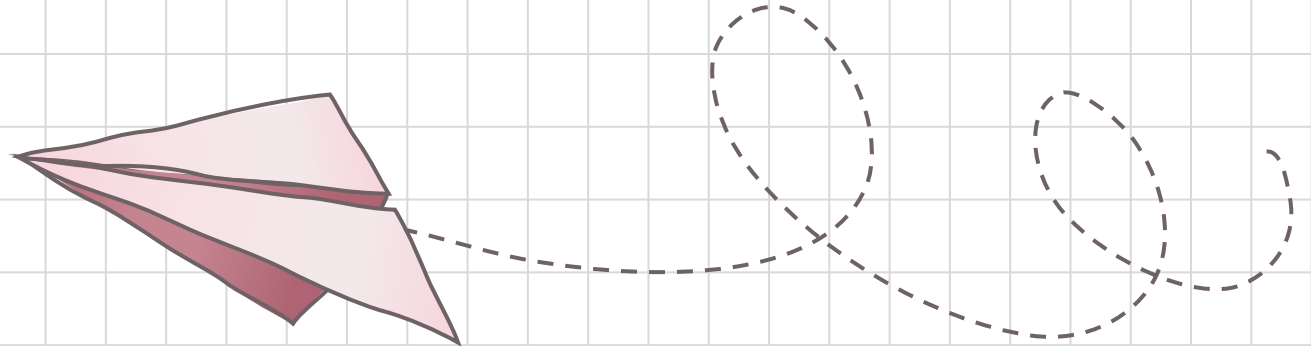


Iterate! Change it up

Change something about your plane. Try to make it go further or fly faster.

Test it out again.

What changed? Did it perform better or worse?





From: researchgate.net



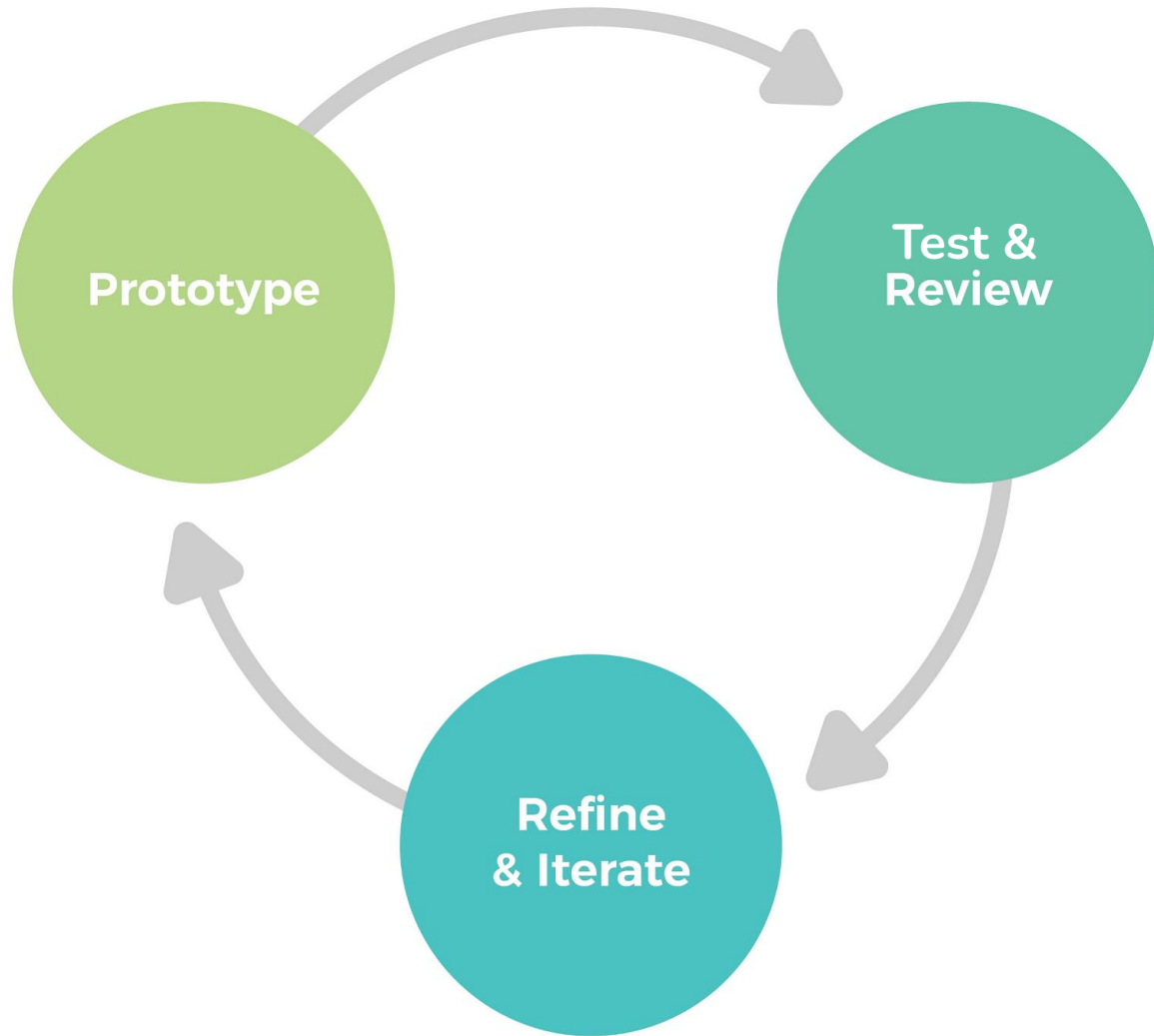
From: kitplanes.com



From: spectrum.ieee.org



From: Tommy Lewandowski on Pinterest



What is prototyping?

A prototype is an **early model** of something.

Prototypes are used to **test a concept/process**.

Prototyping: taking an idea and **building** it so it can be tested

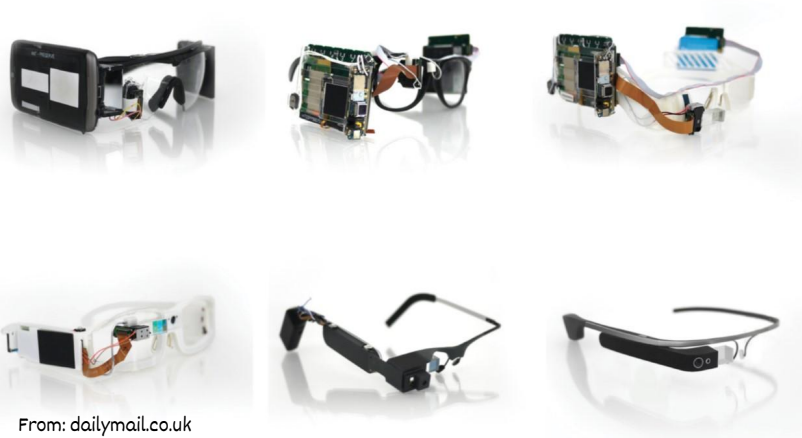
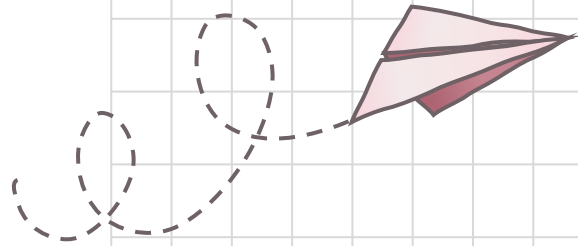


What is iterating?

Iterating is when you **take what you learned** from your prototype and **apply it** to the next one.

- What didn't work in your last prototype?
- What will you try in your next prototype?

An iteration is a **version of something**/one of your prototypes for the same idea



From: dailymail.co.uk

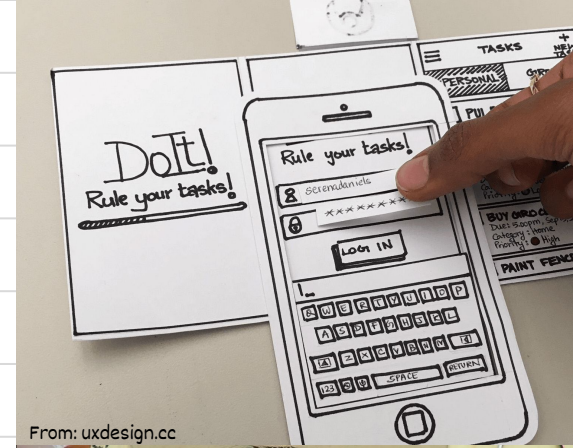


From: Wenchien Wu on Pinterest

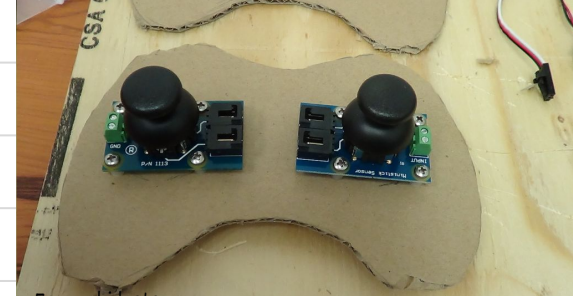
What is sketch modeling?

A simple physical model (prototype)

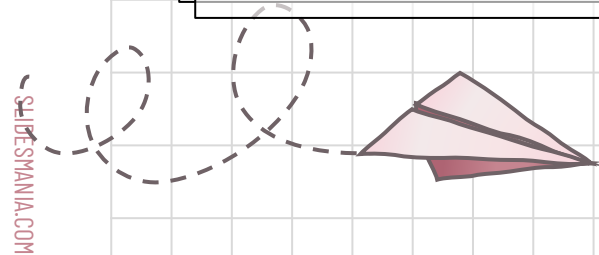
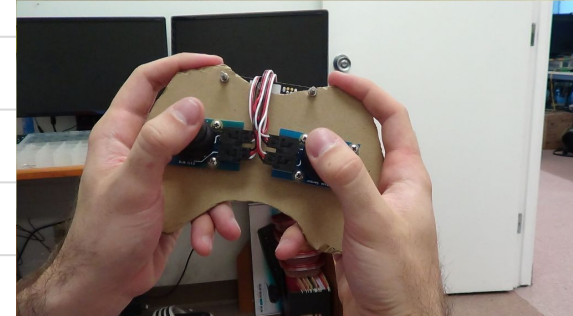
- Low cost material
- Easy and fast to make
- Low fidelity
 - Looks like the idea but doesn't work
 - Works like the idea but looks bad
- Made to be tested/broken
- Have a purpose! (something to test)



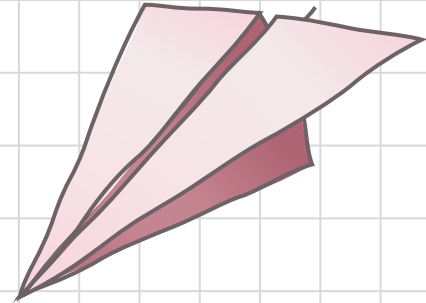
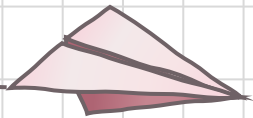
From: uxdesign.cc

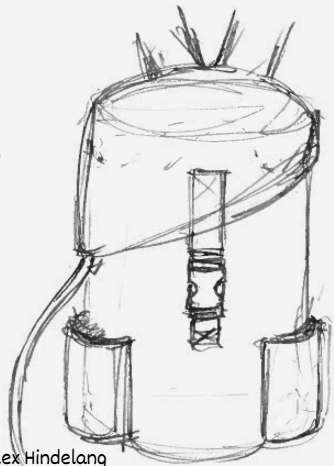


From: phidgets.com

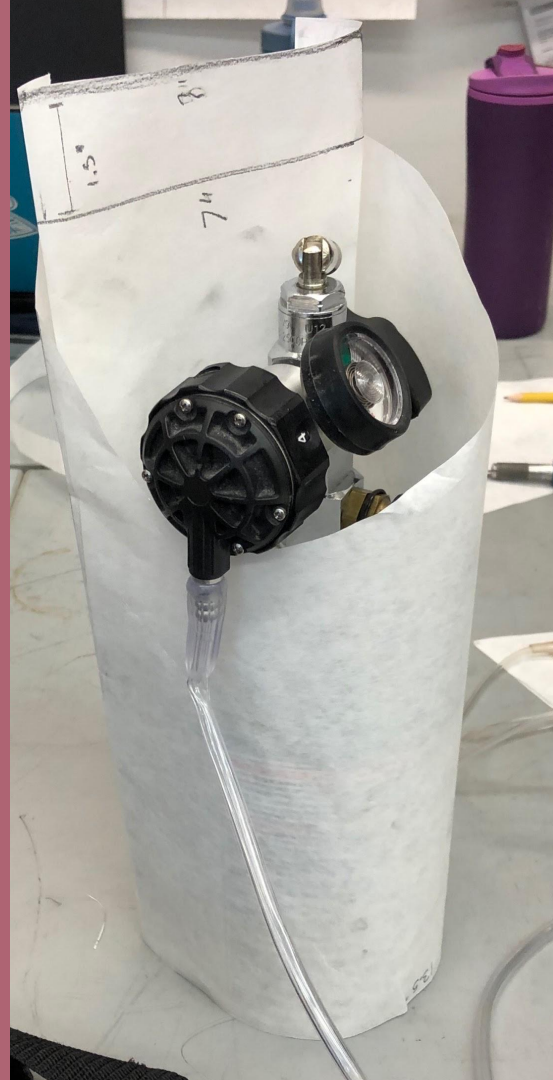


What can you do with paper?



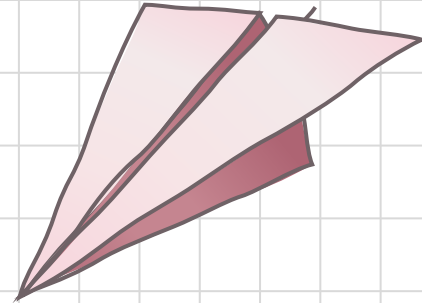
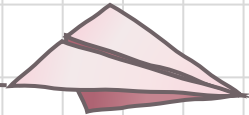


From: Alex Hindelang

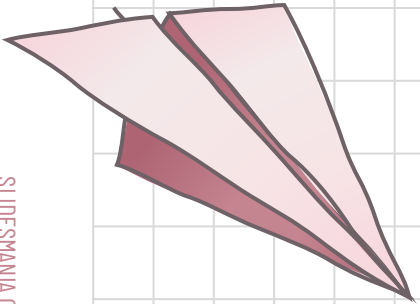


Let's learn some techniques

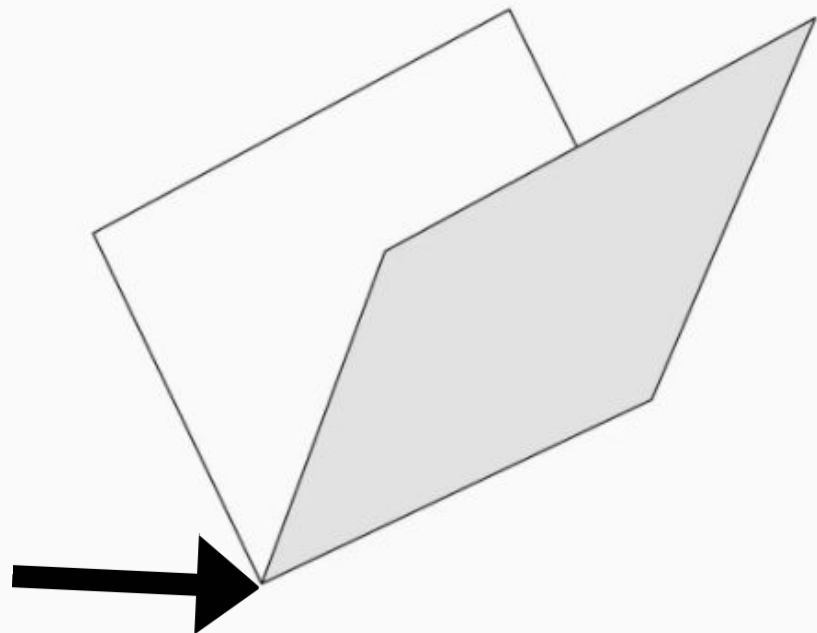
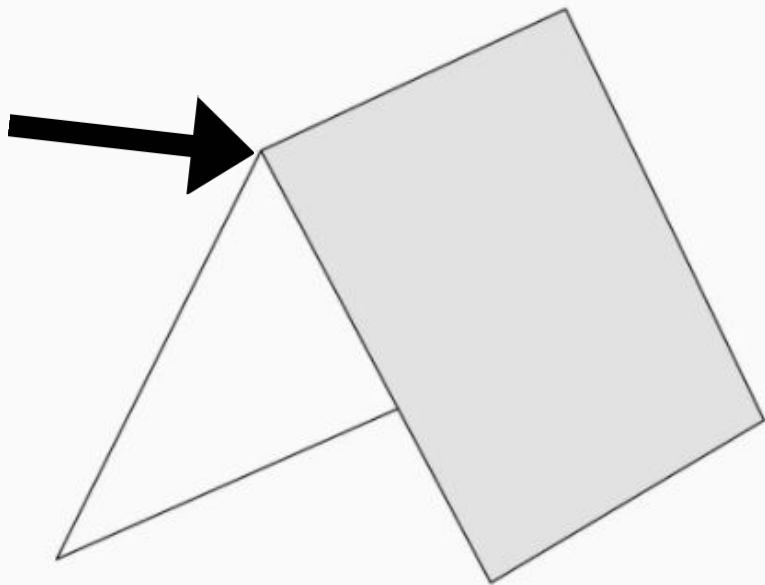
- Creases and folds
- Tearing straight lines
- Connecting without tape
- Make a box



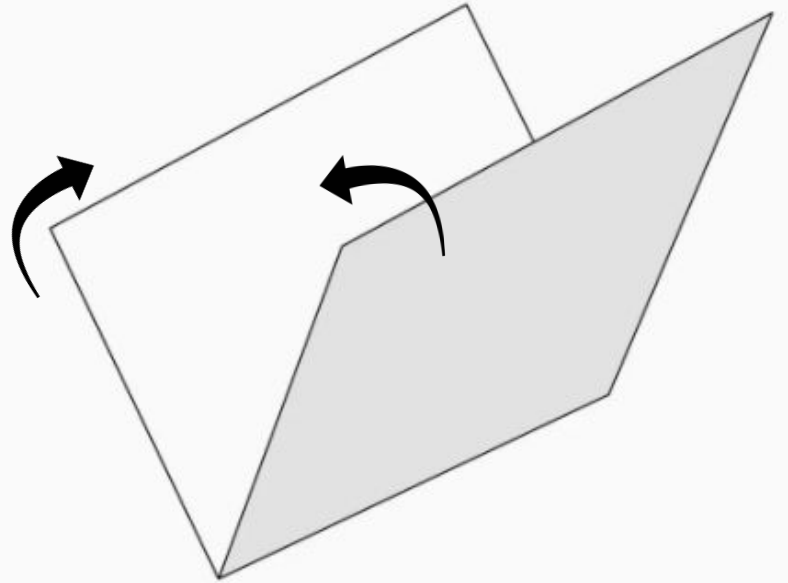
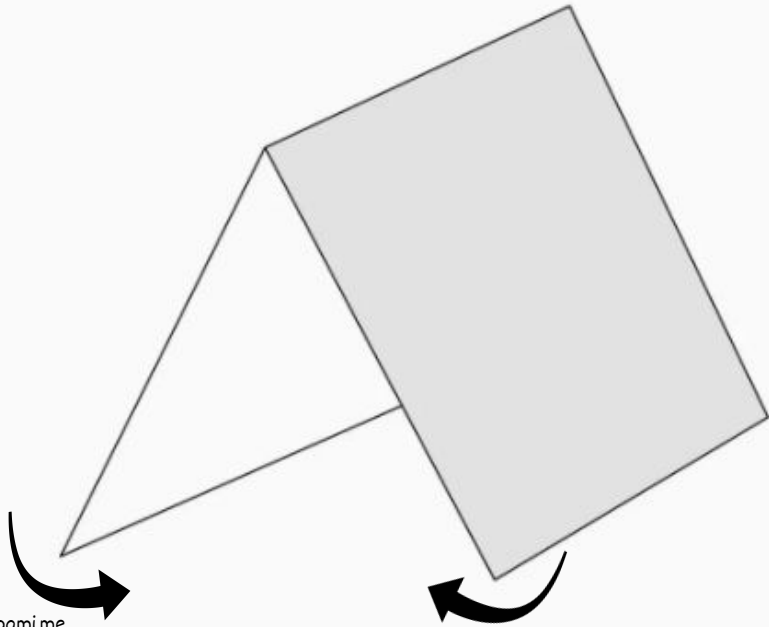
Creases & Folds

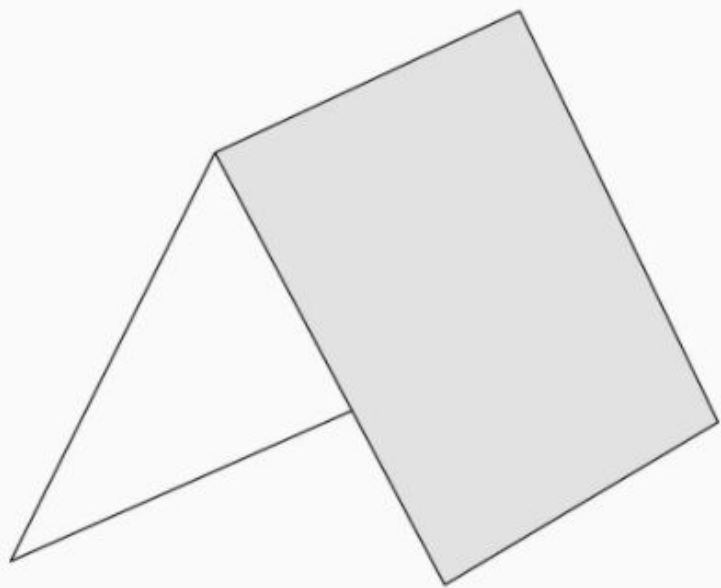


Crease

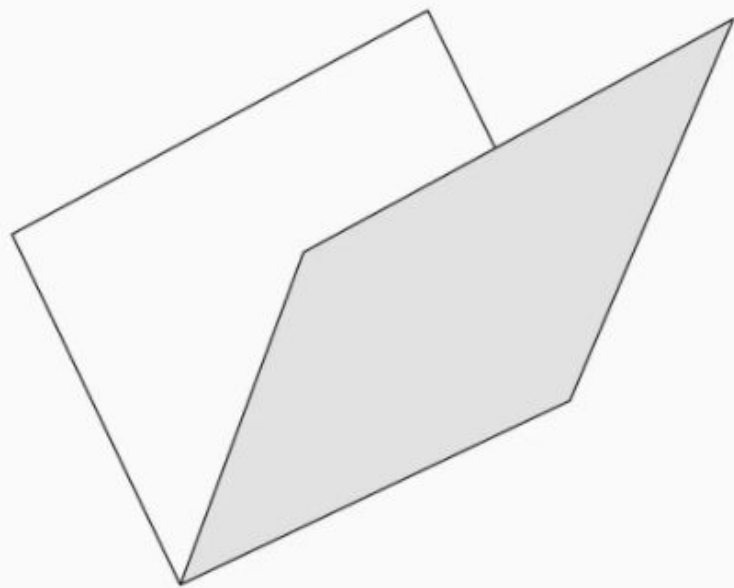


Fold



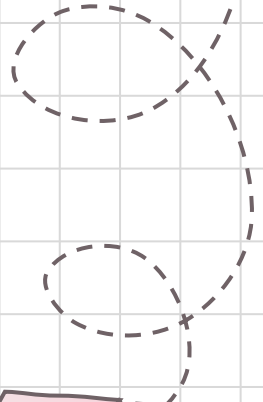
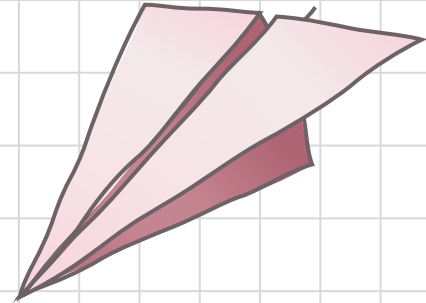
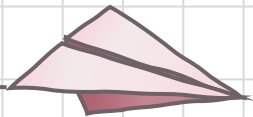


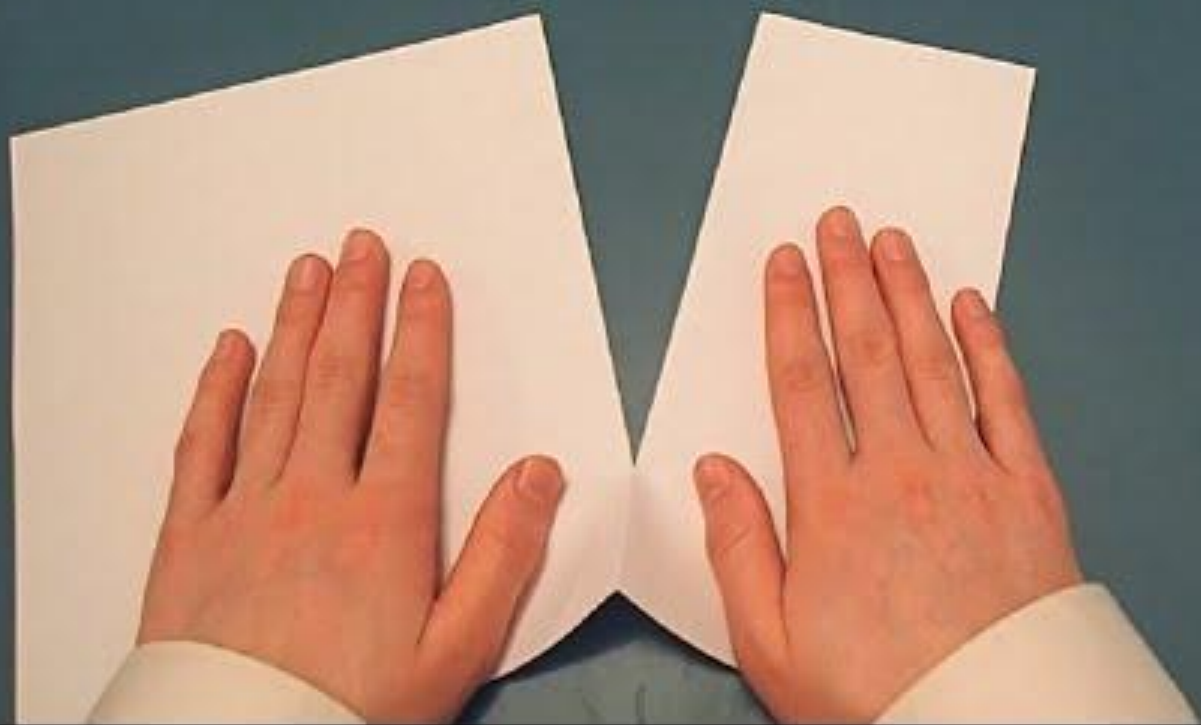
With a **Mountain Fold** the crease bends the paper down and the crease resembles a mountain.



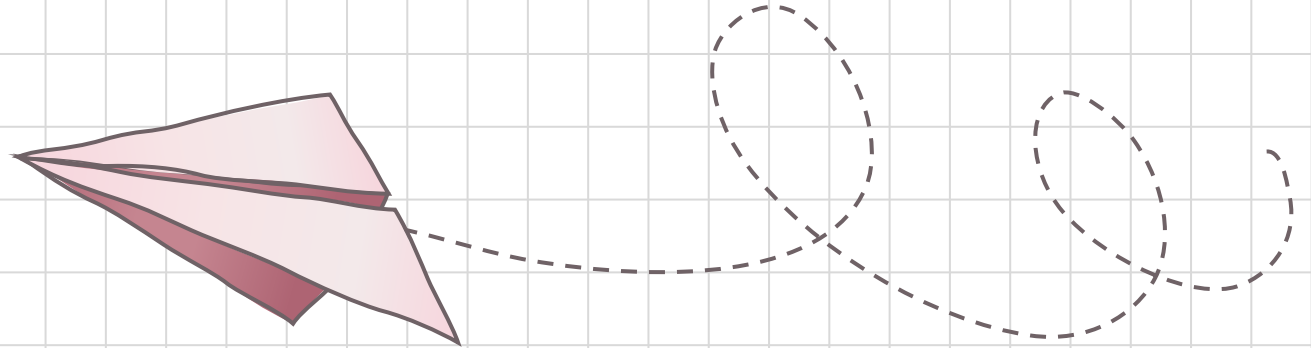
With a **Valley Fold** the crease bends the paper up and the crease resembles a valley.

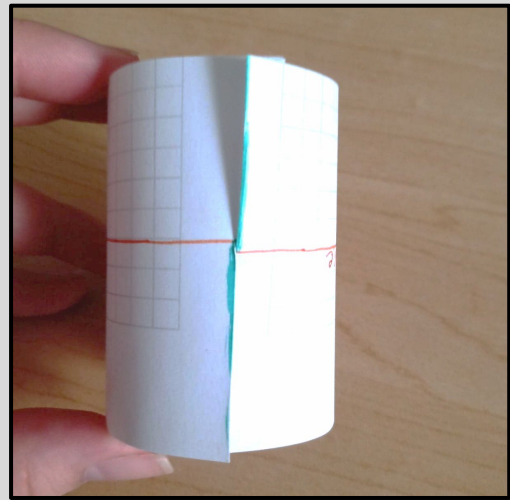
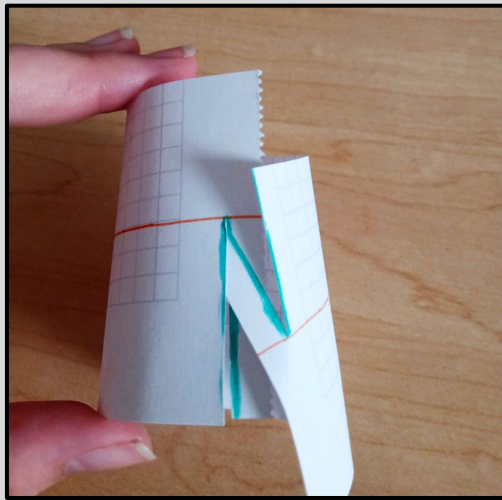
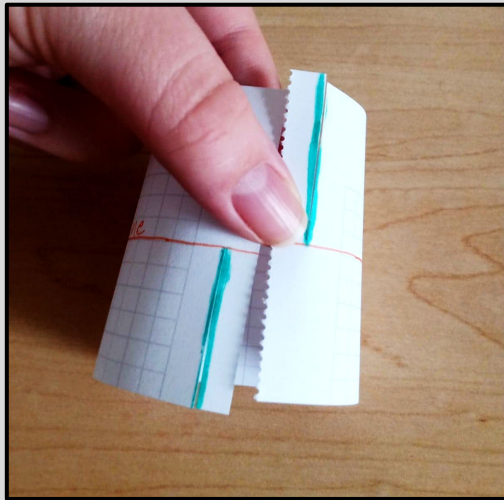
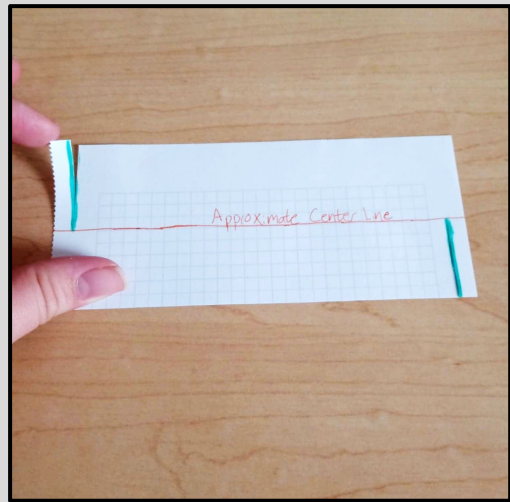
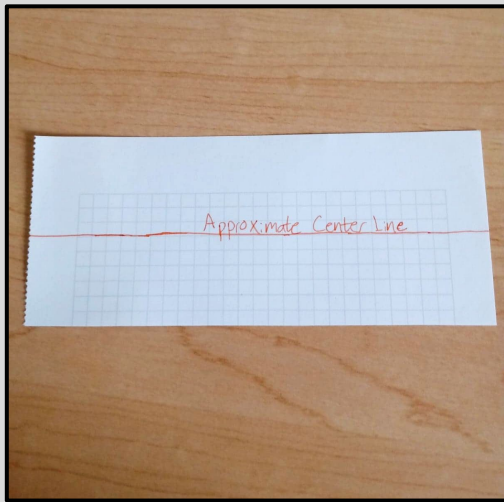
Ripping Straight Lines





Connecting Without Tape



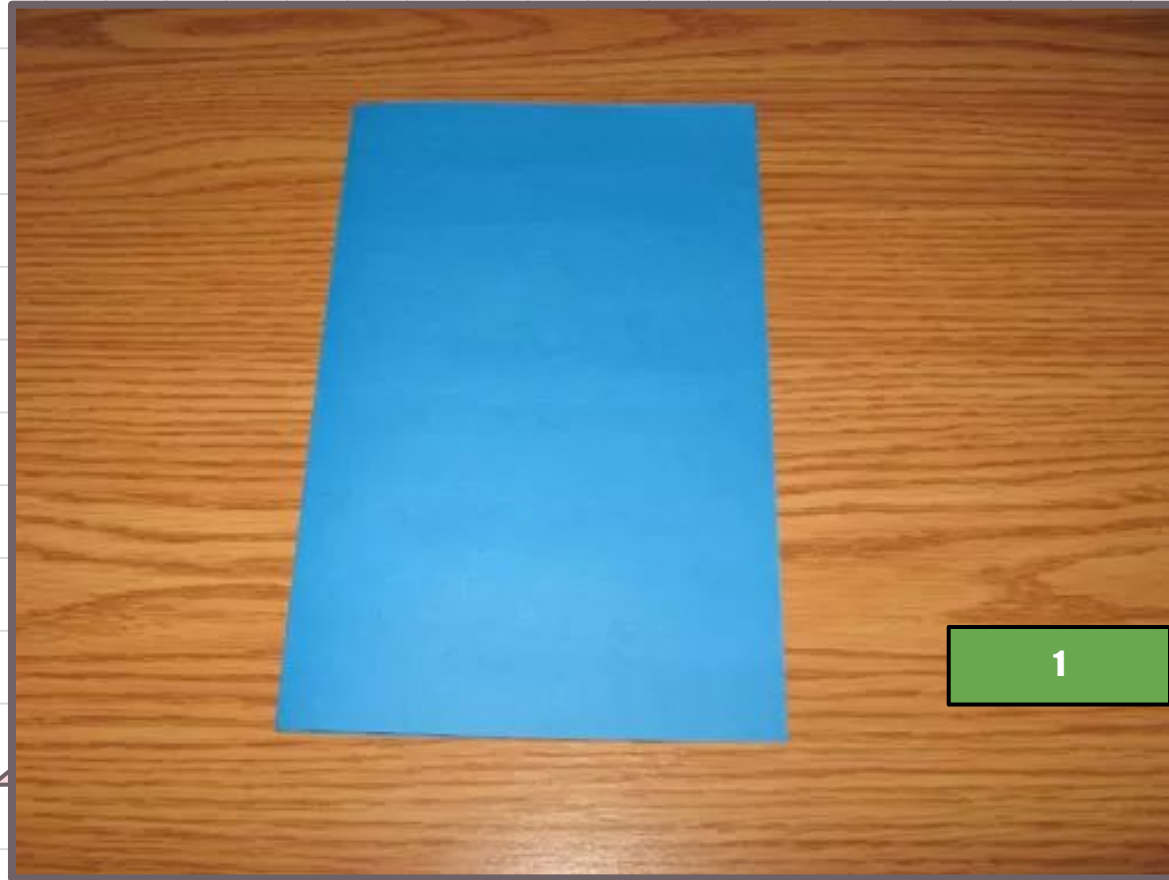


Story time: No bowls for Cereal?!

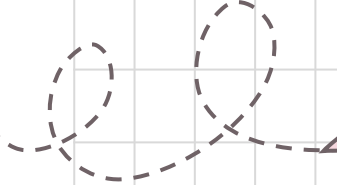
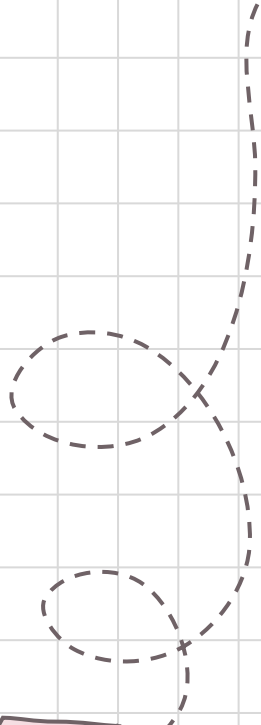
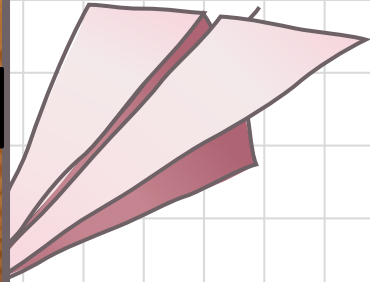


From: https://origami.lovetoknow.com/How_to_Make_a_Folded_Paper_Bowl

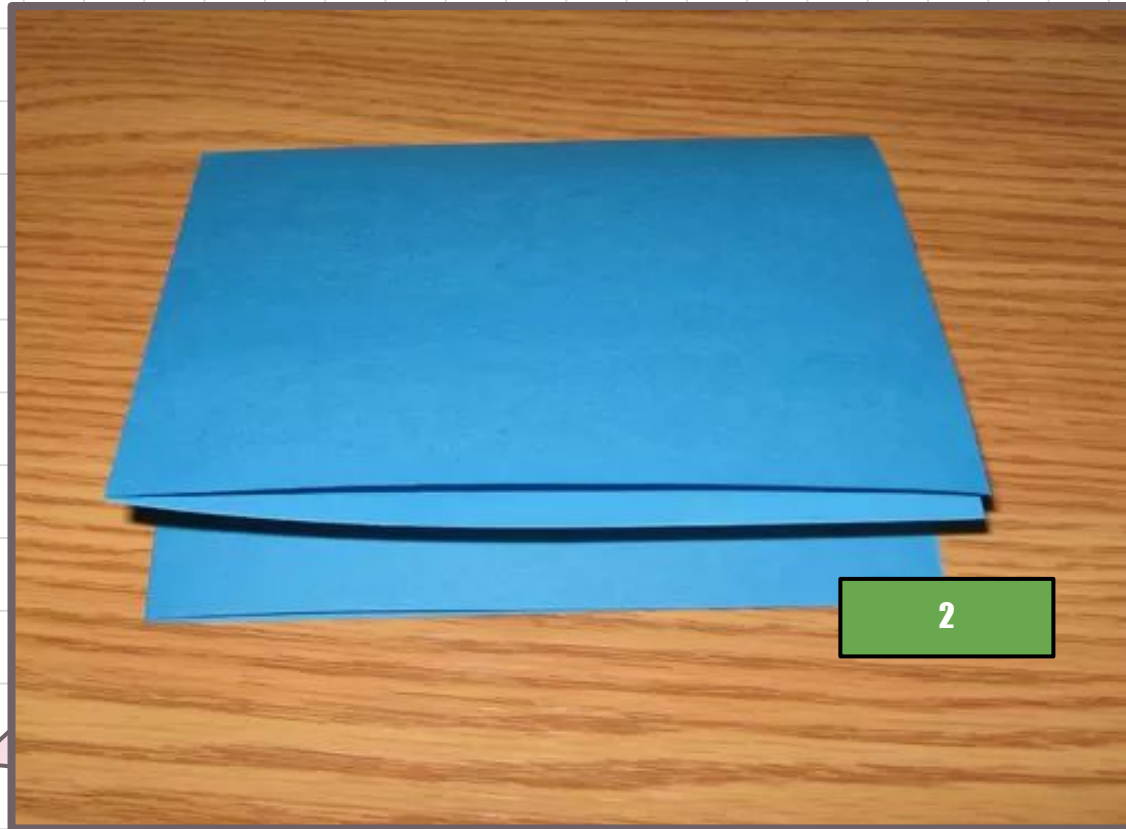
Story Time: Cereal with no bowl?



1

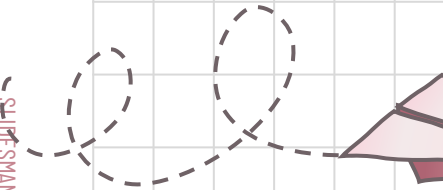
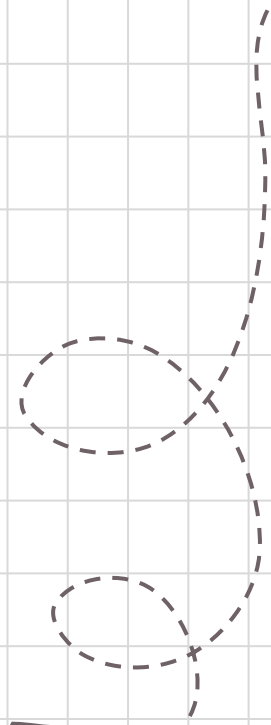
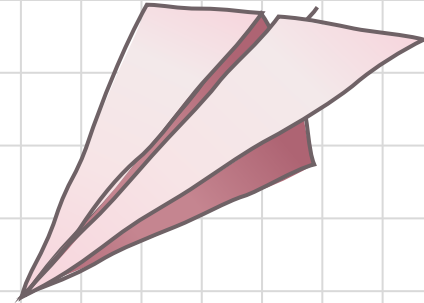
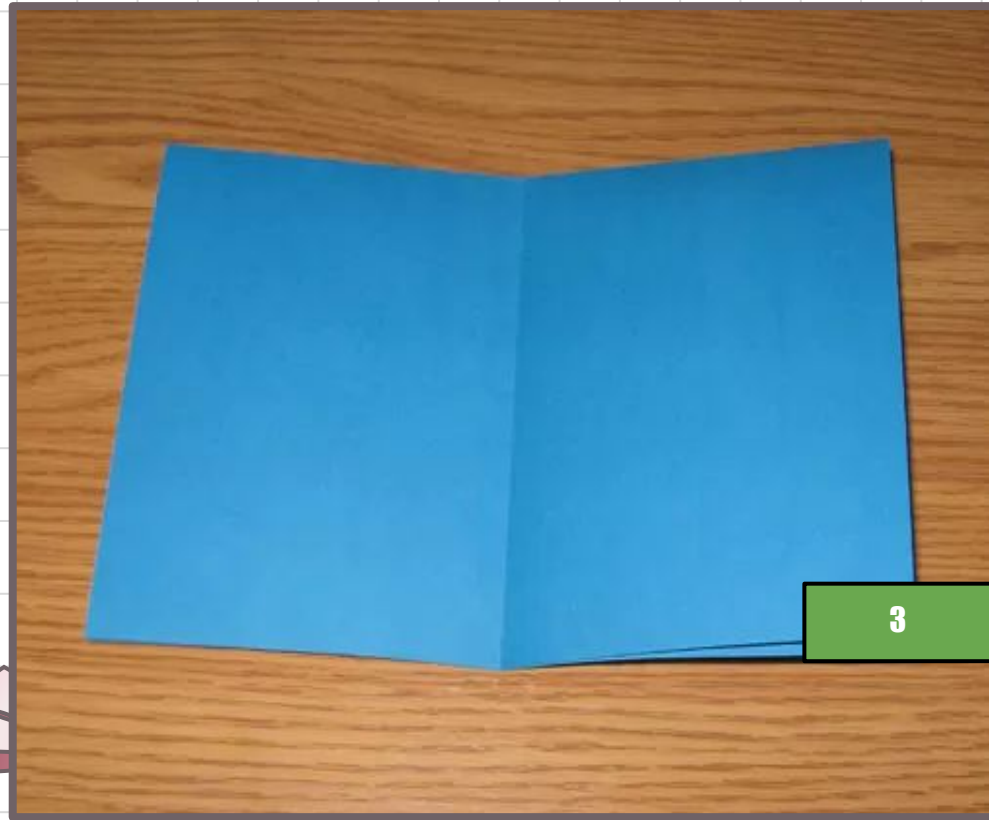


Story Time: Cereal with no bowl?

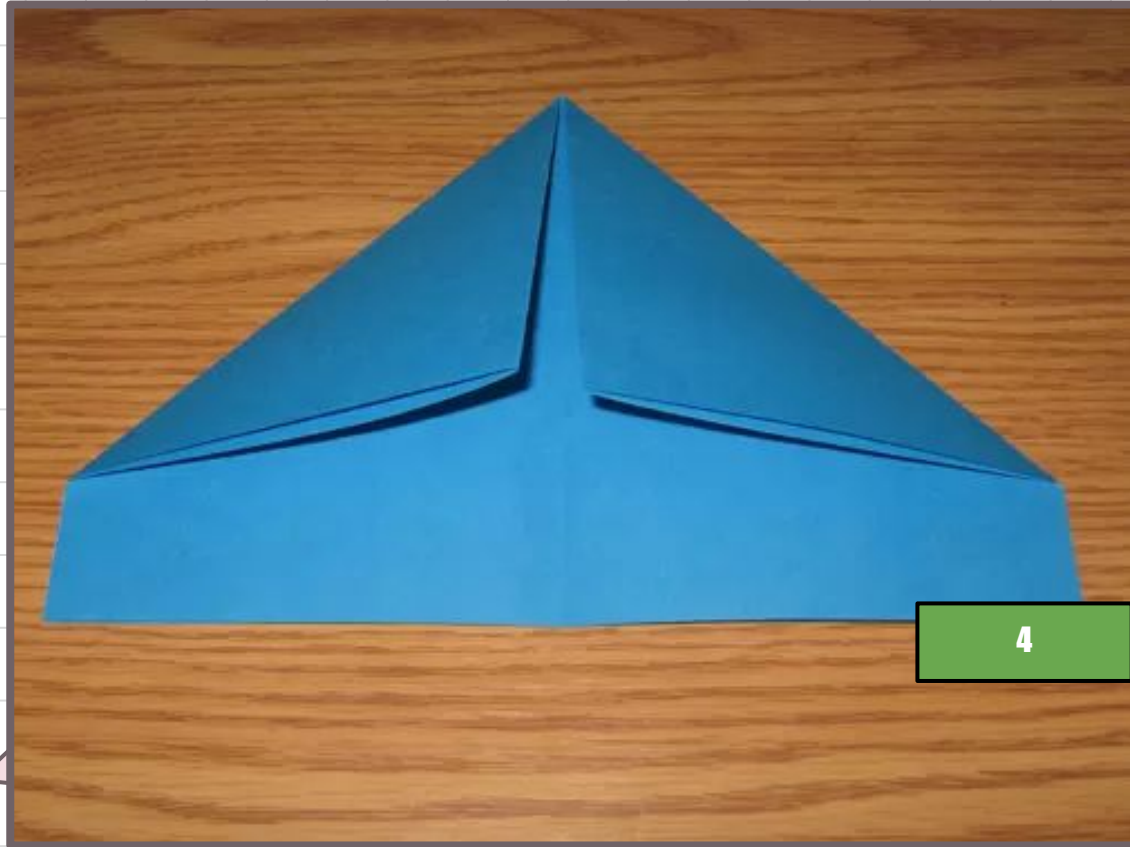


2

Story Time: Cereal with no bowl?

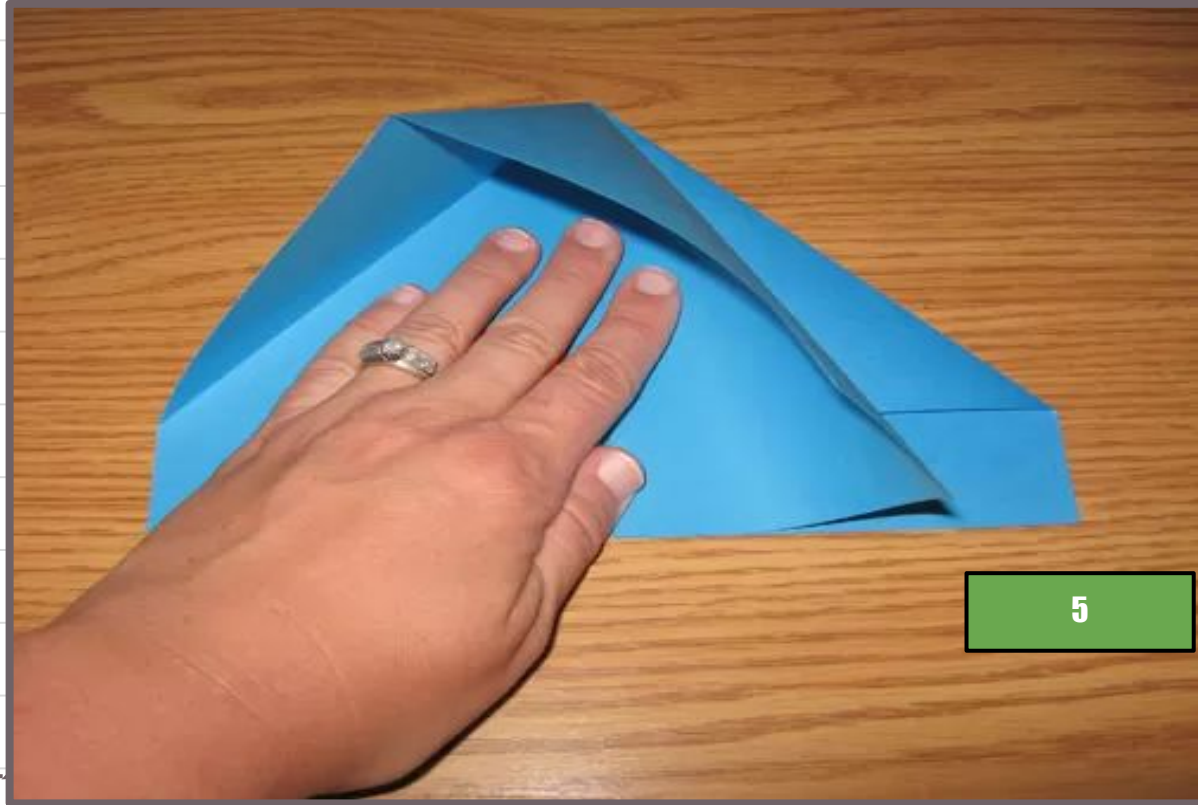


Story Time: Cereal with no bowl?

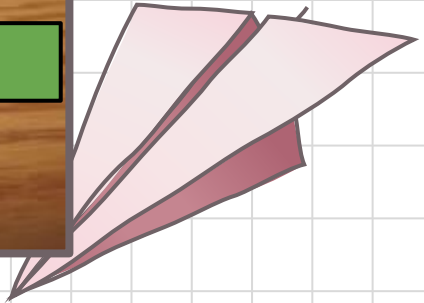


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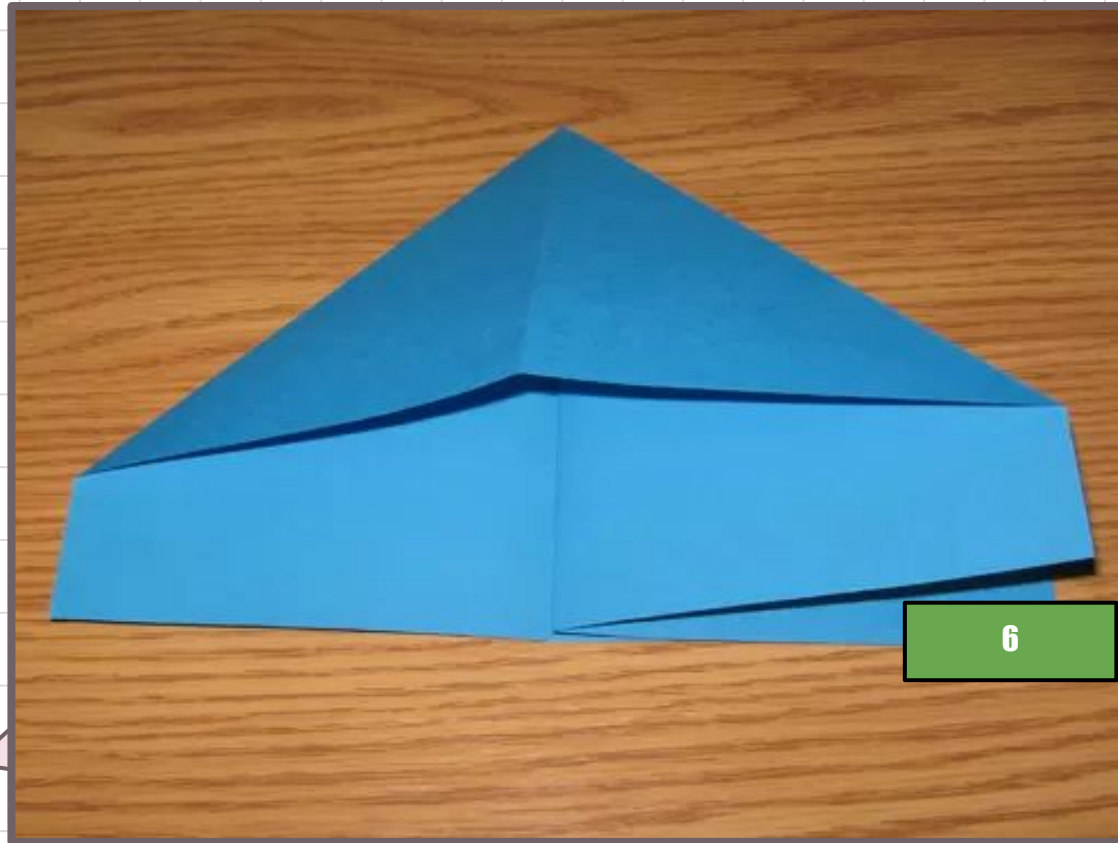
Story Time: Cereal with no bowl?



5

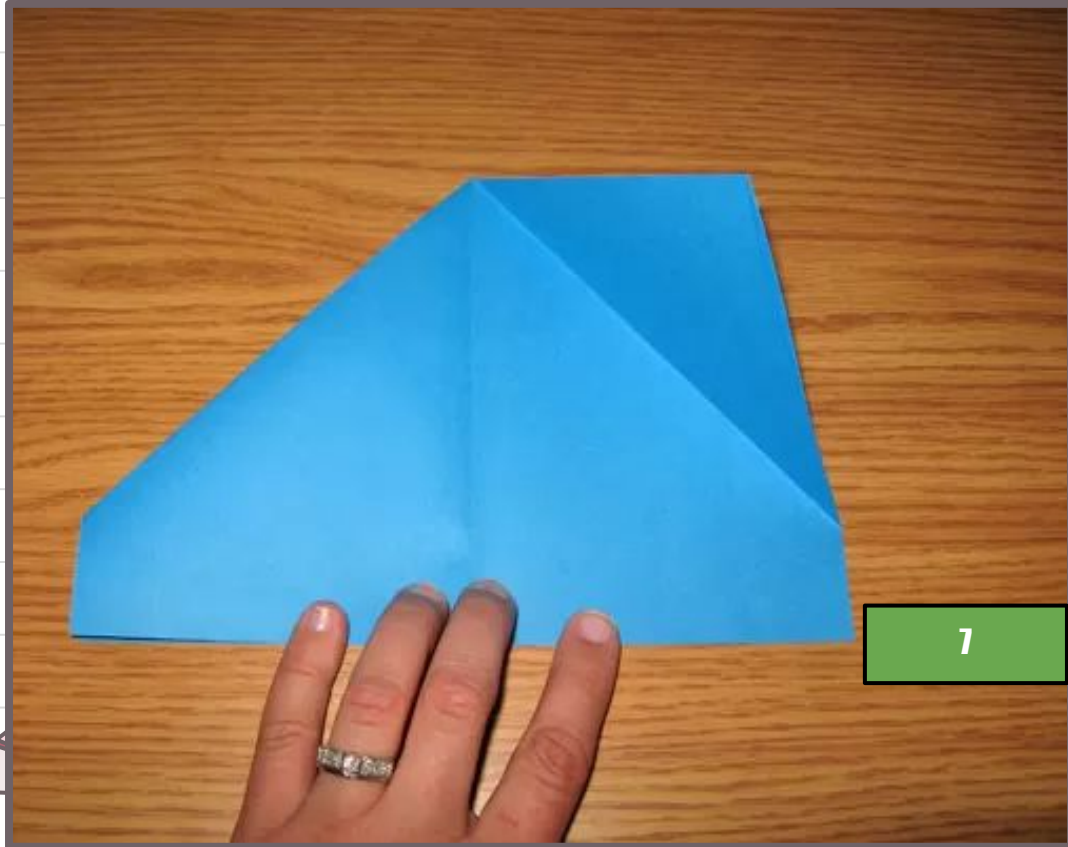


Story Time: Cereal with no bowl?

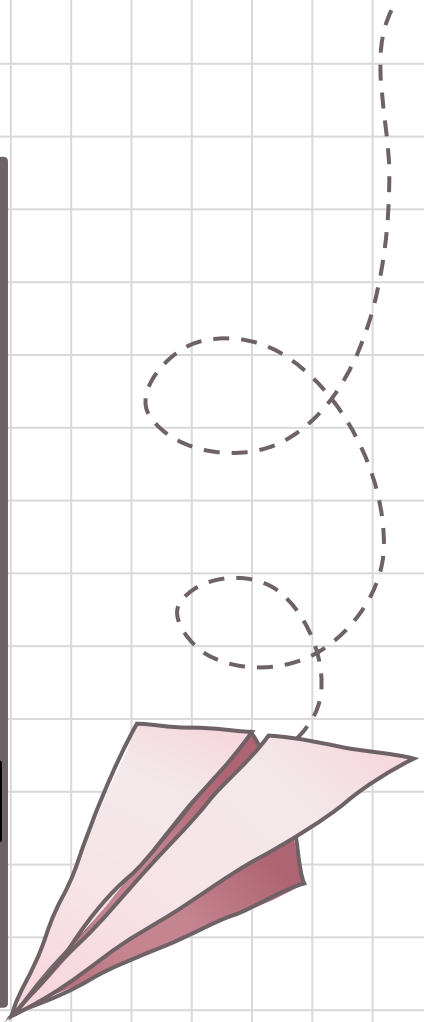


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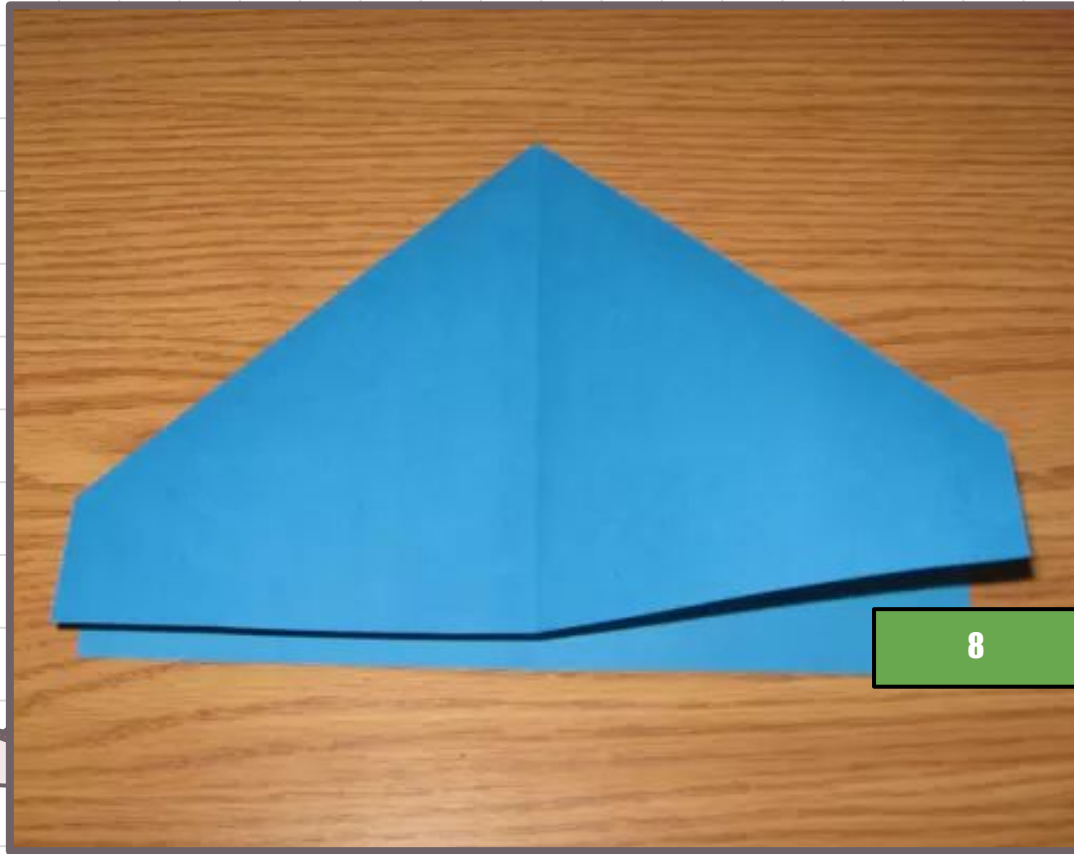
Story Time: Cereal with no bowl?



7

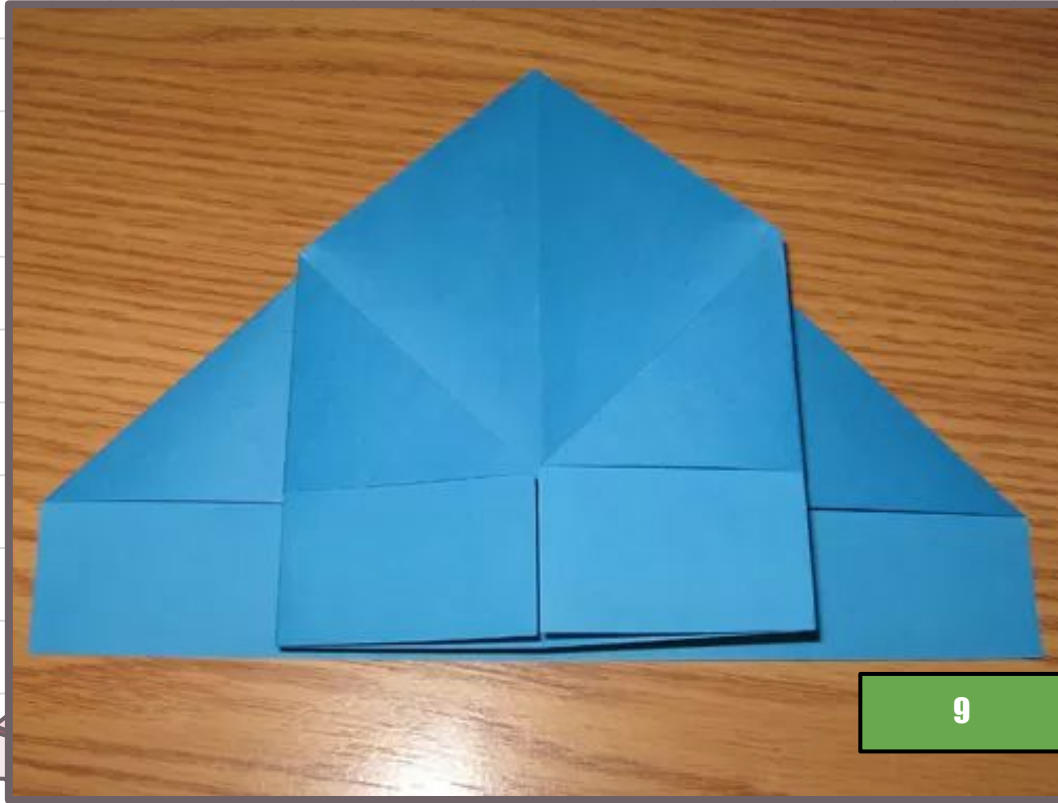


Story Time: Cereal with no bowl?



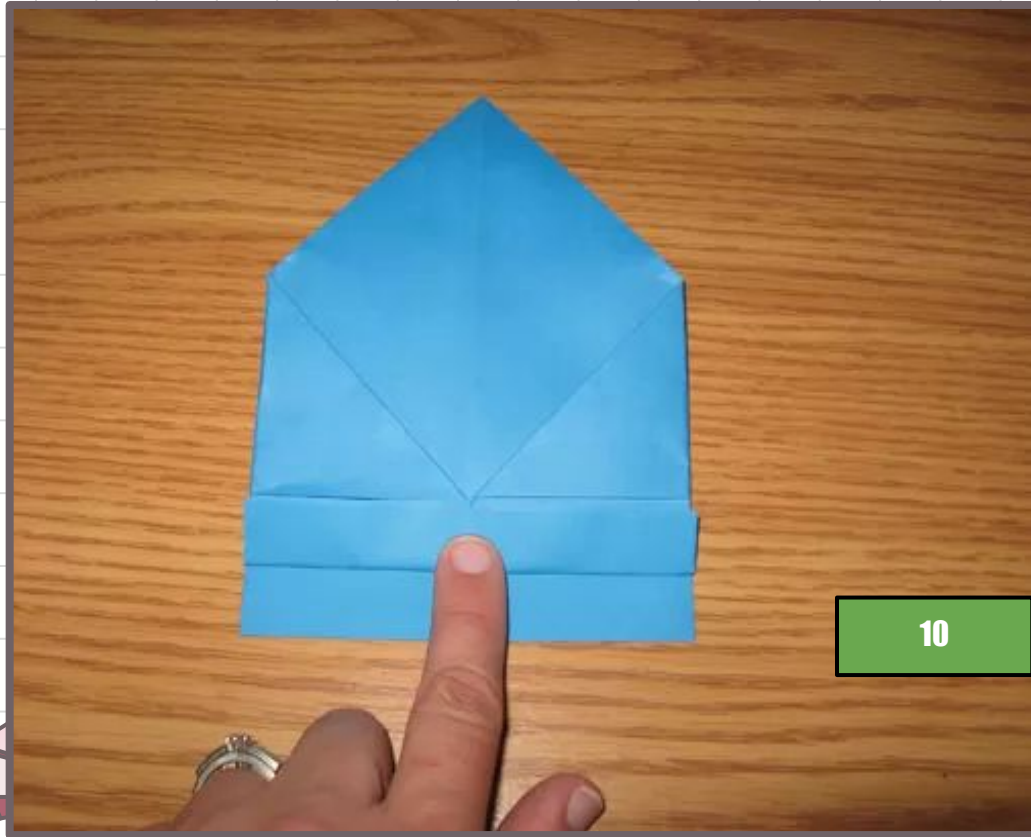
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Story Time: Cereal with no bowl?

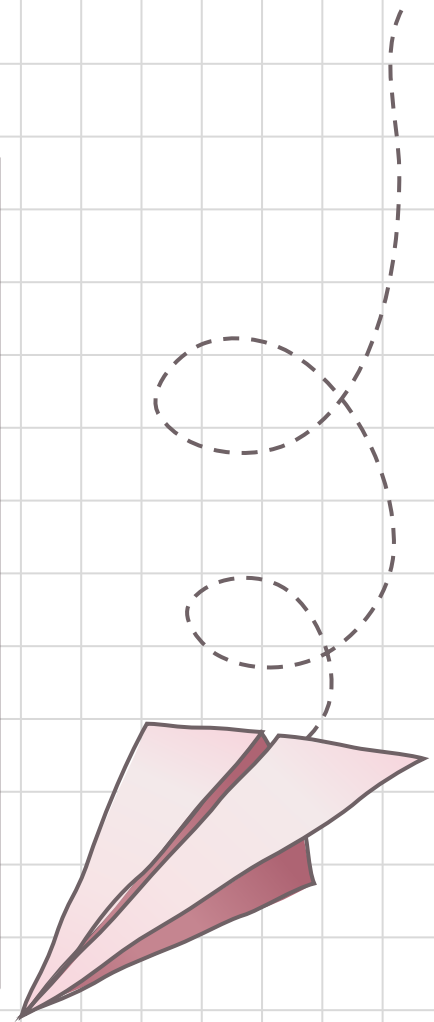


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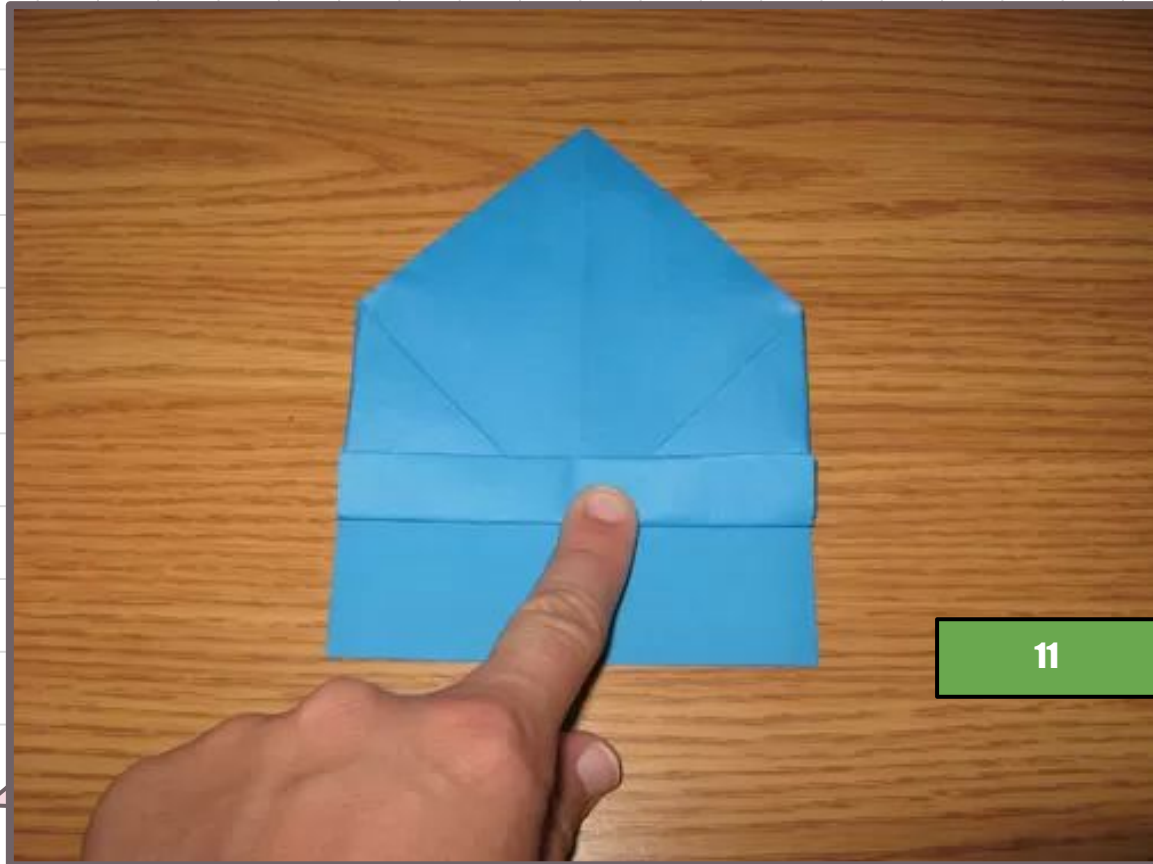
Story Time: Cereal with no bowl?



10

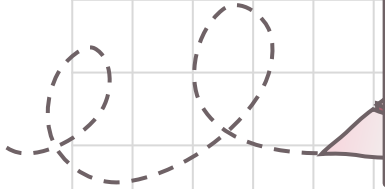
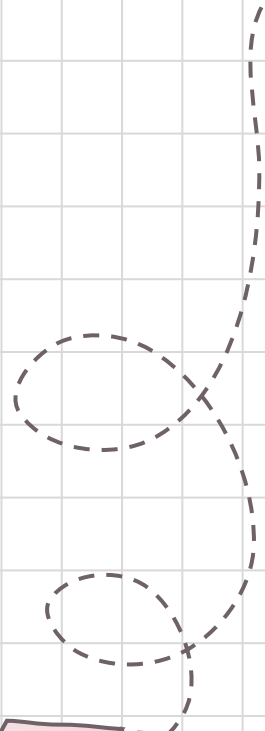
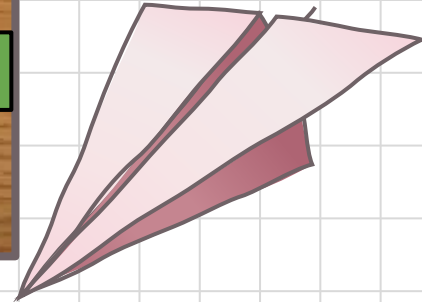
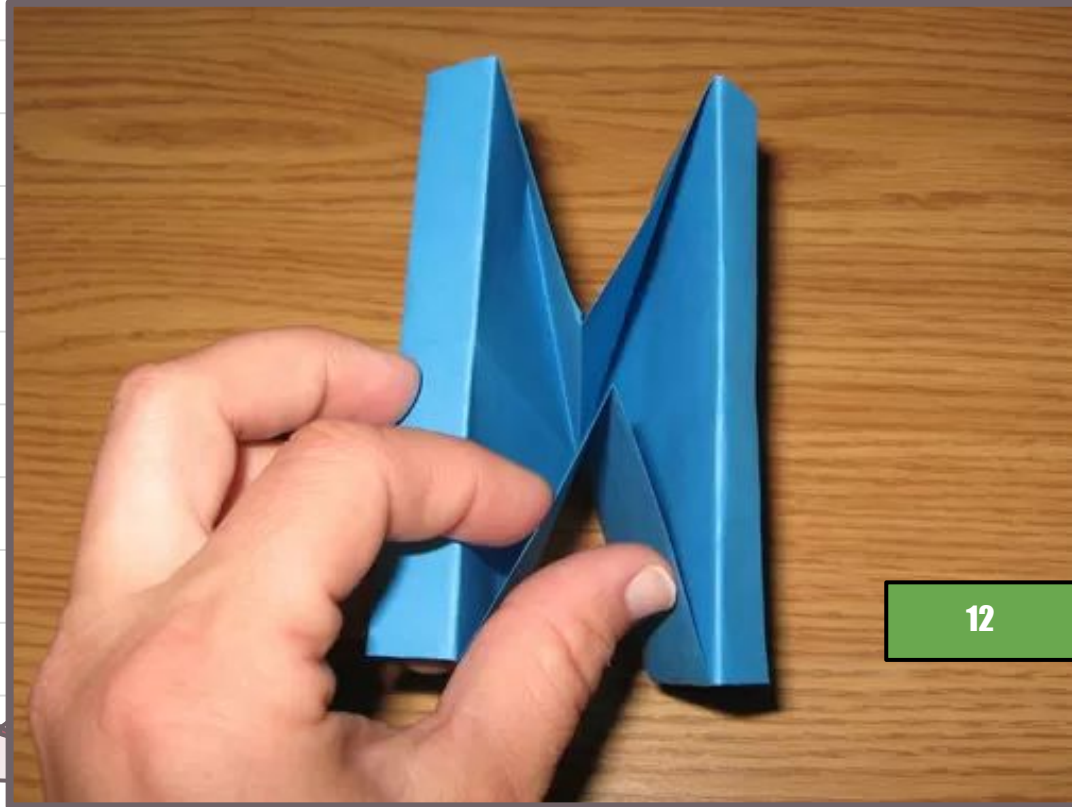


Story Time: Cereal with no bowl?



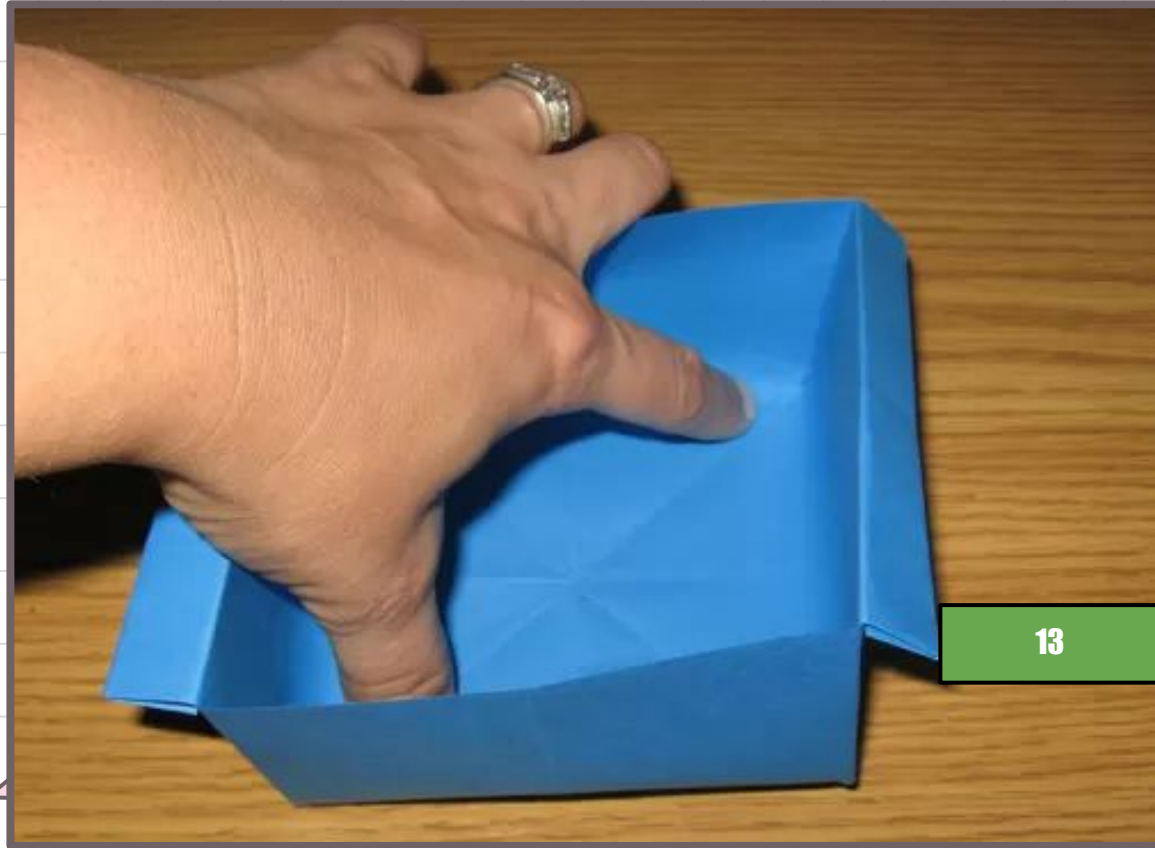
11

Story Time: Cereal with no bowl?



12

Story Time: Cereal with no bowl?



13

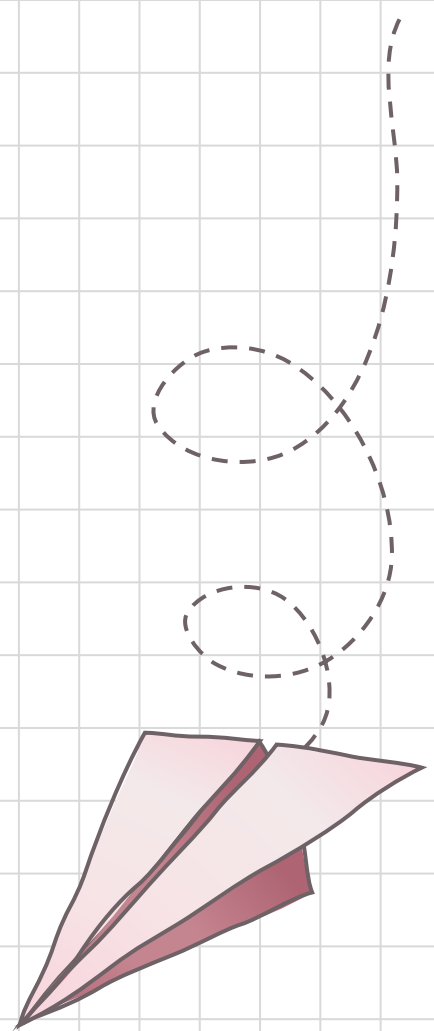
Paper Design Challenge

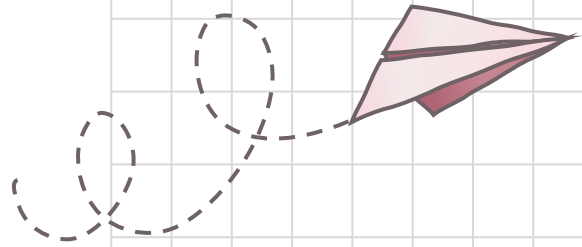
Pick one question:

- What can you design to organize things on a messy table?
- What items do you carry with you everyday? What is something you could design to help you carry those?
- What is something you could design to make it easier to get ready in the morning?

Things to remember:

- It doesn't need to work ("looks-like" prototype)
- It doesn't have to be to scale (make it tiny if you need to!)
- Have fun! Put questions in the chat!





Key takeaways

Prototyping - Making an early model of something

Sketch model - A prototype made of low cost materials

Iterating - Taking what you learned from testing, and applying it to your next model

- Prototyping lets us test our ideas
- When our prototypes don't work we learn
- Testing and iterating makes our end product better
- You can do a lot with paper!



Thanks for coming!

You might want to include a link to a Google Form (survey) to see what students learned!