

The Adventures of Emy the Fox and her Friends



Our main characters



Pierre the Bear



Leo the Rabbit



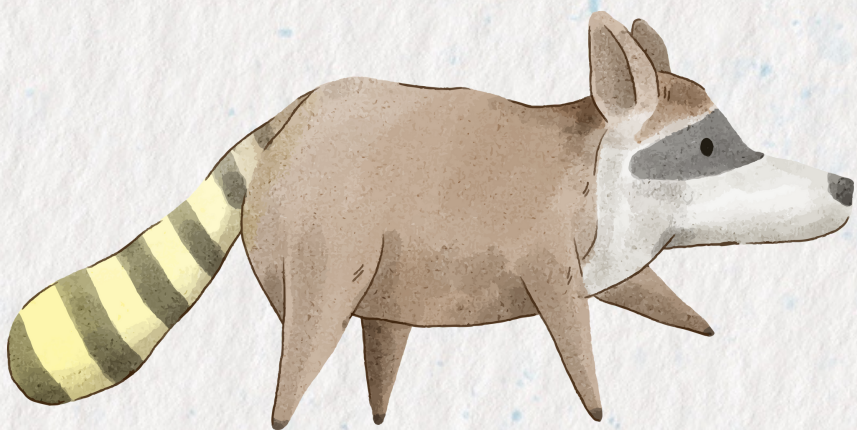
Teo the Beaver



J.R. the Bird



Emy the Fox



René the Raccoon



Ada the Badger



Danny and Johann the
Squirrel Brothers



Hedy the Whale

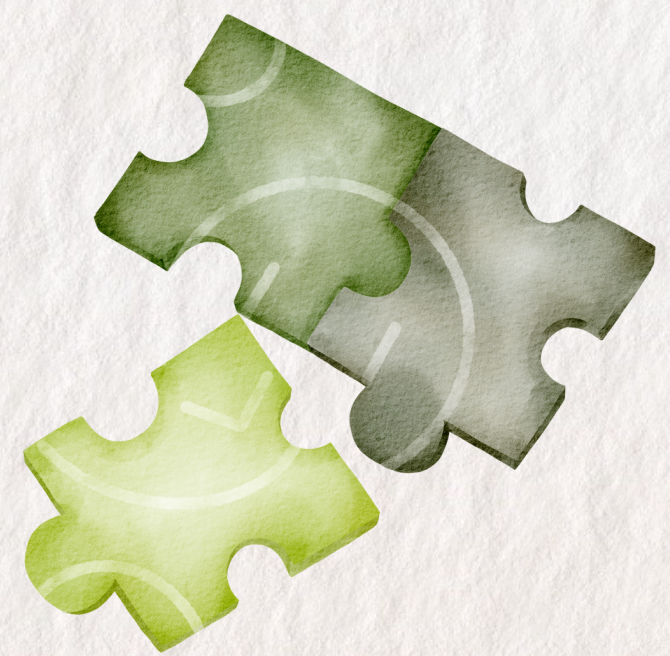
You will look at mathematics differently by the end of this exhibition.

We have always been convinced that good and interesting mathematics can be found everywhere, if you know where to look.



Why not in a tale? And even more, if they tell of nature, between reality, fantasy and a pinch of magic

We then thought that we could present our challenges in a book of tales and with a language that would reach our users and help them get into the game.



And Einstein was right when he stated that "Play is the highest form of research."

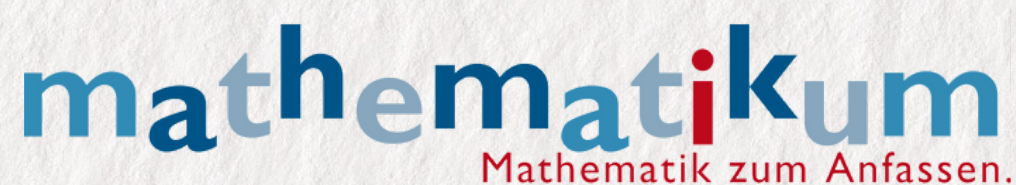


The partners of the SMEM Project

IMAGINARY

open mathematics

IMAGINARY is a non-profit organisation that promotes mathematical education and knowledge worldwide by offering interactive software, images, 3D prints, or hands-on exhibits under an open license on its website imaginary.org. It also creates and distributes interactive (physical) exhibits that communicate modern mathematics to the general public on an international level. IMAGINARY follows an open and participatory approach, involving all target groups in the process of creation and implementation of its projects. Since 2007, the organisation has inspired 3 million exhibition visitors in more than 69 countries and 31 languages with our exhibits ever since. A dozen of Museums and Science Centres worldwide show its content on a permanent basis, amongst others Deutsches Museum in Munich or the Museum of Mathematics (MoMath) in New York.



Mathematikum in Giessen, Germany, is the world's first science centre devoted to mathematics. Since its opening in 2002, it has attracted more than 2 million visitors of all ages and different educational backgrounds. Its success is based on the 200 interactive exhibits, which come from all parts of mathematics, such as geometry, algebra, probability, combinatorics, calculus, applied mathematics, theoretical computer science, history and many more. Mathematikum welcomes all ages of pupils. Its exhibits are based on hands-on and minds-on philosophy that offers the first step towards problem-solving thinking in the mathematical realm.

FERMAT SCIENCE

Une autre idée des maths



The association Fermat Science aims to promote and popularise mathematics and science, heritage and culture through the character and work of the famous mathematician Pierre Fermat. Through its actions of popularisation, Fermat Science hopes to contribute to encouraging more young people (especially girls) to move toward scientific careers. It develops teaching tools and exhibitions and organises events and workshops for schools and the general public. The organisation's continuous success and growth have expanded its partnerships and educational tools on a European and international level. Fermat Science is also the coordinator of disseminating a mathematics culture in Southern France.

mmaca

Museu
de Matemàtiques
de Catalunya

MMACA is a non-profit, non-governmental association. It was established in 2006 as a working group of the Federation of Entities for Education of Mathematics in Catalonia (FEEMCAT). MMACA strives to disseminate and stimulate a positive social image of mathematics through interactive experiences and hands-on activities. They also support and complement the work of educational centres from childhood to college. MMACA's activities include, but are not limited to, hands-on math exhibitions, travelling exhibitions, the creation of suitcases with hands-on material to bring to schools as pop-up exhibitions, virtual hands-on activities in the form of Escape Rooms with exhibits or strategic online games, workshops for students and teachers, and math activities for families and the general public.



MD "Archimedes" is a specialised professional society in the field of mathematics education. So far, more than 30.000 members have been recorded, including pupils, math teachers and math enthusiasts. It is a unique, specialised centre with extensive activities in several sectors: mathematical and computer schools and courses, popularising mathematics and science in general, organising mathematical tournaments and other competitions, organising conferences for teachers, and publishing activities including specialised editions.



C.I.P. Citizens In Power (CIP) is an independent non-profit, non-governmental organization. CIP constitutes one of the leading organizations in Cyprus in the field of global education, social innovation, entrepreneurship, STEM and sustainable growth. The mission of the organization is implementing cross-sectoral, interdisciplinary approaches, as a response to fundamental social, educational and environmental challenges and policy gaps, mainly by employing technology transfer and operationalizing the research findings.

Drawing Dice

The first signs of winter are showing... Emy the Fox and her friends have gathered to celebrate the beginning of winter with a campfire.

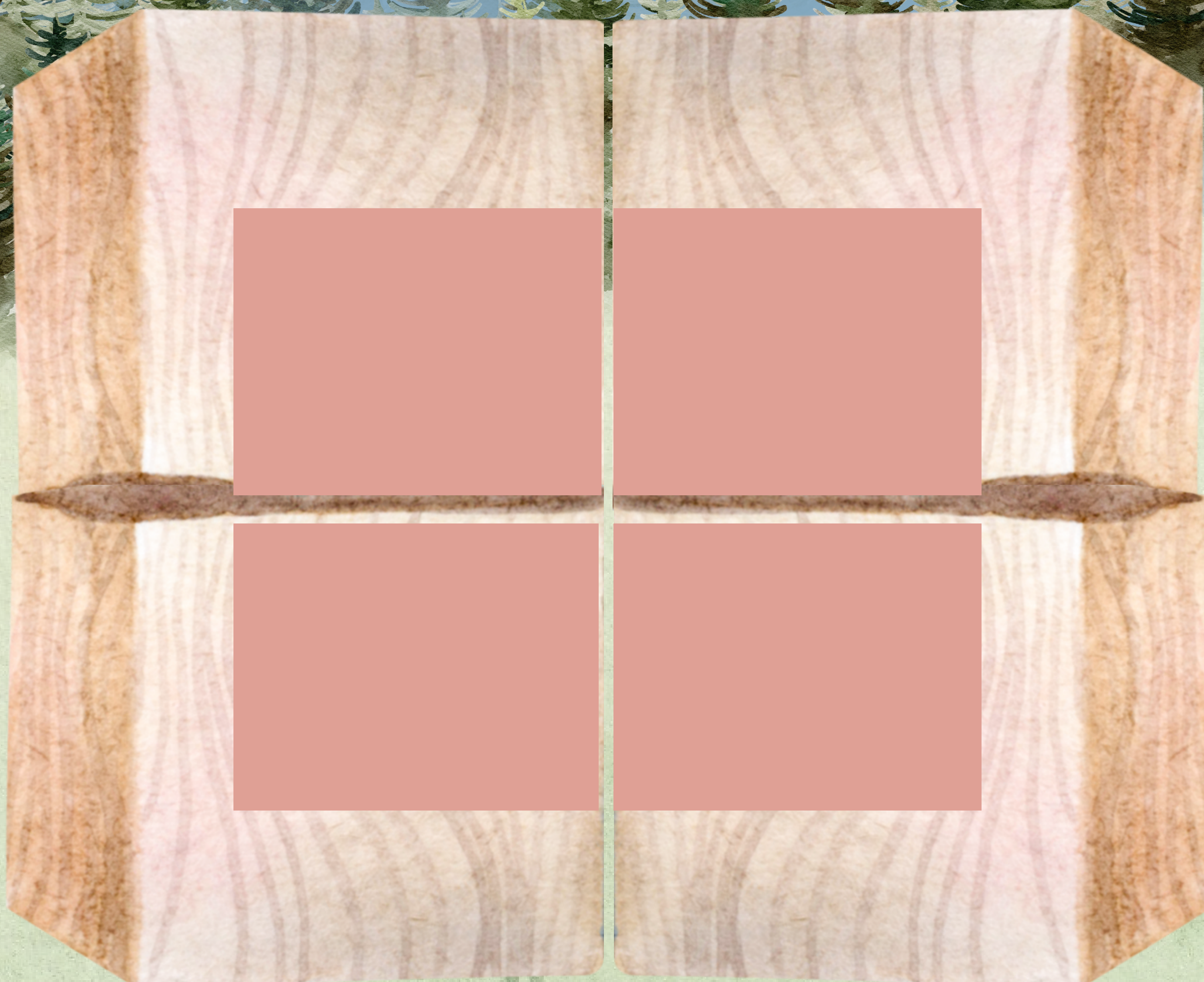
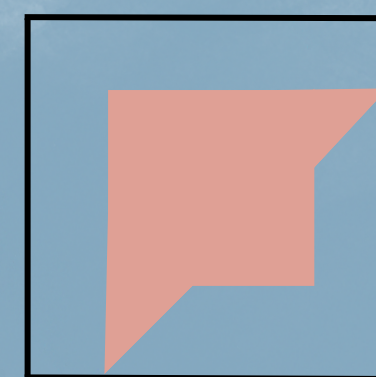
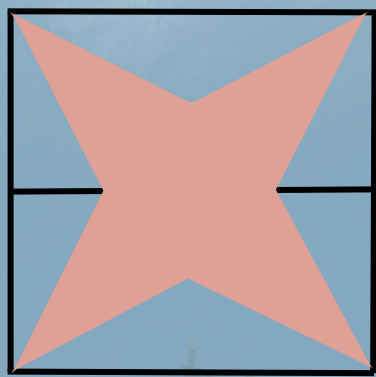
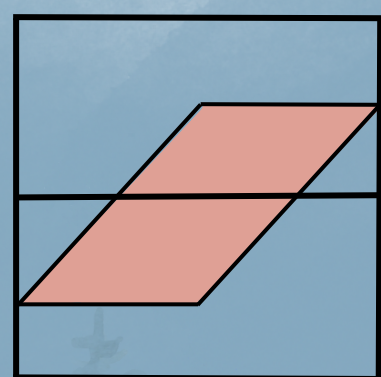
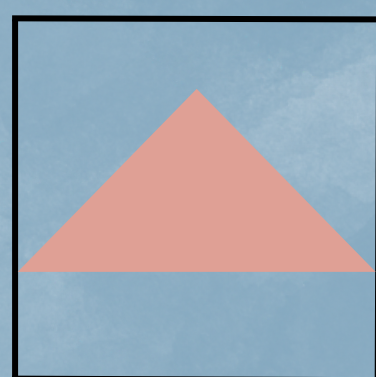
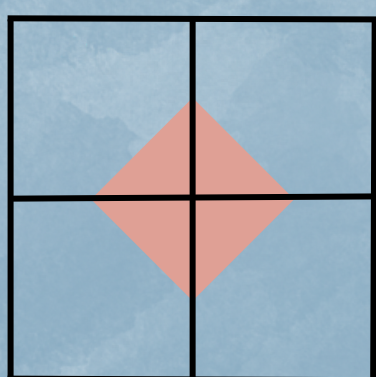
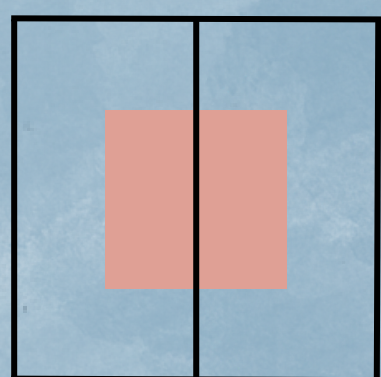
Emy is eager to show her friends the new magical dice a fairy gave her.

The dice have the same shapes but allow whoever uses them to unleash their imagination and create new shapes.



Which other shapes can you build?

Pick up the dice and try it!





Cherries

On their way to meet Emy the Fox for a picnic, the squirrel brothers, Danny and Johann, find a cherry tree.

They want to share some cherries with Emy and their other friends. Unfortunately, they cannot carry many in one go and have to sort out the cherries 1 by 1 and in groups of 2, 3 and 4.

Can you help the two brothers
arrange the cherries neatly in
their baskets?

Make sure to use all the cherries
to fill one basket at a time!



Seesaw

Emy and her friends managed to build a seesaw in the forest. Now it's time to try it!

Emy and René, the Raccoon, are the first ones to get on the seesaw. They quickly realise that René is heavier than Emy.

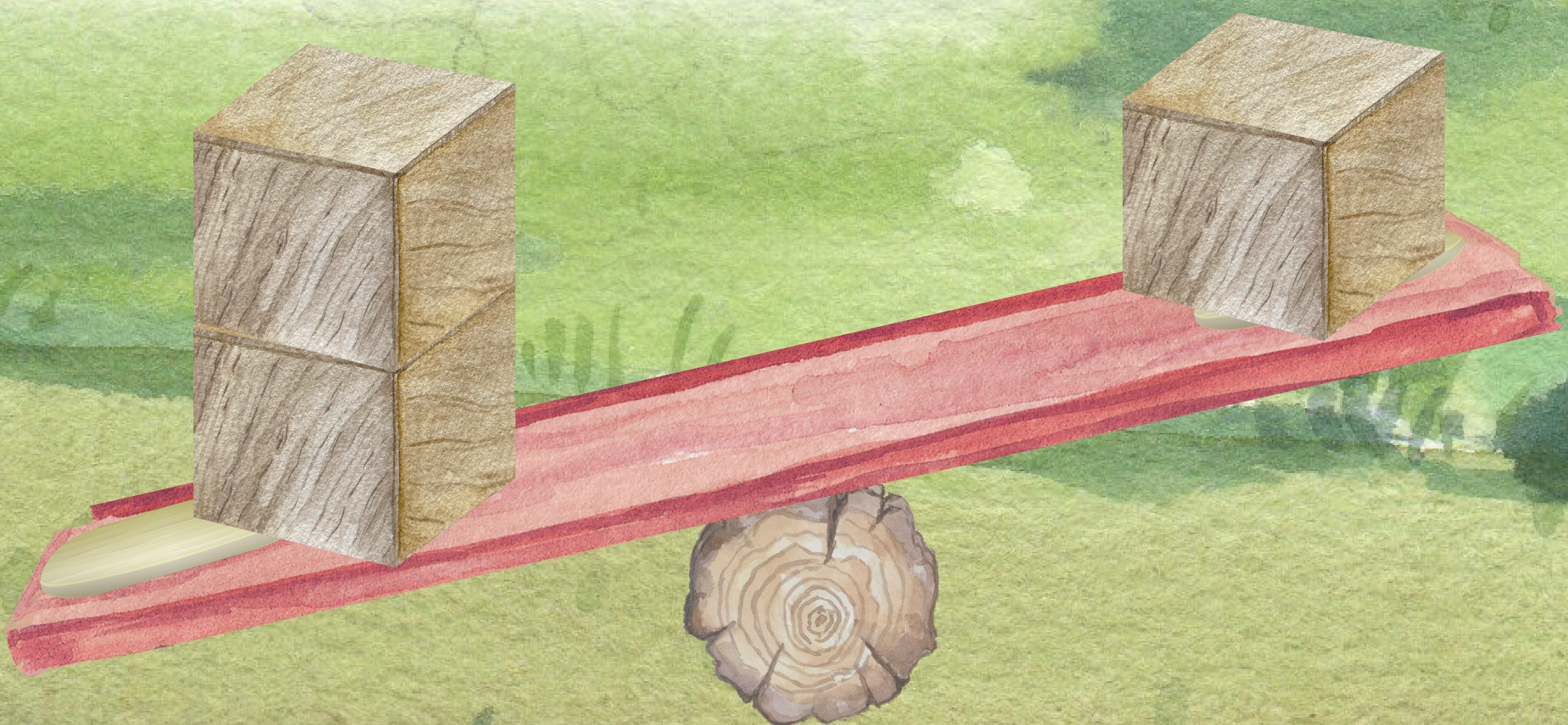
Excited by their discovery, all her friends want to try and see who is the heaviest and what will happen if they get on the seesaw in groups.



Can you help Emy and her friends figure out how the seesaw works?

Can Emy do something to balance René's weight?

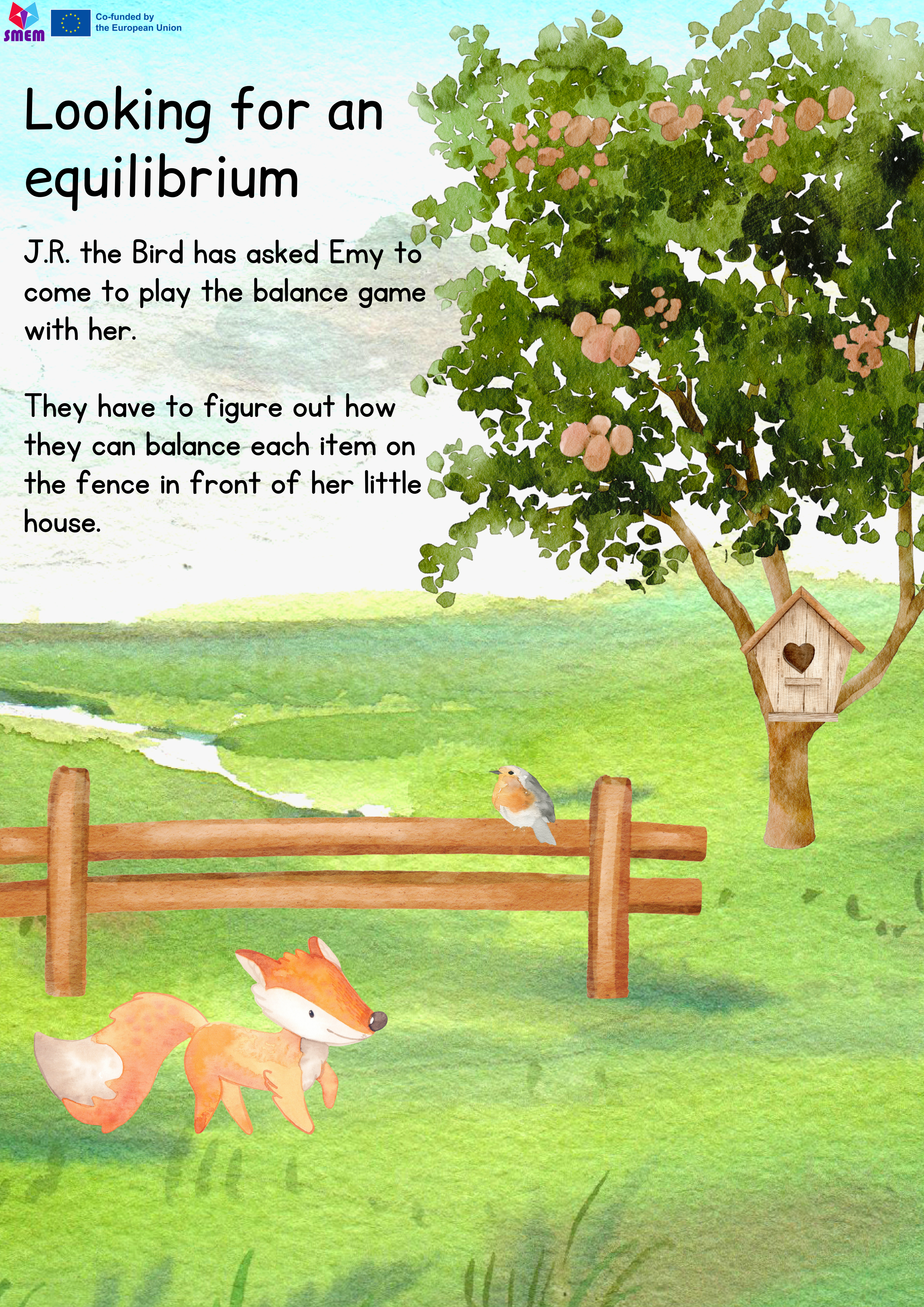
Try different combinations!



Looking for an equilibrium

J.R. the Bird has asked Emy to come to play the balance game with her.

They have to figure out how they can balance each item on the fence in front of her little house.



Want to play the balance game too?

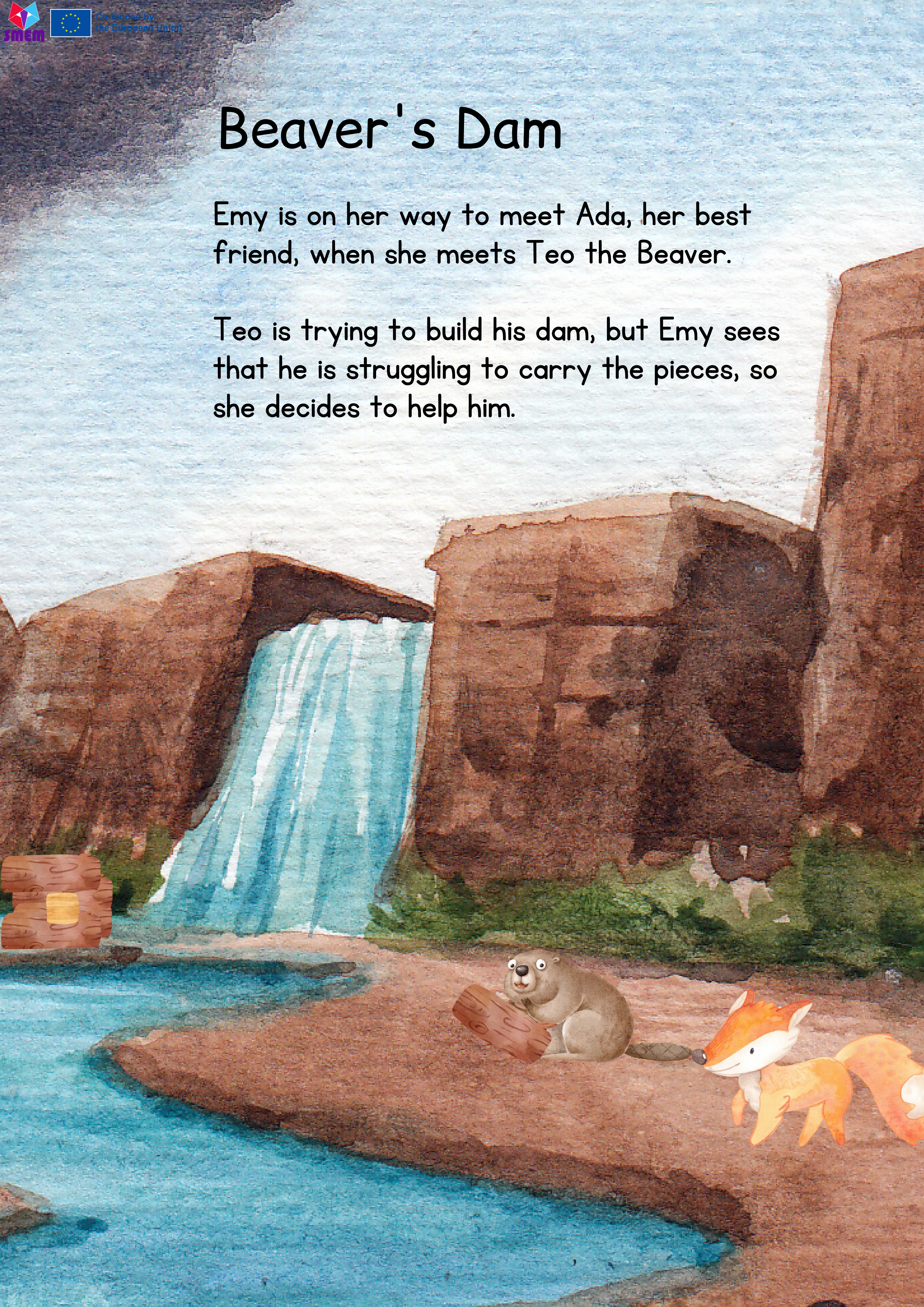
Try you balance as many items as you can!



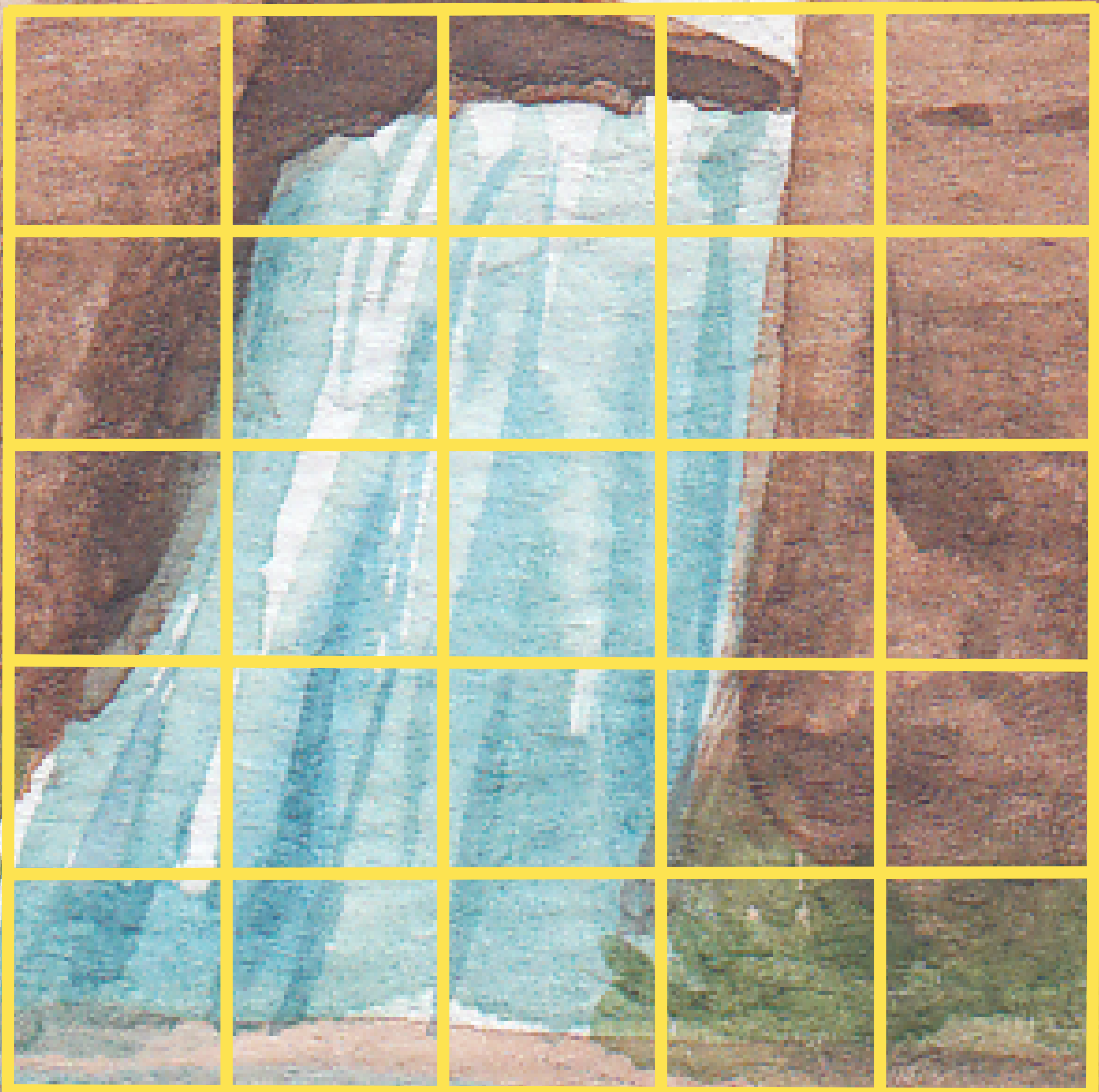
Beaver's Dam

Emy is on her way to meet Ada, her best friend, when she meets Teo the Beaver.

Teo is trying to build his dam, but Emy sees that he is struggling to carry the pieces, so she decides to help him.



Can you help the Beaver complete his dam?
Teo needs our help!



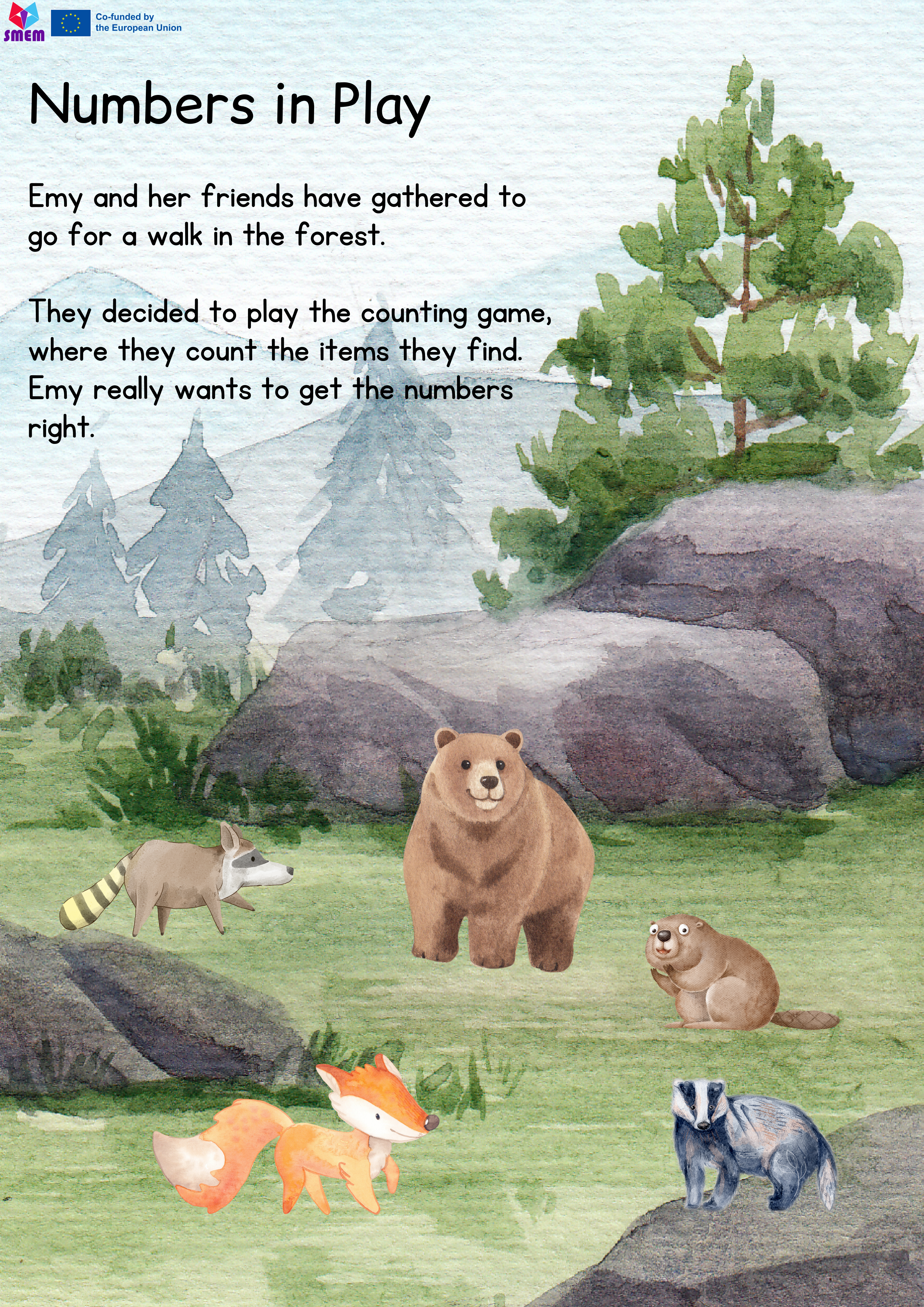
Can you help the Beaver complete his dam?
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Numbers in Play

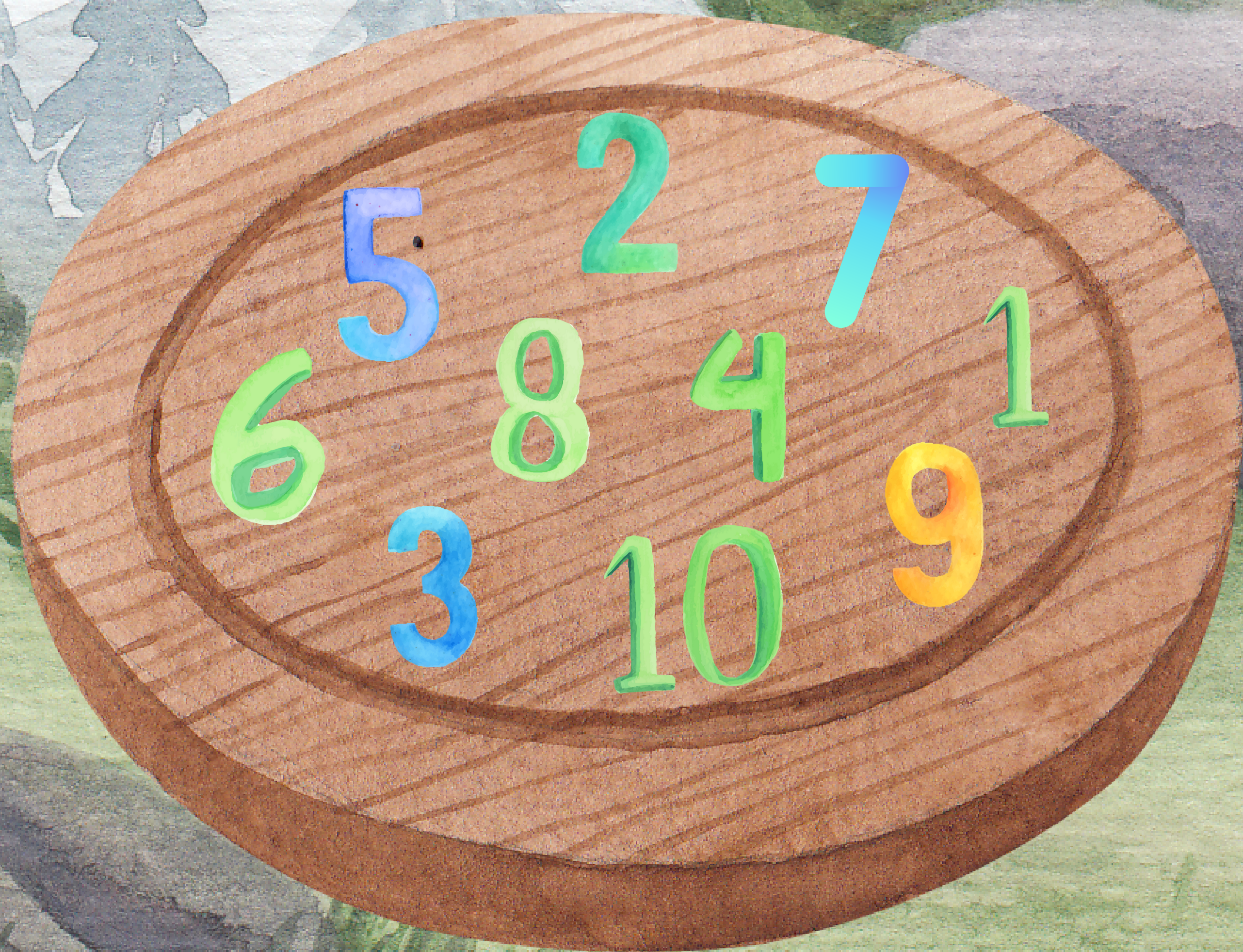
Emy and her friends have gathered to go for a walk in the forest.

They decided to play the counting game, where they count the items they find. Emy really wants to get the numbers right.



Can you help Emy put the objects in the circles beside the corresponding number?

Use the board to figure it out!



Creating umbrellas

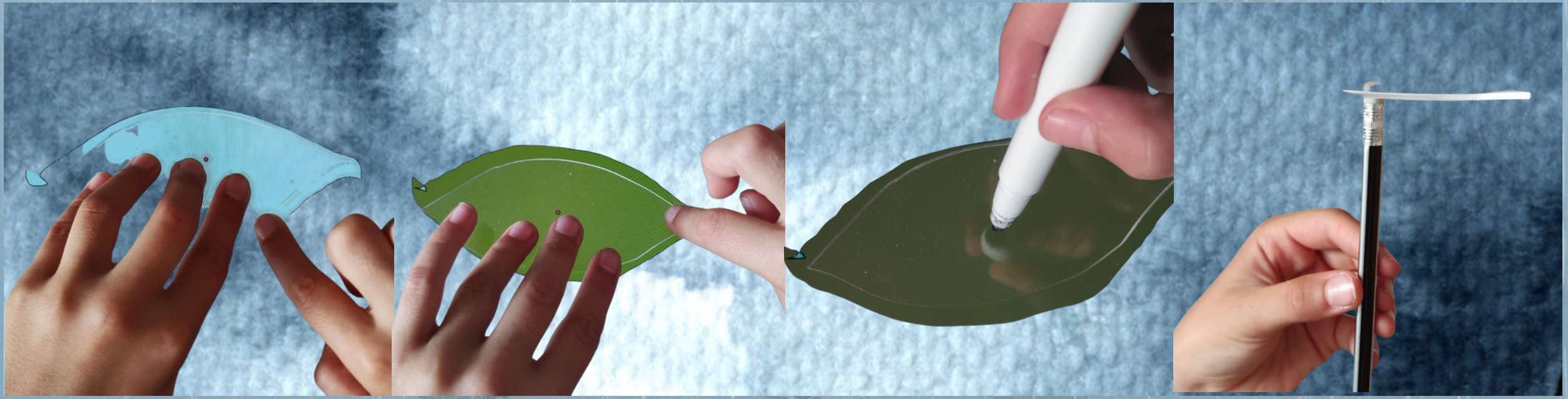
A big storm has started. It's pouring rain in the forest... Emy and Ada want to go home and need to create umbrellas to avoid getting soaked.

To do so, they decide to use the leaves and branches of the trees.

To balance the leaves on the branch, they need to find the exact position where the branch needs to touch the leaf.



Can you help Emy and her friends find the exact position, so that the leaf balances on the branch?



Can you help Emy and her friends find the exact position, so that the leaf balances on the branch?



Heart in the Sky

It's the birthday of Hedy the Whale!

Emy wants to send her a birthday card; the problem is that the paper is not waterproof, and Hedy can only see big things.

So Emy wants to fly her kite in the sky above the ocean for Hedy so that the tail of the kite forms the shape of a heart.



Can you help Emy show Hedy the Whale
the shape of a heart with her kite?

