# STEAMcomic! With Tinkercad, Canva and Stop Motion ⚡

by Elenavercher

Have you ever thought of STEAM and storytelling together? This project is about THAT! STEAMcomic a project based on storytelling, specially the comic technique and STEAM subjects. We will design our comic characters using the 3D modelling online software named Tinkercad. Then, we will use them to write the story and draw a comic. After that, we will bring those pieces alive using a 3D printer. Finally, we will use a Stop Motion app to create the trailer by using the 3d pieces and the students' drawings. Are you ready to take part on our STEAMcomic?! Lights... Camera... ACTION! ?

## Teaching notes

STEAMcomic is a project we created at Escola Sant Jordi and Institut Roquetes based on storytelling, specially the comic technique and STEAM subjects. We have designed our comic characters using the 3D modelling online tool Tinkercad. We have downloaded the .obj character from Tinkercad and animated those creations using Monster Mash. Then, we have used them to write the story and draw a comic. After that, we have brought those pieces alive using a 3D printer. Finally, we have used a Stop Motion app on a tablet and a chromebook to create the trailer by using the 3d pieces and the students' drawings.

We have used an inquiry-based approach where the students had to collaborate to create their own comic. We have used small group work to provide the pupils with an opportunity to collaborate with each other, also providing them with the communicative skills they needed to interact successfully in the English as a Foreign Language (EFL) class. We also used Whole Brain Teaching for classroom management, so that they had the need to use that language. The last activity of the project was a collaborative trailer watching, where all of the students from the different countries watched their colleague's trailers.
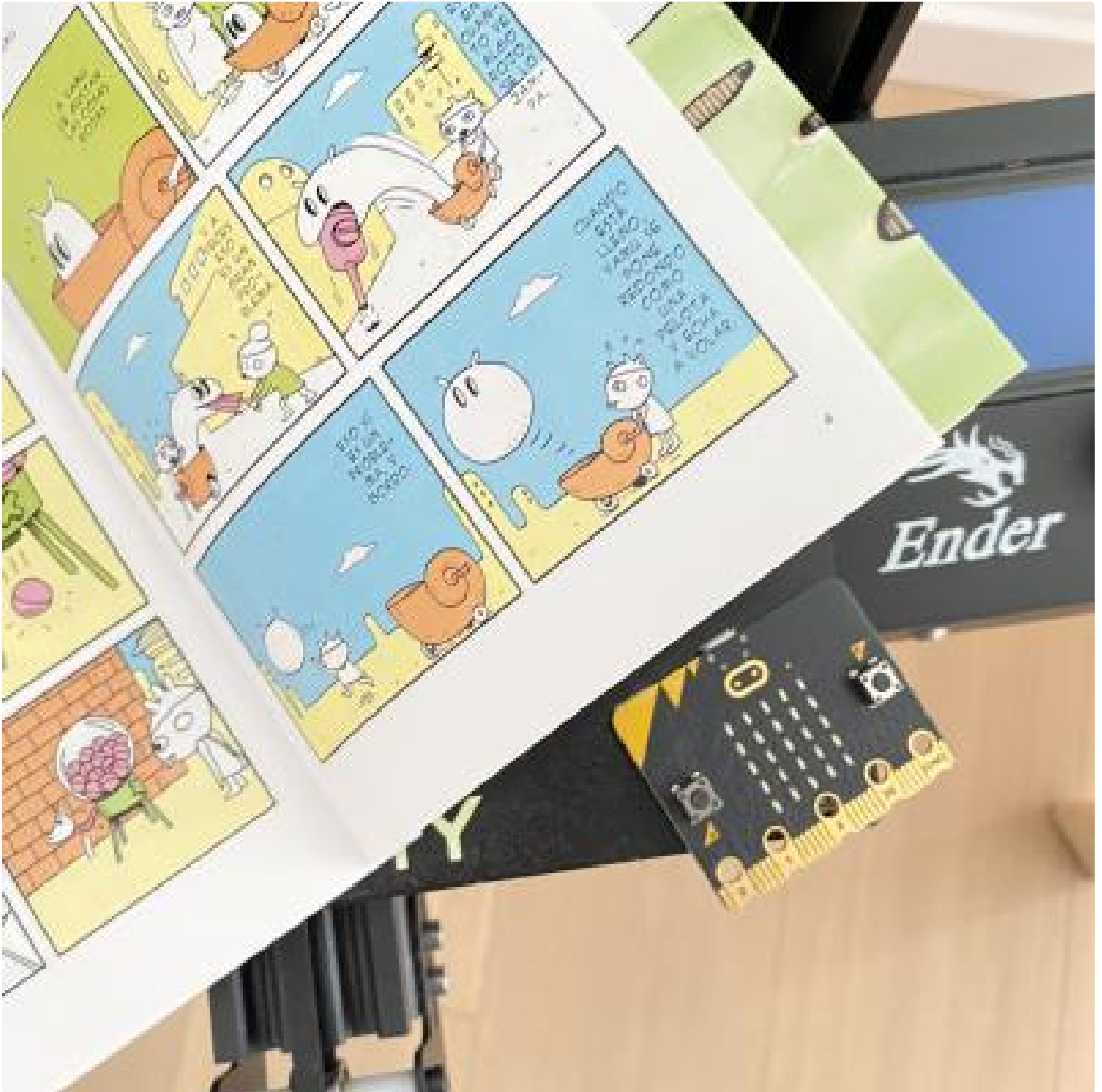
## Educational objectives

- Learn about the comic technique and the language used in it
- Write a comic
- Use STEAM techniques such as 3D modelling and printing
- Learn how to use a 3d printer
- Write in a foreign language
- Create a stop motion trailer
- Video editing

## Supplies:

- Laptop / Tablet
- 3D printer

- micro:bit
- Servo Motor

## Step 1: Introduction of the Main Character

**We will create a comic based on this main character:**



We will use the same common main character. It will be this robot:  https://www.thingiverse.com/thing:539474
(JointedCommons - Attribution - Share Alikelicense . theCreative)

**Create or choose the secondary characters**

We need to define the size in centimetres to be able to make the Stop Motion scenery. We will create them using Tinkercad and print them using the 3D printer.

We can also edit some of these articulated designs: Articulated characters.

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## Step 2: Write the Story

In this step, we will write a summary of the story, using an indirect style synopsis, with an environmental theme, and focused on **energy**.

This activity can be done in pairs, each couple of students will imagine and write an argument.

Then, we should choose an argument from the whole class to create a common comic. We read them all of the stories all and create a google form to vote for the one we liked best.
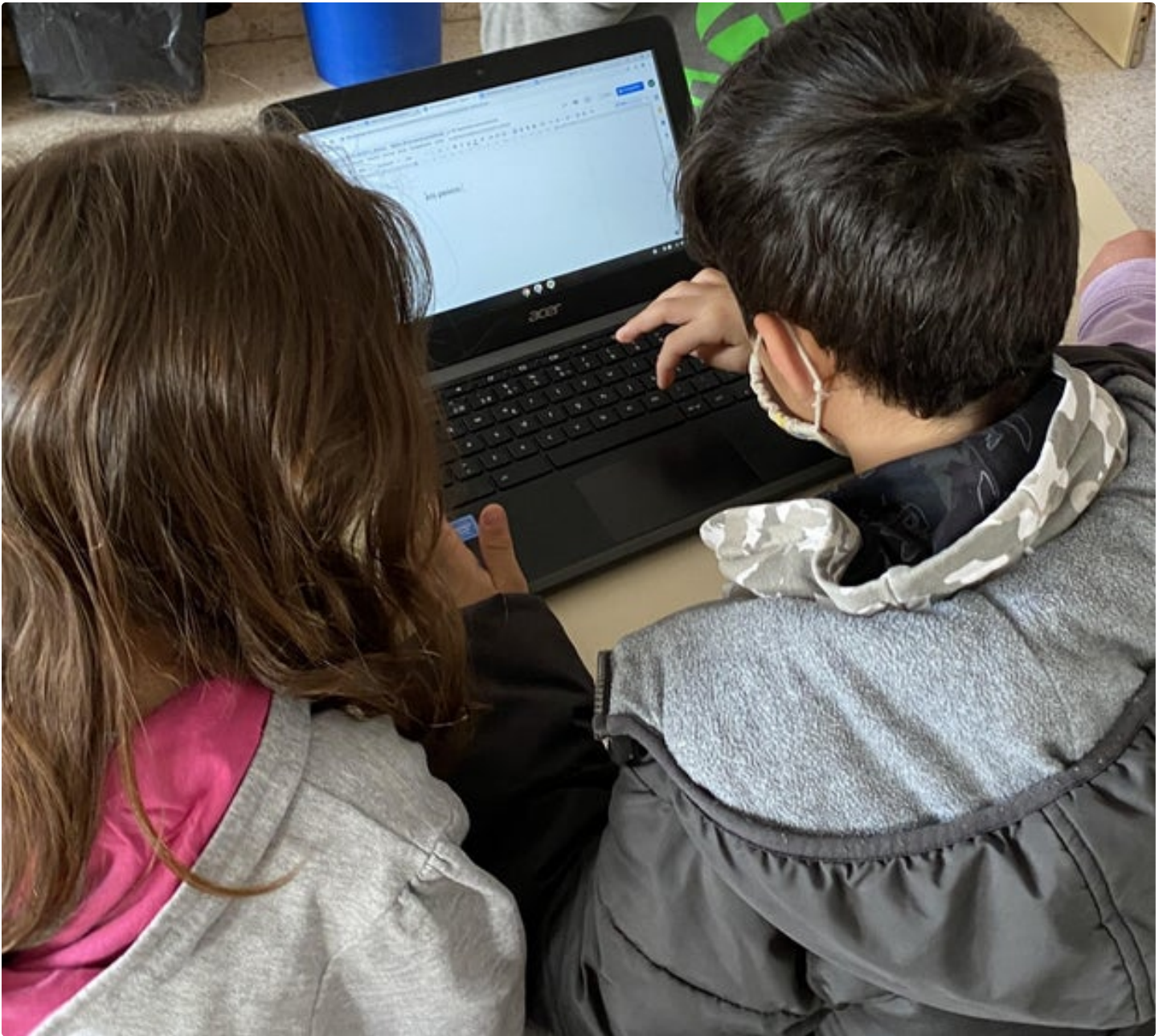
## Step 3: Divide the Force ⚡

Now it's time to divide the force, which is the same: work in groups! Yaaay!▨▨▨

We will create work teams of three people who will work simultaneously in different processes:

- **COMIC**:
- Editors: write the script
- Layouts: draw the templates of the comic (which will be bigger, smaller, type of vignette -with text below …-)
- By hand
- With software:
- To give movement to the 3D character: https://www.mixamo.com/#/
- To download the moving 3D image: https://chrome.google.com/webstore/detail/3d-viewer-for-google-

chro/jceeiccnnkpmlgddogegmifjahkohnfb

- To create cartoons and characters: https://www.canva.com/search/templates?q=comic
- Illustrators: design the comic book drawings, etc.


- The **STORYBOARD**:
- Editors: write the script for what will be the Stop Motion
- Layouts: draw the scenes of the Stop Motion (cinema shots - close-up… -)
- By hand
- With software : https://www.storyboardthat.com/es / https://www.canva.com/search/templates?q=comic
- Illustrators: design the sets for each scene of the trailer in Stop Motion


- **TRAILER**
- Creation team:
- Paint the 3D models created in Tinkercad and printed in the 3D printer using acrylic paint.
- Design and print background and different objects needed for the story.
- Add movement to the characters using micro:bit and a servo motor (link to the tutorial).
- Shooting crew: photos of each scene
- Editing and sound: Review photos and make modifications, if necessary, type: duration, voiceover, sound effects, etc...
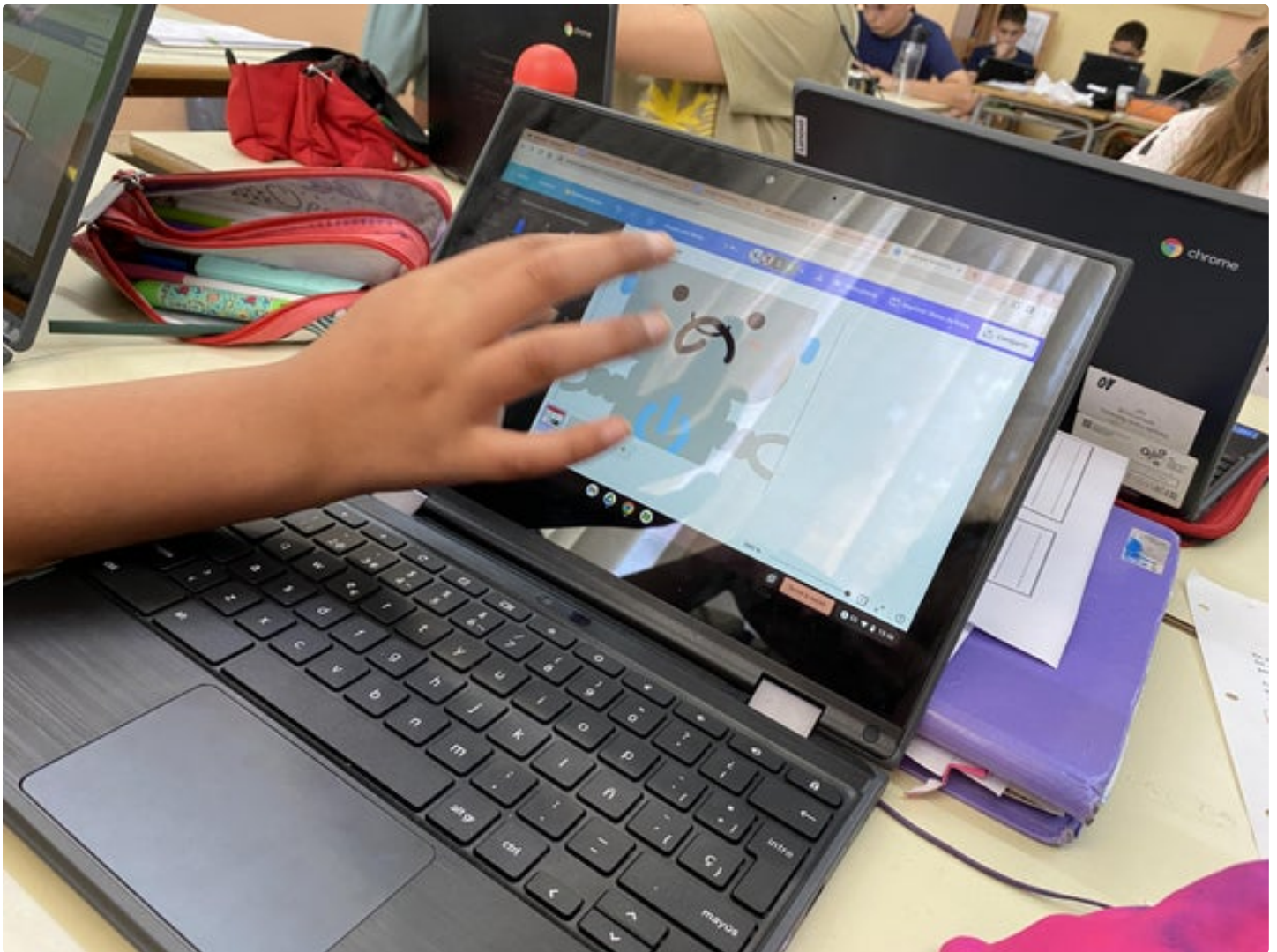
## Step 4: Lights... Camera... ACTION!

In this final step, we can use Microsoft Flip to share the work of every team and the students' creations, or we can devote a couple of hours in class to share the comic, the storyboard and the trailer of the comic and also share some popcorn! ⬜

Here is a certificate that you can use to congratulate your students on their project: https://docs.google.com/presentation/d/1fjNmI3CNXAKGgKHpn8-veqiQhCiG4ng5a97pfscEd6Q/copy?usp=sharing

**And now... lights... Camera... ACTION!** ⬜

https://youtu.be/Eeeinug8Tcw

https://youtu.be/cuWmD8L5EQM