



GUIDE FOR EDUCATORS

Create your own keychain

With this guide, you can design and conduct a one-hour activity using **Tinkercad**. Participants explore and have experience of **3D modeling** while creating their own custom keychain.



Activity Overview

Here's a programming tip for a 1-hour activity:



IMAGINE
15 minutes

Divide the class into groups and introduce the theme of the activity



CREATE
30 minutes

Help participants create their own project, working at their own pace



SHARE
15 minutes

Plan a final moment of project sharing and reflection

Checklist

Use this checklist to prepare for the activity:

- ☐ **Have a tutorial with the participants.**

Before the activity, explore Tinkercad and do a simple tutorial to create 3D objects. You can show how you move in space and how to create simple elements.



>>>> Are you new to Tinkercad?

No problem! Open the **Create Cards** and follow the steps to create your first 3D project!

- ☐ **Print the activity cards.**

Prepare some printed copies of the "guides for participants" that can be used during the workshop.



- ☐ **Verify that participants have an account.**

Participants can register for free at tinkercad.com. If you are facilitating the workshop for a class of students, you can create a teacher account to easily support students.

- ☐ **Prepare the computers.**

Arrange devices so that participants can work in small groups. Also set up a computer connected to a projector or a large screen to show examples and guide participants through the first steps.

Imagine

Start engaging the participants by introducing the theme and stimulating new ideas for the projects.



Provide ideas and inspiration

Show an introductory video about Tinkercad or examples of simple objects created with the software.

Show different examples with different customizations, such as keychains with the shape of animals, comic book characters, etc...



Peer-to-peer exchanges of ideas

To help participants, come up with ideas for their keychain, brainstorm creative themes. Take turns to share shape ideas or customizations, such as a star-shaped keychain with your name, or a keychain that represents a hobby, like a tennis racket or a book.






Demo project: first steps

Show the first steps to create a new project.



How to move in space

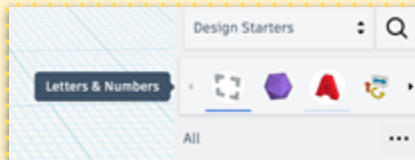
To zoom in or out press + or -, use the touchpad or rotate the mouse wheel.

Use  to change the view angle. For precise navigation, press the right mouse button or hold down *ctrl* and *click* with the mouse.



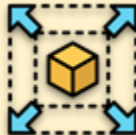
Choose a letter

Select "Project Starters" in the drop-down menu on the right, select a letter and drag it onto the workspace.



Change the parameters

Show participants how to change the size or color of selected objects, how to add more shapes and group them together.



Create

Support participants during the creation of their project.



Start with...

Ask questions to guide participants to start creating their own project.

For example:

- Which name did you choose?
- What new element would you like to add?



Provide helpful resources

Offer different ways to get started.

For example: some participants will be happy to follow printed guides, others will instead watch online tutorials. See example resources in the "Learning Center" section on tinkercad.com.

Suggest ideas to get started

- Choose a name
- Change colors
- Think of a composition
- Add decorative elements





Try more

- Create new shapes
- Create a keychain made up of multiple parts that fit together
- Import complex shapes from other galleries



Support peer collaboration

- When someone gets stuck, encourage collaboration with other participants who can help them.
- Have you found an interesting idea? Ask the person who thought of it to share it with others.



Facilitate problem solving

Help participants to feel comfortable trying different combinations of shapes and seeing what happens. To understand their thought process, you can ask questions like:

- How is it going?
- What are you working on now?
- What do you plan to try next?

Share

Ask participants to share their project with their peers of exploration.



Ask questions they can discuss:

What did you like the most about the project you created?

What was the hardest part?

If you had more time, what would you have wanted to add or change?

And then...?



- Participants can use the ideas and the concepts from this workshop to create a wide variety of projects.
- If possible, provide an online space to collect and share everyone's projects.

These guides were created by



Inspired by the **Scratch** Cards