


Design a 3D object in Tinkercad

This tutorial guides you through the basics of Tinkercad, an online software for 3D modeling

 Difficulté Très facile

 Durée 40 minute(s)

 Catégories Art, Jeux & Loisirs

 Coût 0 EUR (€)

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Skill level

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Background knowledge and competences

Duration of the activity

Material and equipment needed

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Introduction

Age range

9-13

Skill level

Beginner

Objectives

- learn the basics of designing 3D objects in view of leading an activity on this topic with youth
- master the basics of Tinkercad (an online software for 3D modeling)

Background knowledge and competences

none

Duration of the activity

20 to 40 minutes

Material and equipment needed

A computer, or a tablet with internet connection



Matériaux

A computer or tablet with internet connection

Outils

Étape 1 - Activity Plan

This video takes the educator through the basics of Tinkercad. You will learn about designing simple solids (ex. cubes, tetrahedrons), and combining them together to produce a complex object

https://openclassrooms.com/courses/imprimante-3d/modelisez-un-objet-en-3d#/id/video_Player_0

Étape 2 - Follow-up to the activity

Connecting 3D modeling in Tinkercad with STEAM

3D design tools enable us to visually and tangibly experiment with a variety of mathematical concepts. To give you a sense of what this looks like in practice, here are a few concepts you might explore with young people using 3D design:

- Reason with shapes and their attributes .For example, using Tinkercad, "Can you create three different objects with the defining attributes of a cube?"
- Reason with shapes and their attributes . For example, using Tinkercad, "Can you create a sphere that is 1/2 red and 1/2 blue?"
- Reason with shapes and their attributes. For example, using Tinkercad, "Can you partition a shape into four equal parts, making each quarter a different color?"
- Represent and interpret data . For example, have students take measurements of a real-world object (a simple shape like a tissue box is a good start) and then create a 3D model of the object in Tinkercad using the measured dimensions.
- Develop understanding of fractions as numbers. For example, use a 3D printer to create the [Beast Belly Fraction Game](#) . In this game, users will use 3d printed tokens that represent various fractions to "fill the beast's belly" by creating a perfect 1 whole.
- Geometric measurement: understand concepts of angle and measure angles. For example, in Tinkercad, "Can you rotate an object by 120 degrees?"
- Geometric measurement: understand concepts of volume

Other ideas for STEAM projects, related to physics, for example, that you can run using tinkercad are the following:

- design a water filter
 - build your own space station
 - make your own measuring tools
 - design a soda bottle rocket
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Étape 3 - Resources

[Here](#) is an instructable tutorial that deals with 3D design and STEAM

Notes et références

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