



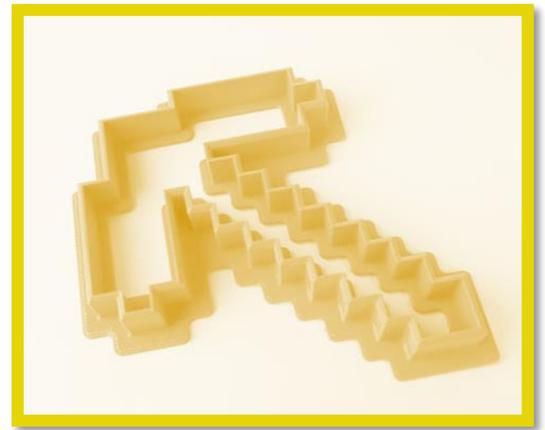
# Cookie Cutter

Create a cookie cutter which can be used in cookery, play dough or salt dough using computer aided design and a 3D printer.

## Lesson overview

In this lesson, children create a shaped cookie cutter on Tinkercad. This can then be used to create cookies or biscuits, in the play area with play dough or for part of an art project with salt dough.

In Tinkercad, children create a 'solid' shape before adding a 'hole' in the middle to create a cutter shape.



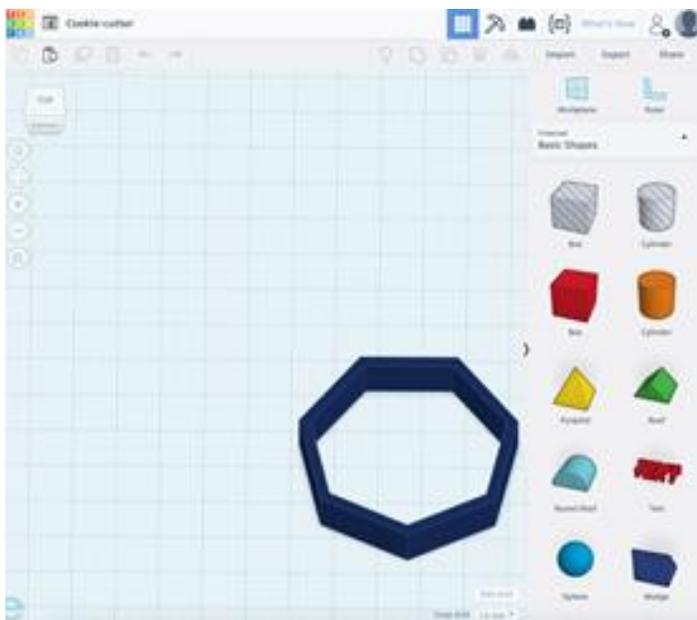
Category: 3D printing

Age or Stage: KS1  
Lower KS2  
Upper KS2  
SEND

Key words: Cookie, food, nutrition, play dough, enterprise, biscuit

Subject areas: Science, Design and Technology, Computing, Maths

Resources: 3D printer  
Computers or tablets  
Tinkercad

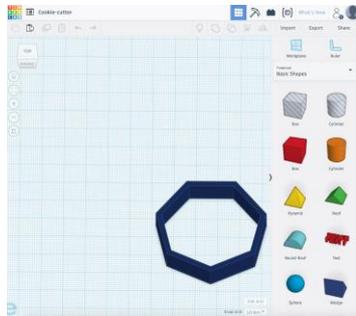




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## Lesson guidance:

1. Ask children to log on to the PCs and navigate to Tinkercad.
2. Children then choose a shape with vertical sides from Basic Shapes (e.g. a cube, but not a circle or pyramid). If the polygon shape is chosen, children can choose the number of sides they want.
3. Drag the shape across to the Workplane and make it the correct dimensions (e.g. 50mm wide and 15mm deep)
4. Drag the same shape over to the Workplane again. This time, in the shape submenu, select 'hole'.
5. Place this hole over the existing shape, adjusting and aligning the shape and location so that it is in the centre without any overlap of the solid shape.



6. Ask children to check that their neighbour has no overlap of the hole with the solid shape. Select the shapes and group them together to remove the hole.
7. When the children are happy with their cookie cutter, ask them to export their file as an .stl file ready to be printed.

## Extension exercises:

Extensions can be varied to fit your Programme of Study, but could include:

- Design a handle to make it easier to hold.
- Create a more complex cookie cutter using several different shapes. Children will need to use the 'group' feature to group together several shapes into a new one. They could also try to duplicate their new shape using 'copy and paste' to create the same shape again before making it into a hole.
- Creating and/or importing their own image to use to create a cookie cutter. This can be done by converting their .jpg file into an .SVG file by using a free conversion website such as Convertio.