

# Sensory Spelling

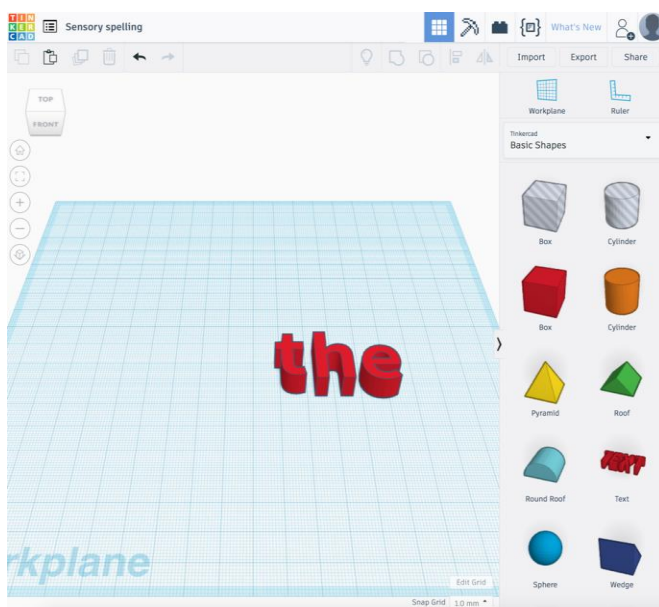
Using computer aided design (CAD) and 3D printed letters to help learn spellings, sounds and tricky words.

## Lesson overview

This lesson helps children to familiarise themselves with the letters and formation of words by creating them letter by letter in 3D on the computer and also in as 3D plastic letters. Using Tinkercad, children can design their weekly spellings or tricky words as a 3D word which they can then print out on the 3D printer. These letters can then become a resource to use for further spelling practice.

This visual approach to creating each individual letter in 3D to form words can be particularly helpful for children with learning difficulties such as dyslexia.

You can ask children to print either one letter or the whole word, depending on which letter resources are needed in your school. Children could print whole words for their own reference, or just a few letters which are those you required to create a letter bank for your class.



Category: 3D printing

Age or Stage: Foundation  
KS1  
Lower KS2  
Upper KS2  
SEND

Key words: Spelling, morphology, orthography,

Subject areas: English, Design and Technology, Information, Computing, STEM

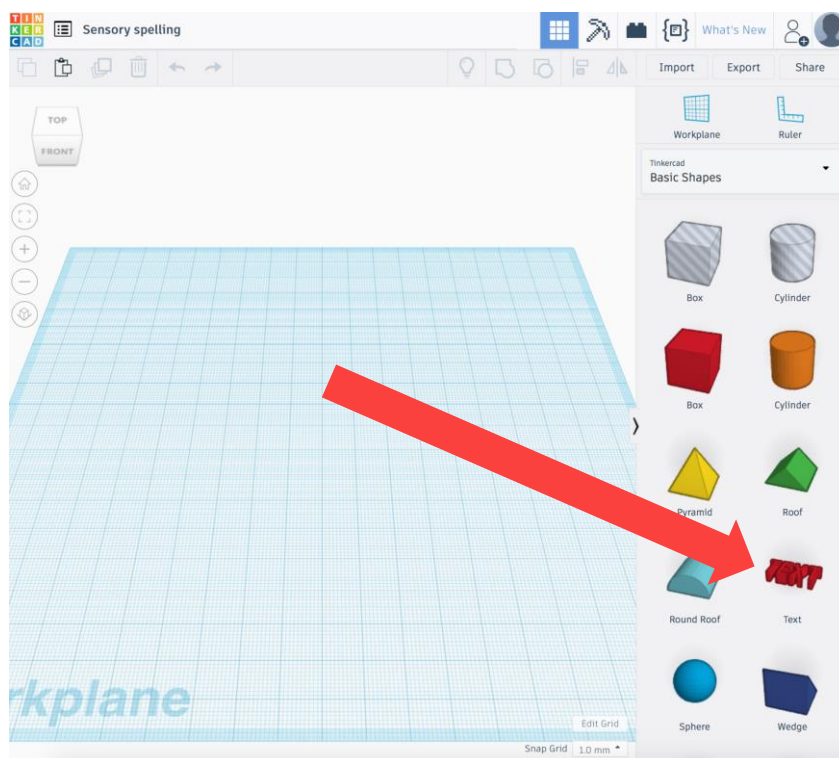
Resources: 3D printer  
Computers or tablets  
Tinkercad  
Children's spelling or literacy books



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## Lesson guidance

1. Assign children specific words to create (perhaps words they are finding hard to spell).
2. Ask the children to log on to the PCs or tablets and navigate to Tinkercad. (See our guidance on How to use TinkerCAD in the Classroom).
3. Using Tinkercad, ask the children to drag and drop the Text option from the Basic Shapes list onto the Workplane or use individual letters to make up words.



(It's recommended that children do one letter at a time so that individual letters can be printed, as you require. This also helps children to remember the word spelling.)

4. Specify the dimensions of the letters to the children, e.g. width 20mm, depth 5mm, and explain how children can lock the aspect ratio for scaling an object.
5. When the children have completed their word, ask them to export their file as an .stl file. Into a shared folder for access by the 3D printer.

## Extension exercises

- Create another tricky word, or a word in another language (e.g. French).
- Create a Box shape to create a background for their word to sit on, possibly experimenting with the 'hole' feature on their letters.