



Montessori Golden Beads



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Summary

Montessori Golden Beads to help children learn the decimal system and counting up to thousands.

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[montessori](#) [thousand](#) [decimal](#)

Montessori Golden Beads to learn counting and the decimal system. Can also be used in combination with the number cards: <https://www.printables.com/model/964405>

A box that will hold the recommended set of pieces is included.

The beads have a sidelength of 8mm, but an openscad file to scale them up or down is included. It will also scale the box appropriately.

Printing Instructions

A standard set of golden beads consists of

- 100 single beads
- 45 tens
- 10 hundreds

- 1 thousand

If you want the weight to scale linearly with the number of beads, proceed as follows:

- Slice a single bead with 0 infill and as few perimeters and top and bottom layers as you feel comfortable with. This gives you the baseline weight per unit. **Note:** Many slicers will include the priming line as part of the used material. Make sure to note down only the amount of material that will actually go into the model
- As you slice the tens, hundreds, and thousand files, increase the infill, trying out different values until you achieve the appropriate multiple for each piece, note down the infill percentages
- Use these percentages when slicing all models
- You can of course go heavier if you want, the maximum weight would be given by a 1000 cube with 100% infill and then scaling down the infill for the other pieces as appropriate
- For an 8mm scale, the weights I got when printing were 0.27g, 2.7g, 27g, and 270g, respectively.

The container comes in 2 versions, one with mouse-ears that are a more efficient and effective alternative to a brim for preventing the corners lifting during printing.

Model files



container.stl



container_mouse-ears.stl



one.stl



ten.stl



hundred.stl



thousand.stl

golden-beads.scad

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