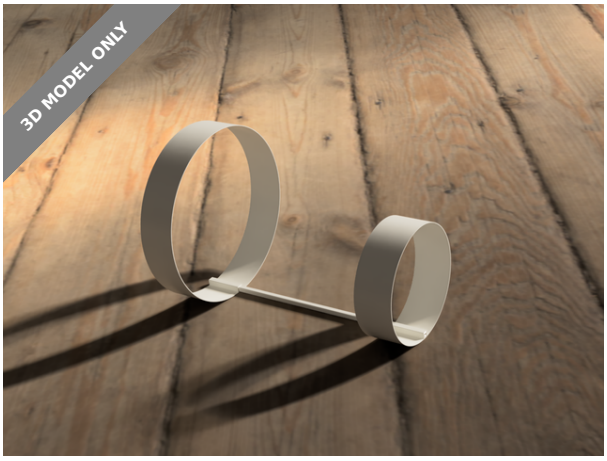

Adjustable Parametric Hoop Glider

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VIEW IN BROWSER

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Summary

Customizable hoop glider files to make your own with whatever dimensions you choose.

Learning > Physics & Astronomy

Tags: toy parametric fusion360 fusion stem learning glider

This Fusion 360 Hoop Glider design is for a classic paper-airplane-like hoop glider often made with craft supplies (example). This one allows you to customize the hoop diameter, the length of each hoop, and the connecting pole length, and several other parameters, all while being fully 3D printable. The connecting pole trapezoid geometry is designed to be light and stiff to resist torsion and be easy to grip without having it twist in your hand.

You can use a little tape to lock the hoops at different sliding positions on the connecting pole to help trim the glider, and when you've found a position you like, you can add a tiny bit of glue to lock the setup in place.

An example is included, as well as the Fusion360 file for people to play with and customize.

Printing instructions

Be sure to look carefully at the first layer if you slice this yourself. Although the model is perfectly flat on the ring edge faces, the classic wall generator on some slicers seems to glitch and not put down the first layer properly for the rings. If you use Orcaslicer, this can be fixed with "precise walls (experimental). However, **I strongly recommend the Arachne wall generator here because it works properly.. you may get spaghetti prints with classic walls.**

Model files

hoopglider-v10.3mf

hoopgliderv10.f3d

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