

Part 2 - Slicing

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Basics

What is a slicer

In 3D printing, a **slicer** is software that converts a 3D model (such as an STL file) into machine instructions that a 3D printer can understand. It “slices” the model into thin horizontal layers and generates all required print settings. The result is a **.gcode file**, which contains the step-by-step commands used by the 3D printer to produce the object layer by layer.

Choosing a slicer

There are several slicer software options available, and most of them are **free to use**. Nearly every 3D printer manufacturer provides its own slicer, tailored to their machines.

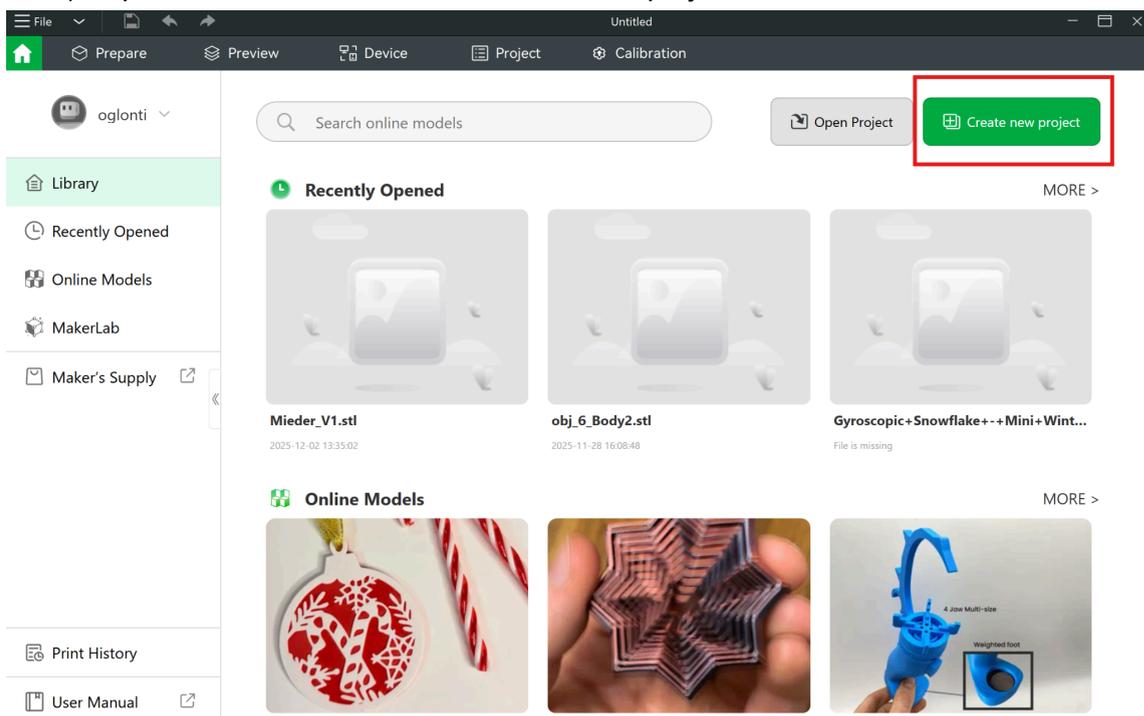
In general, it is recommended to use the **slicer provided by the printer manufacturer**, as it usually comes with optimized profiles and default settings. However, most slicers are very similar in functionality because they are often based on the same open-source software. This means you can usually use a slicer from one manufacturer with printers from another company, as long as the correct printer profile is selected.

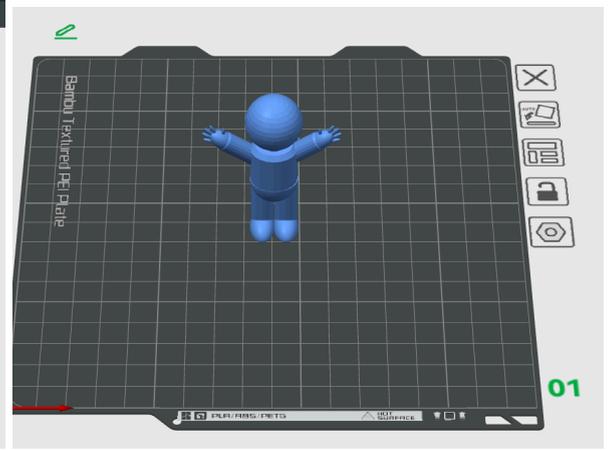
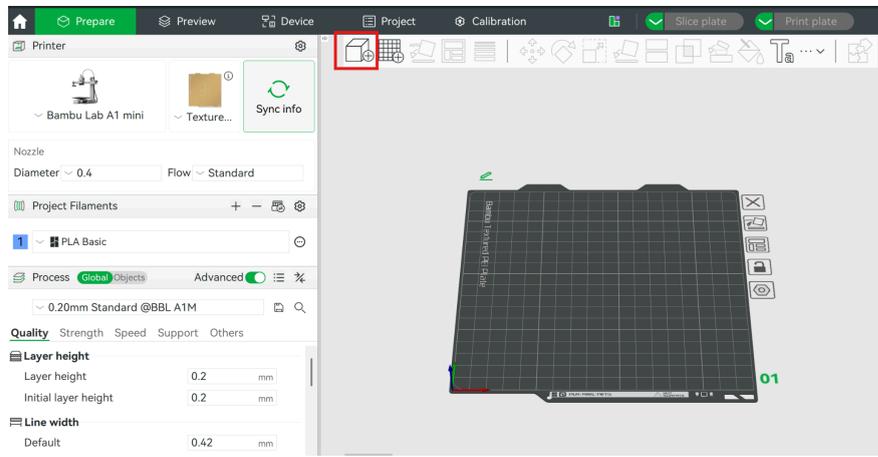
We recommend Bambu Studio from Bambu Lab.

Import an object into the slicer and slice an object

There are several ways to open a 3d model in Bambu Studio.

- 1) Download any model (ideally as .stl file) and double click it. Usually Bambu Studio automatically opens it, if it is your default software for these files.
- 2) Open, Bambu Studio, click on create new project and click on the “cube+” button to import the object.

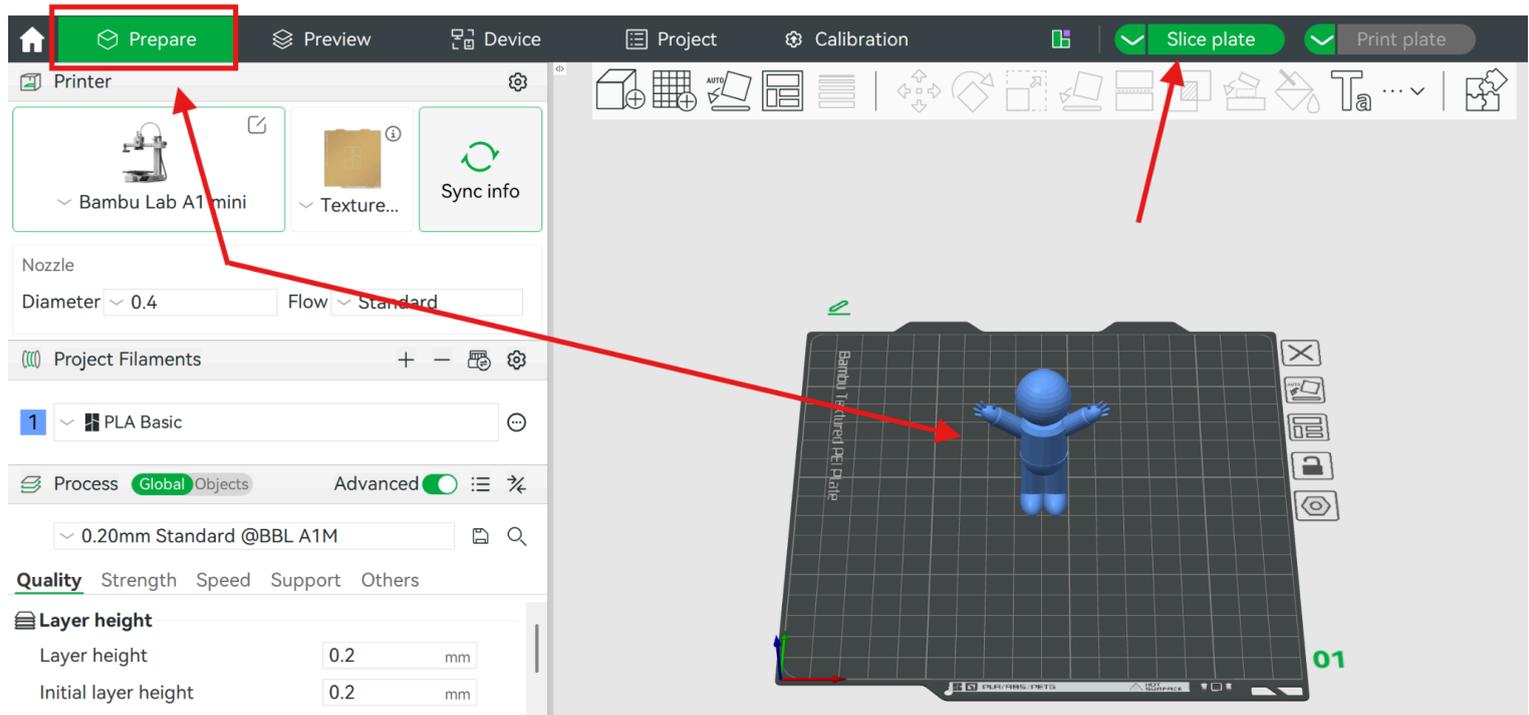




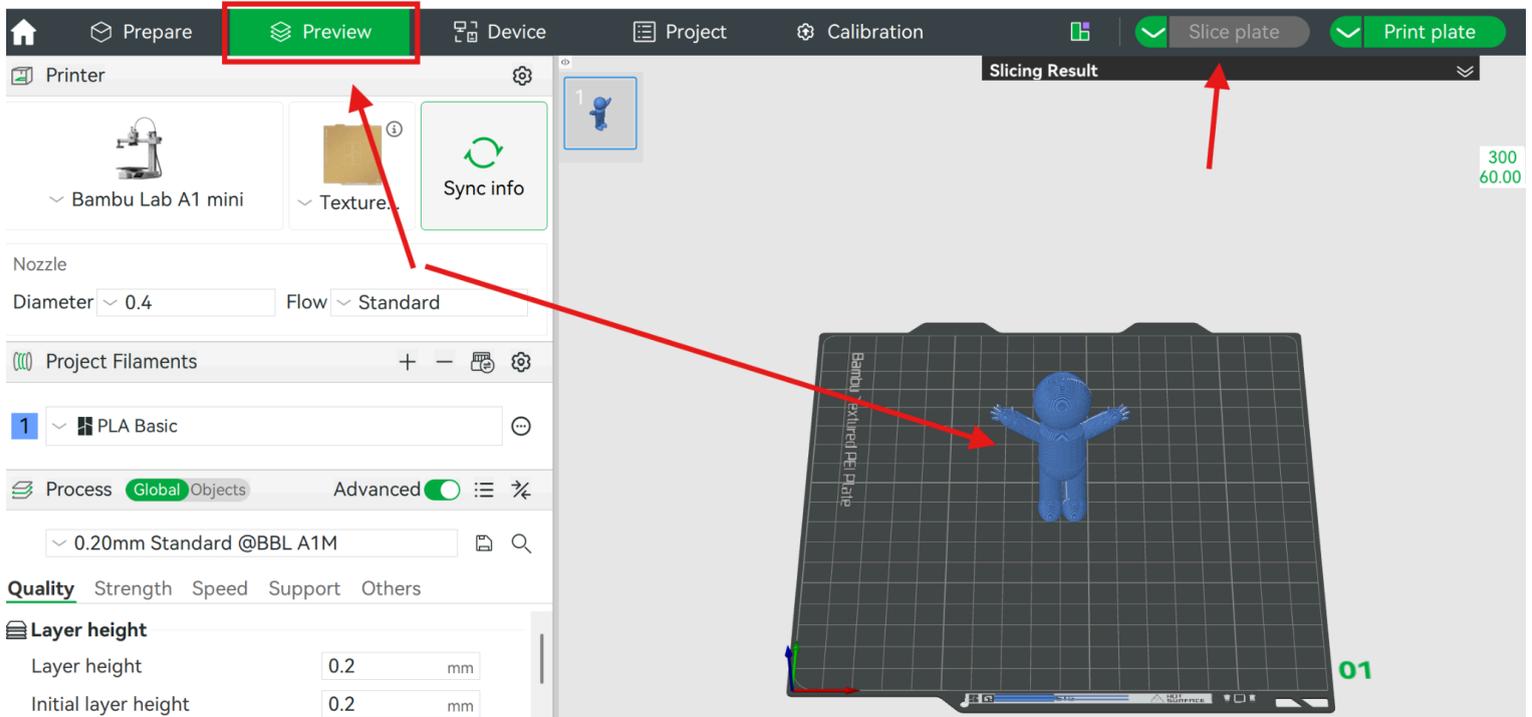
Two views / two states

In **Bambu Studio**, there are two main views for an object: the **Prepare** view, which shows the model in its default (imported) state, and the **Preview** view, which shows the sliced result.

To generate the sliced model, simply click “**Slice Plate**.” This process slices the object, creates a **.gcode** file, and automatically switches the view from **Prepare** to **Preview**, where you can inspect the toolpaths and layers before printing.

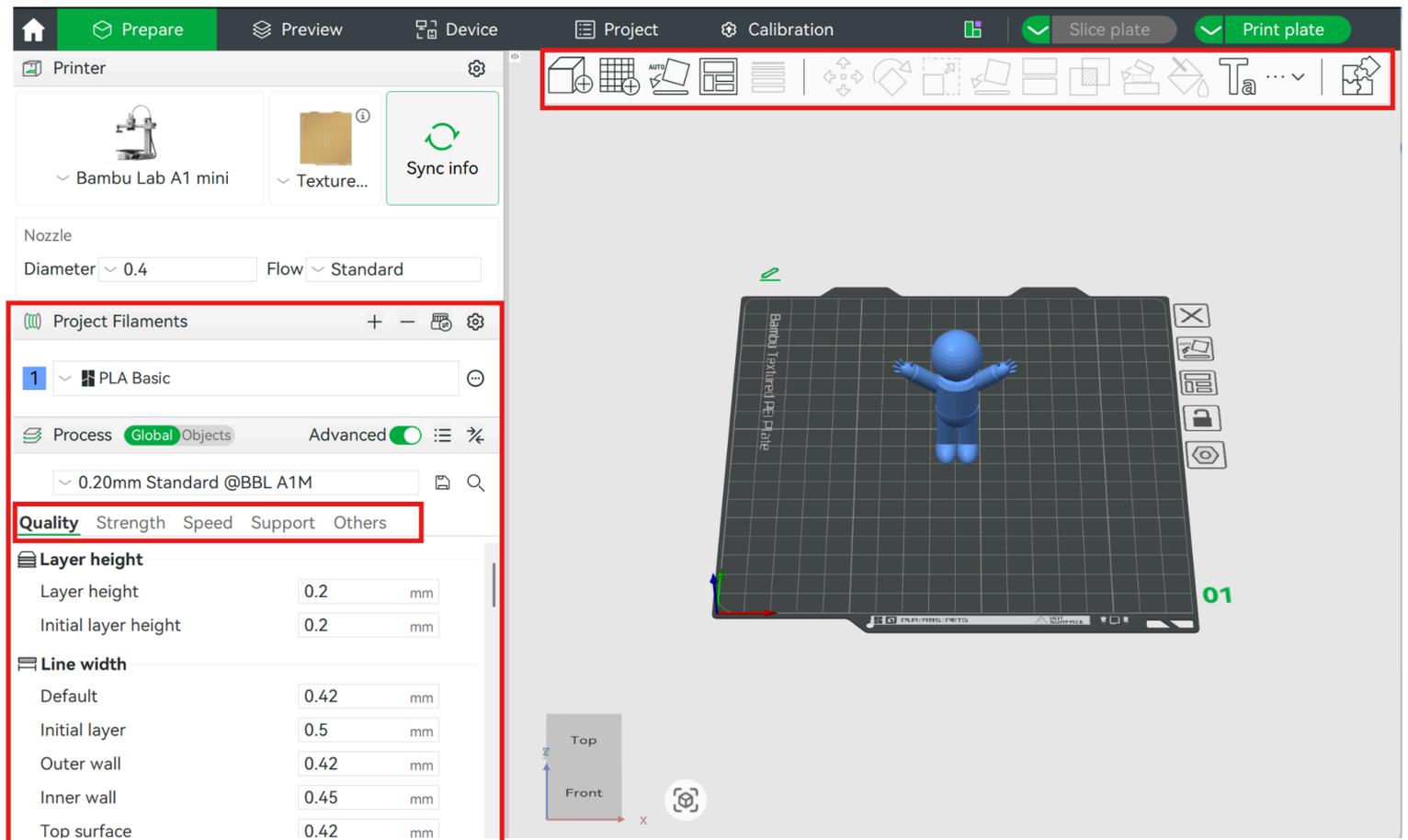


...
sliced state



X most used functions in a slicer

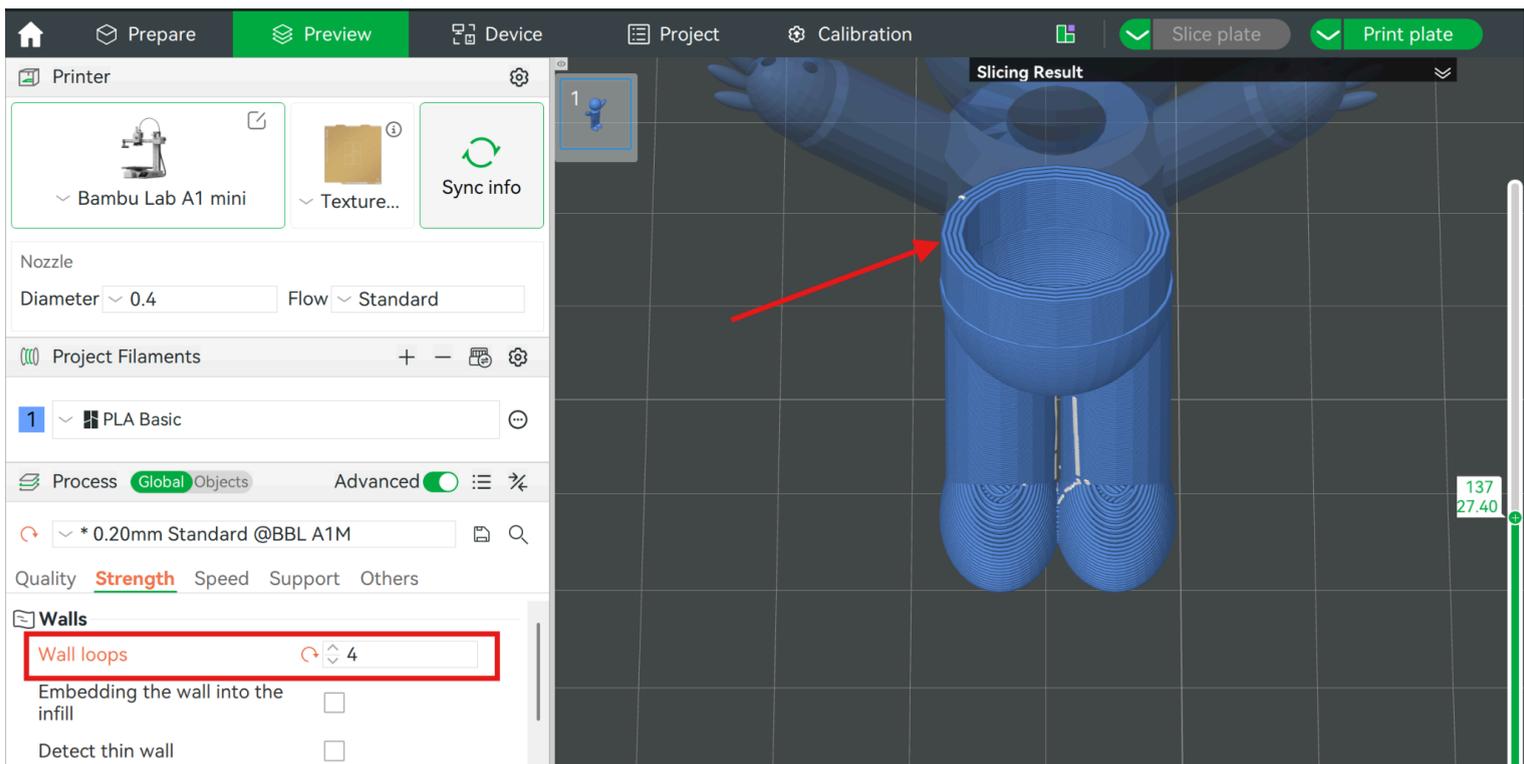
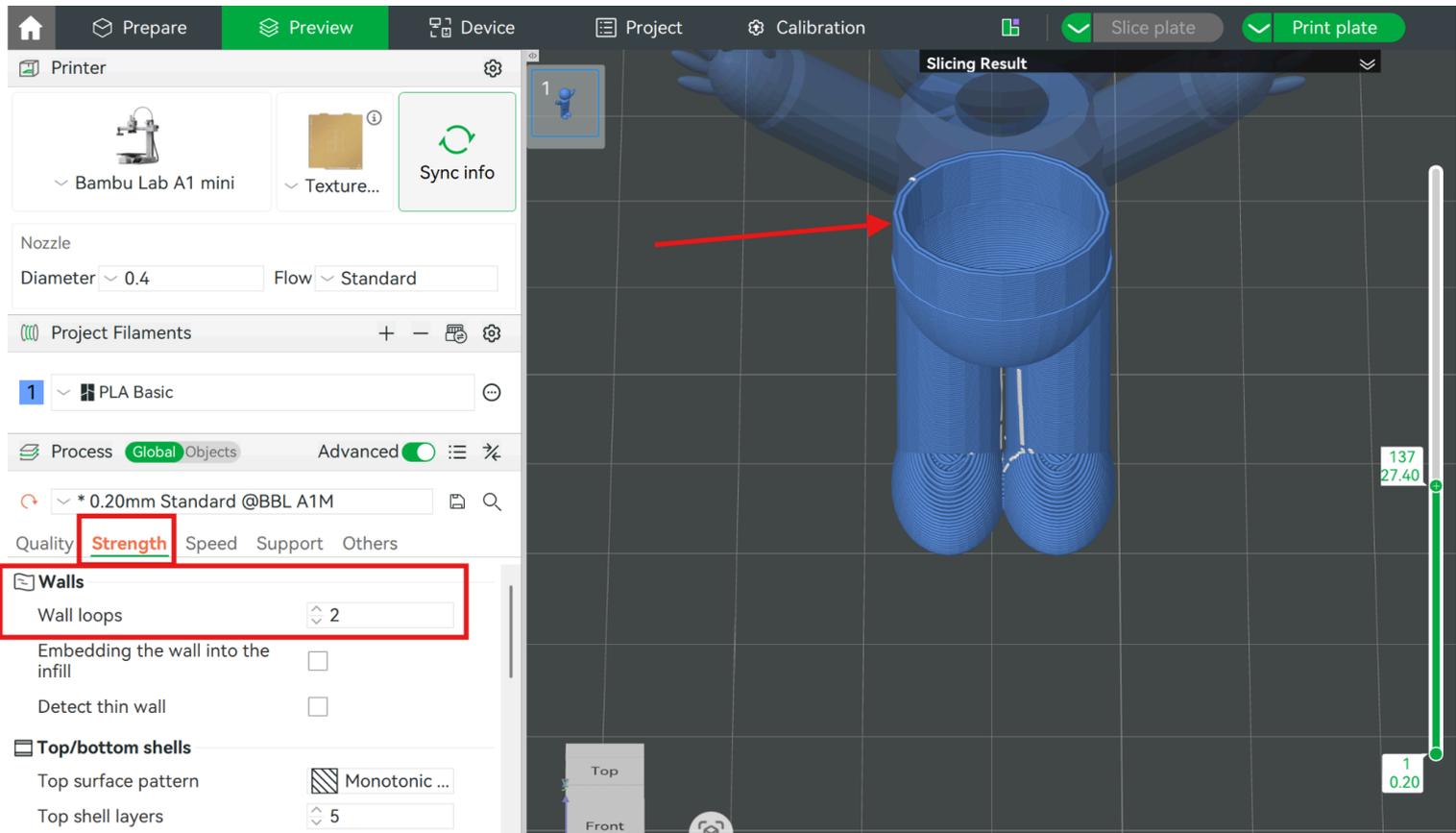
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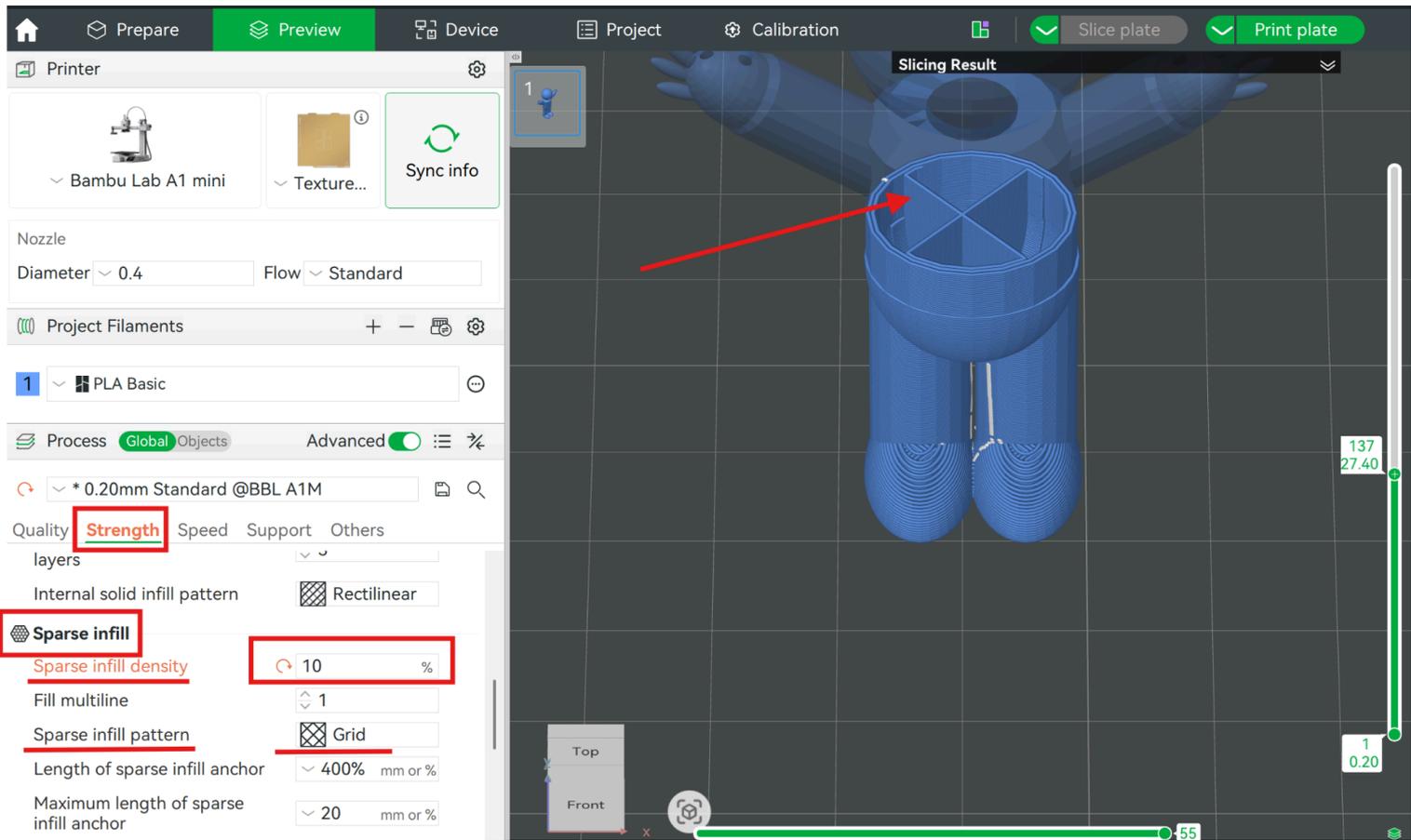


Other from time to time useful functions

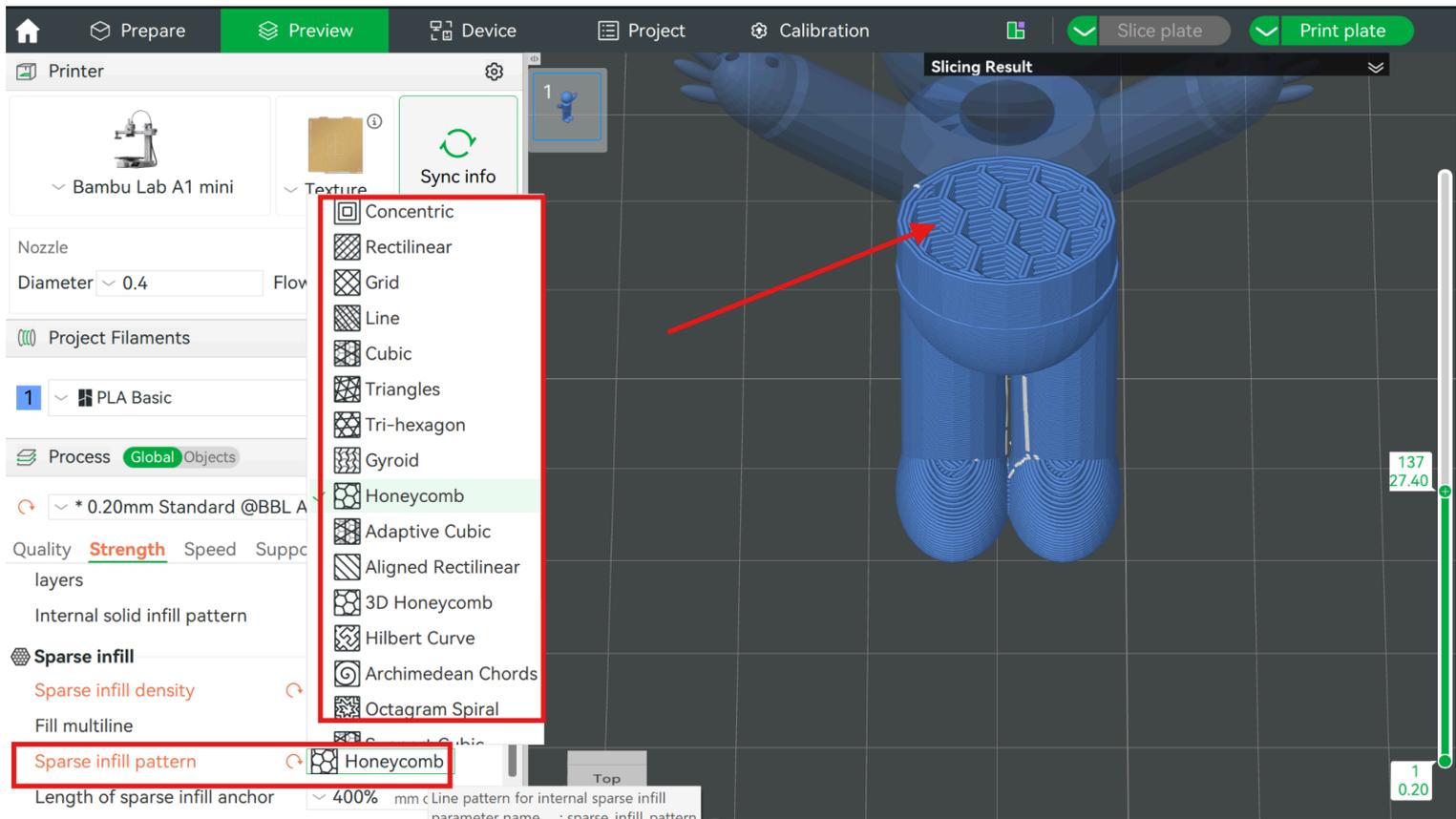
[...]

wall loops



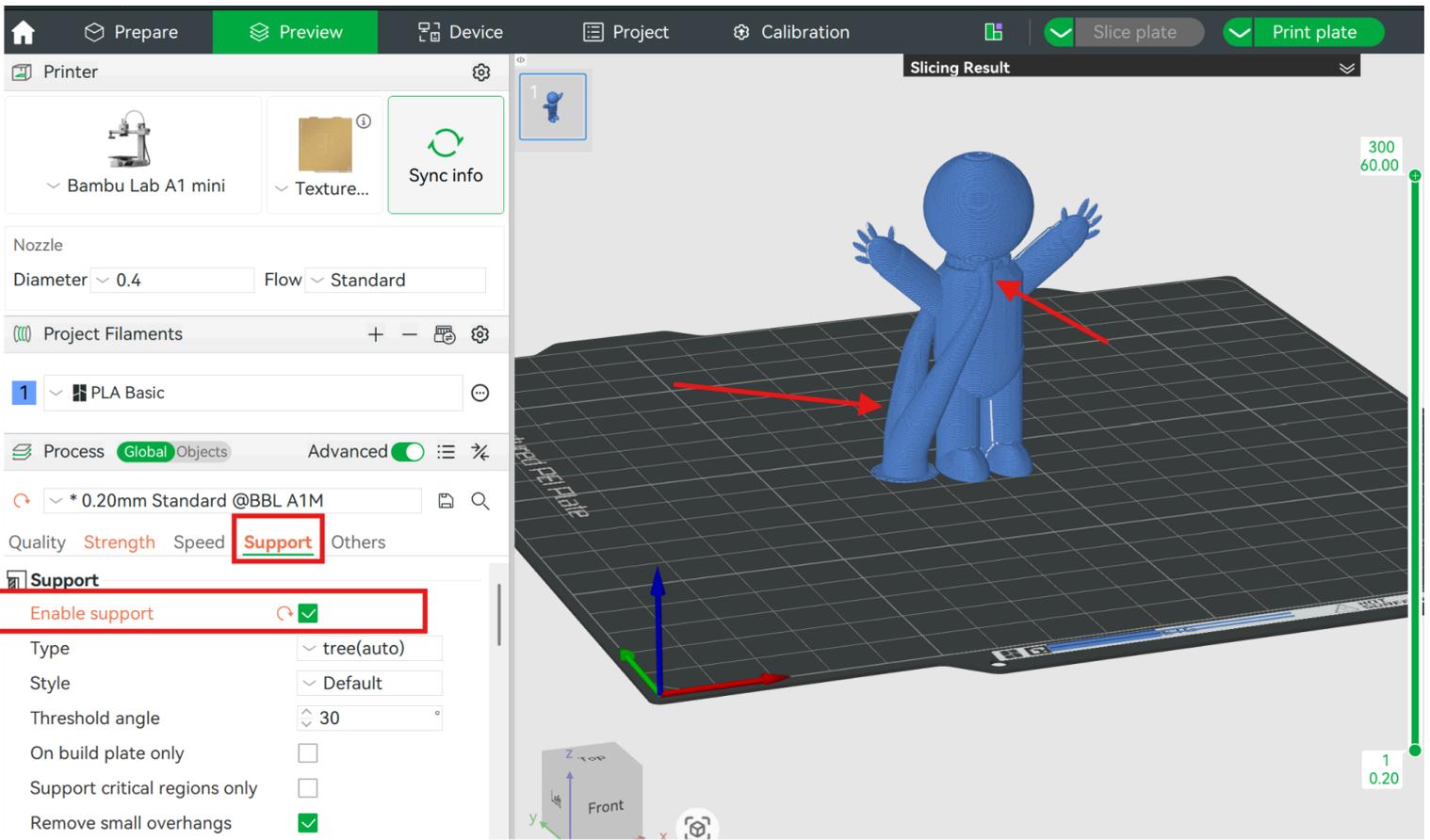


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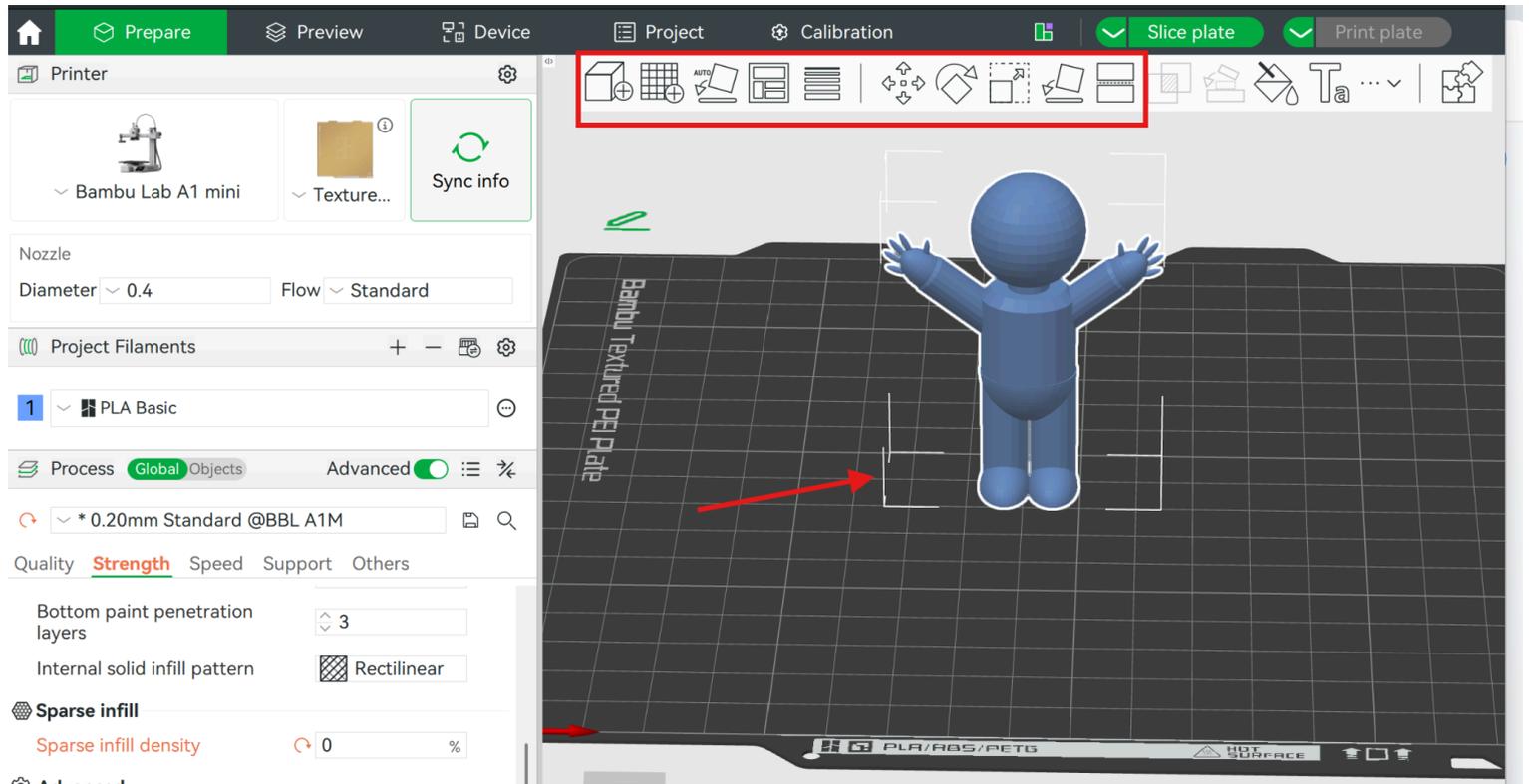


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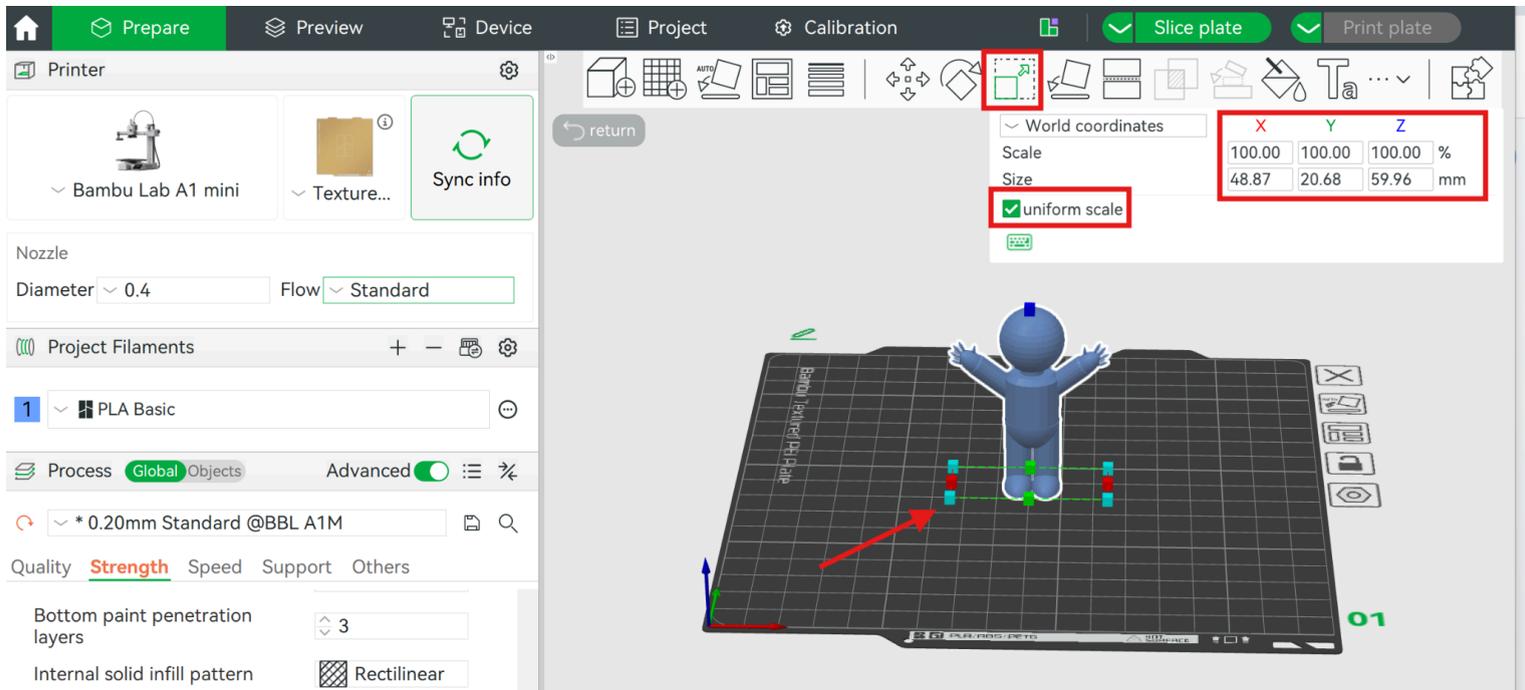
support



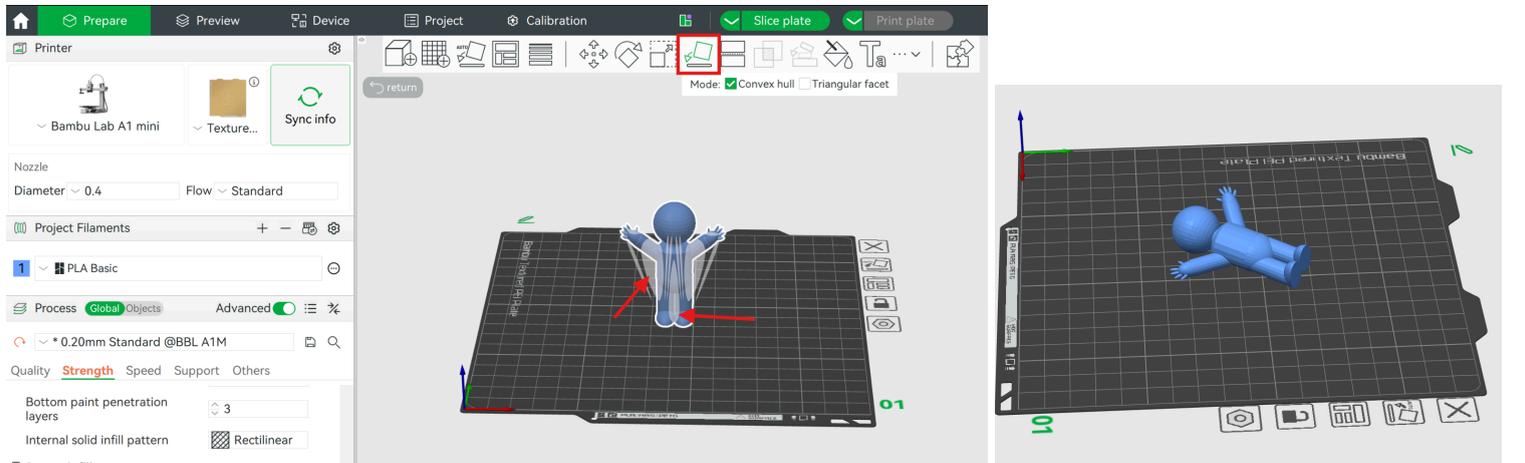
...
Upper Toolbar



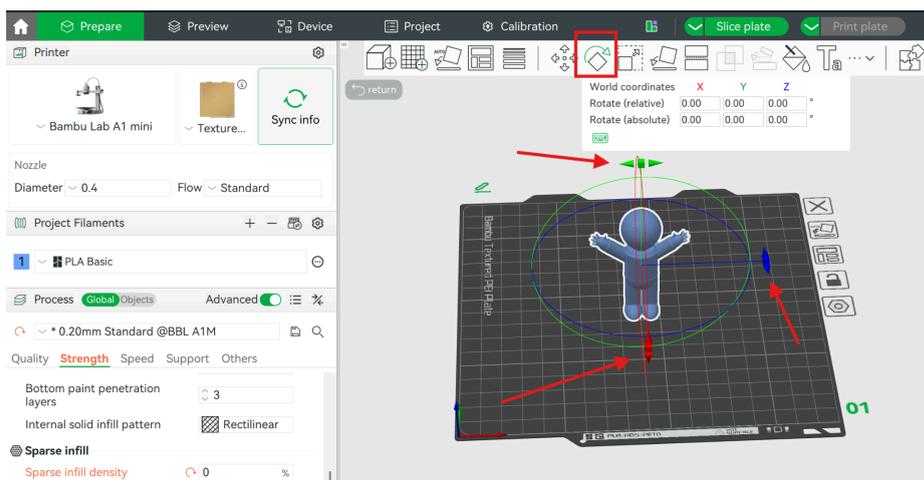
...scale



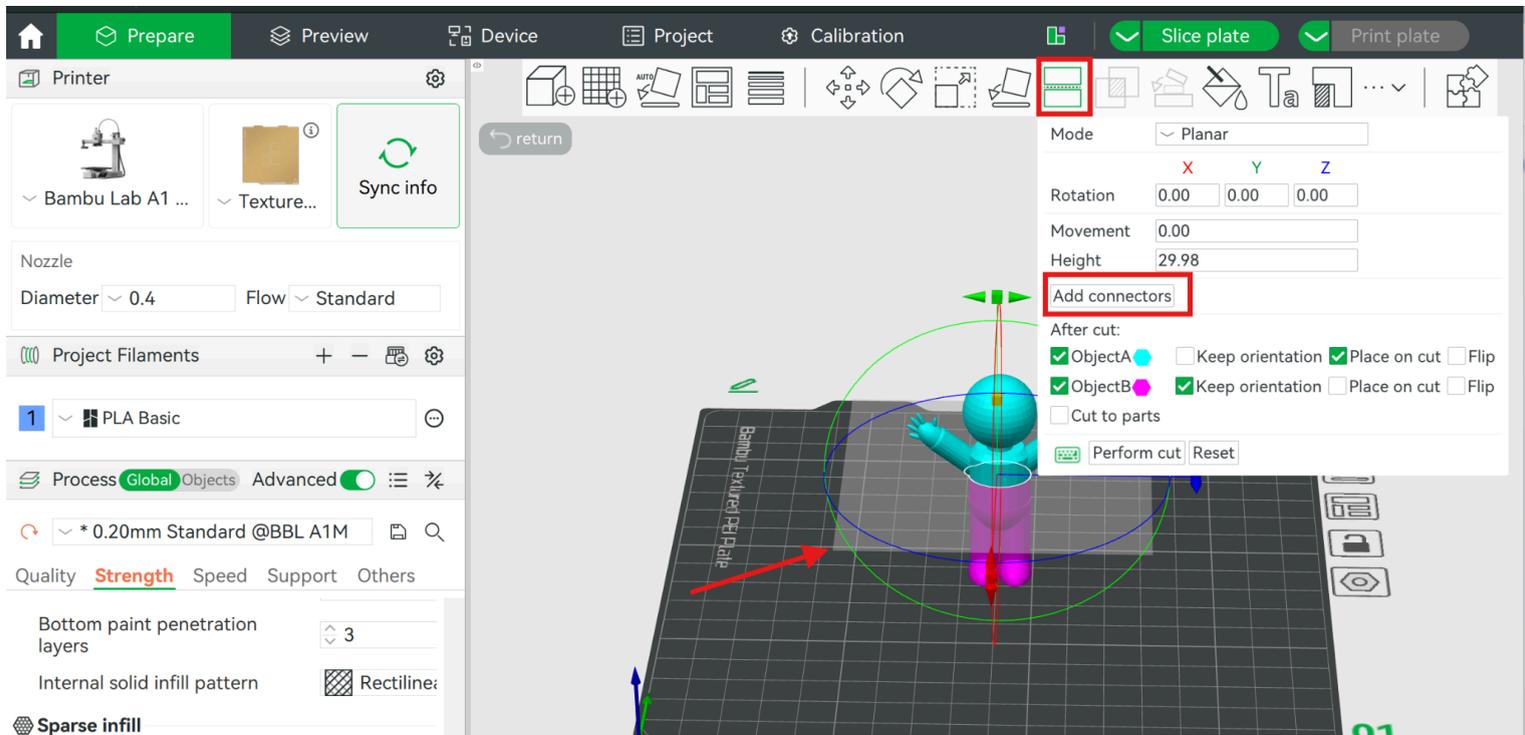
... lay on side



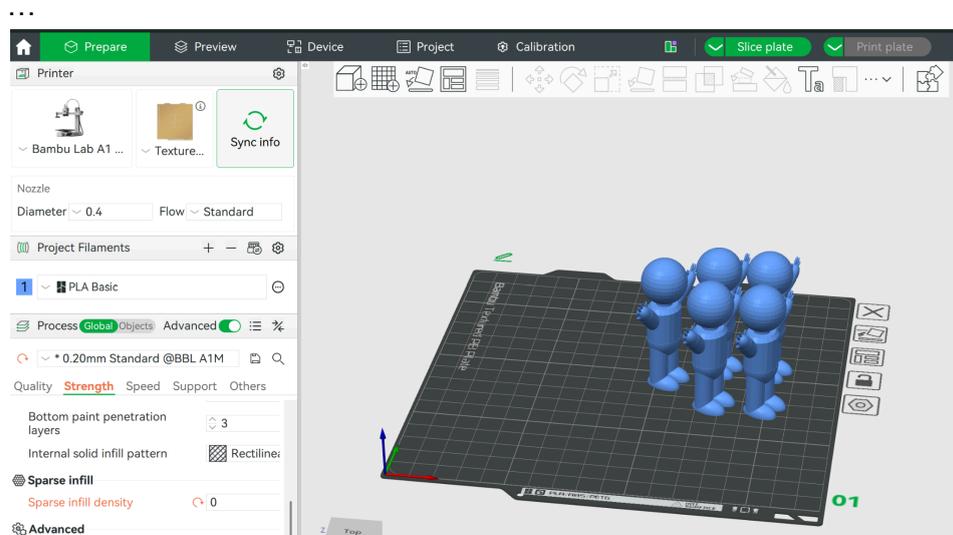
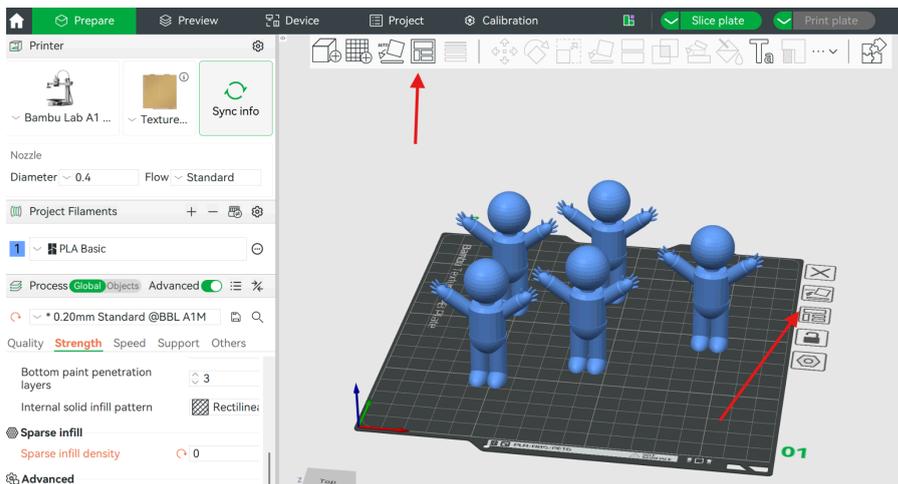
... rotate



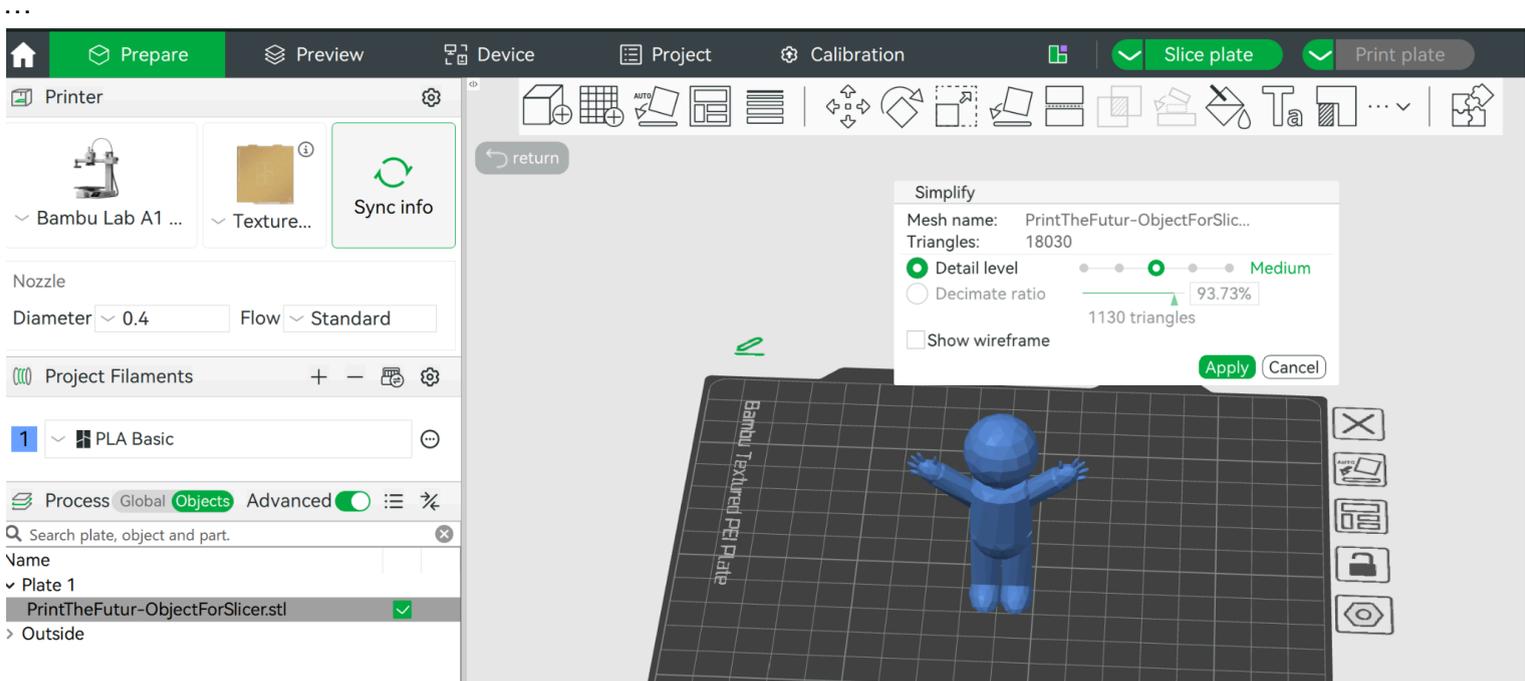
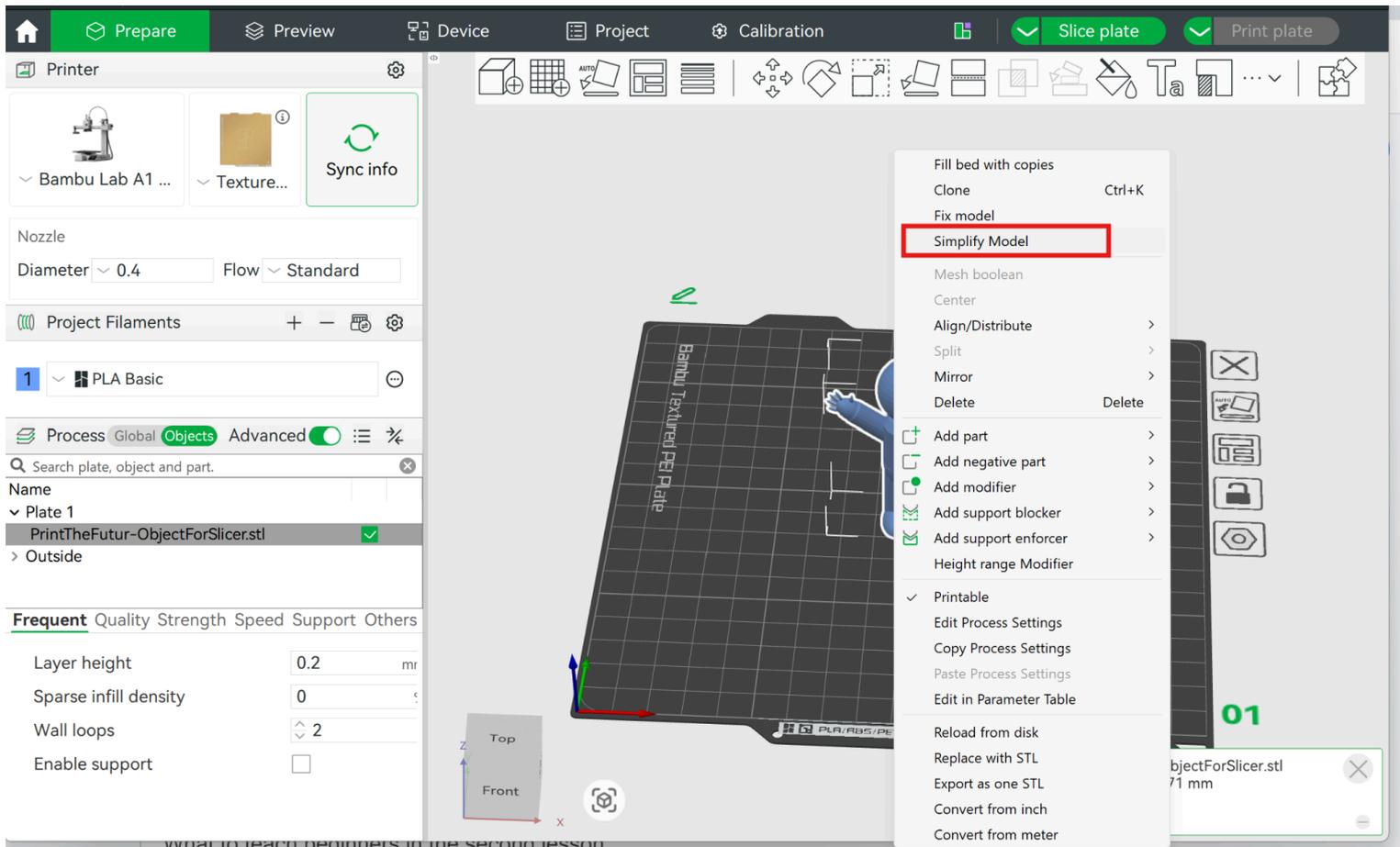
... cut an object



...
arrange many objects



...
reduce complexity



Teaching beginners about slicing

What to teach beginners in the first lesson

[...]

What to teach beginners in the second lesson

[...]

What not to teach beginners

[...]