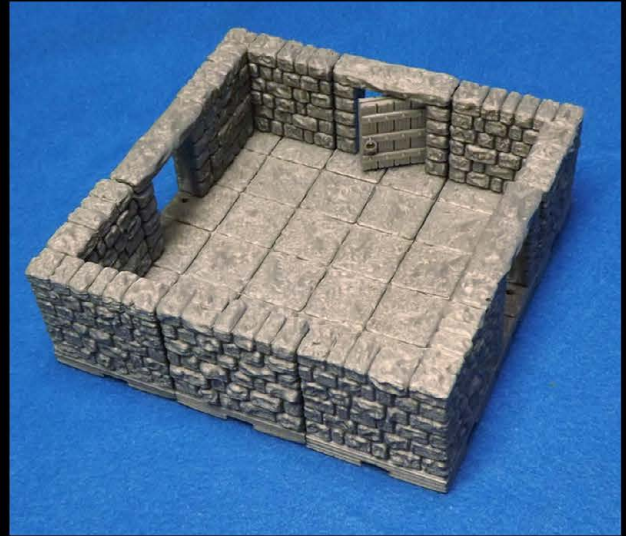
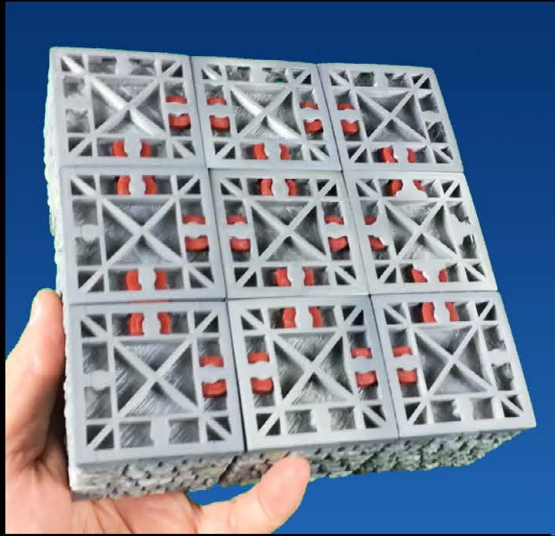


DRAGONLOCK

ULTIMATE



DRAGONBITE™
COMPATIBLE

Miniatures by www.reapermini.com

WINDMILL

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DRAGONLOCK

Getting Started

Welcome to the DRAGONLOCK: Ultimate™ terrain system. This instruction manual will outline some basic materials you will need for 3D printing these models, specific printing information for the models in this set, and links to additional resources.

For more information on getting started with 3D printing, help with choosing a printer, settings for many popular printers, troubleshooting, and more; please visit our 3D Printer forums:

<http://fatdragongames.proboards.com/board/21/3d-printing-dragonlock-terrain>

For painting tutorials on these and other models in the DRAGONLOCK: Ultimate™ product line, please visit our Youtube channel:

<https://www.youtube.com/channel/UC5Lbnd97HV3rU98gcwHklzQ>

Basic Tools and Materials



For gluing models with multiple pieces together, we have found that Gorilla Glue works great (especially the 'gel' type.)

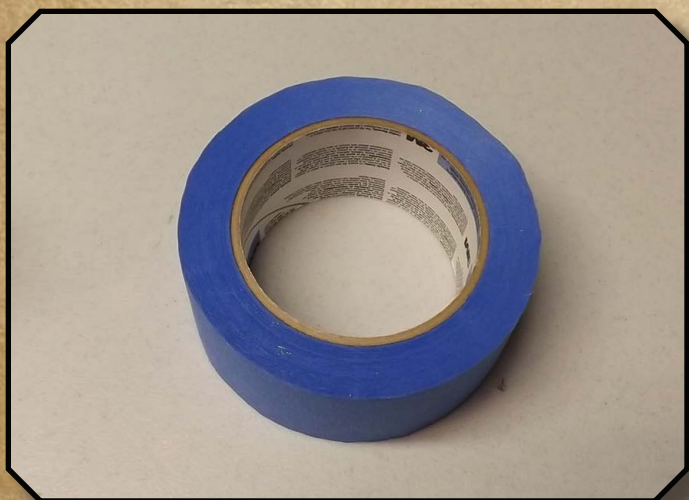


While not necessary, it helps to have a pair of small tweezers on hand. You'll find yourself using them often to pull odd strands of plastic off the model, getting small bits of plastic out of the printer, etc.

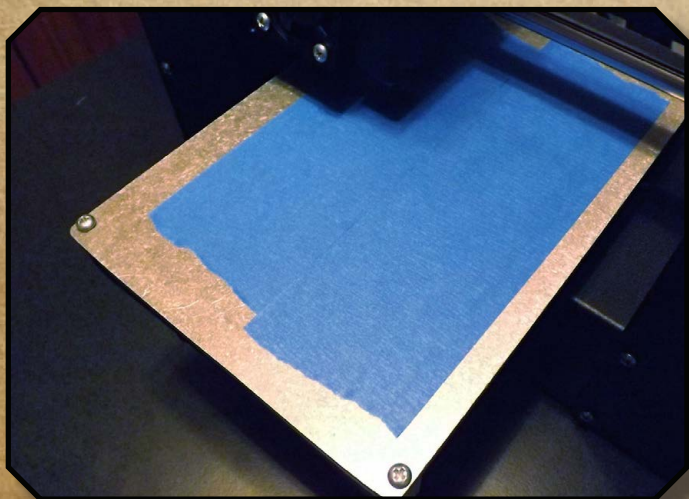
DRAGONLOCK



Absolutely essential is a small metal spatula to help remove models from your build plate. We've found that ones like this from art supply aisles at craft stores work great and should only cost you a few dollars.



When printing PLA on a non-heated build plate, applying blue painter tape to your build-plate works great to help the plastic adhere.



To make your print stick as well as possible, you can wipe off newly applied tape with a paper towel that has a little rubbing alcohol on it (the tape has a wax coating on the back that sometimes inhibits the plastic from properly sticking to it).

DRAGONLOCK

General printing tips for DRAGONLOCK: Ultimate™ models

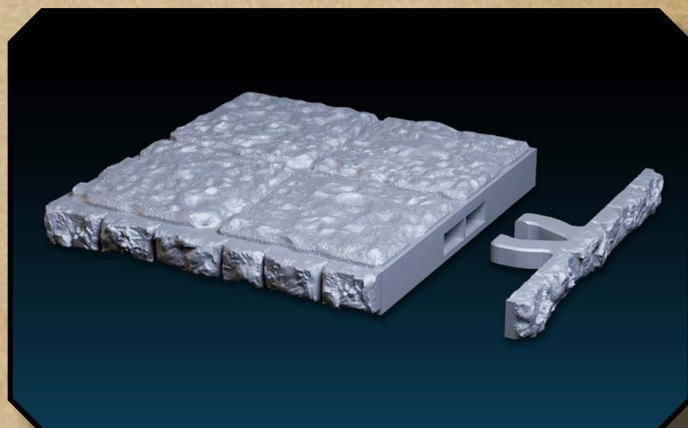
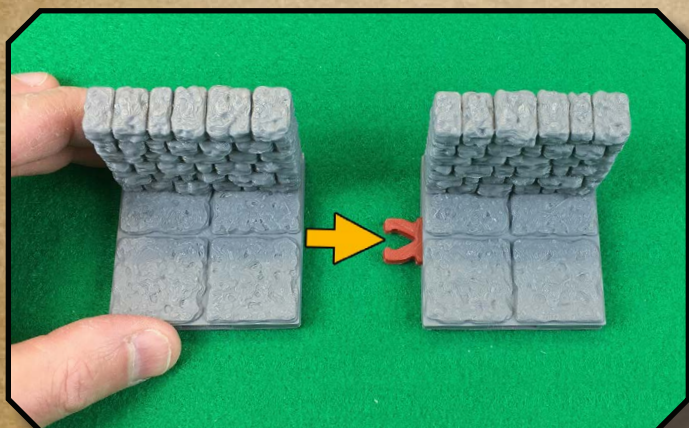
With the wide variety of printers and filaments on the market, it isn't possible for us to list printer settings that will work with multiple machines. Please visit the Fat Dragon Games forums for printer-specific tips and information:

<http://fatdragongames.proboards.com/board/21/3d-printing-dragonlock-terrain>

Using the DRAGONBITE™ clips

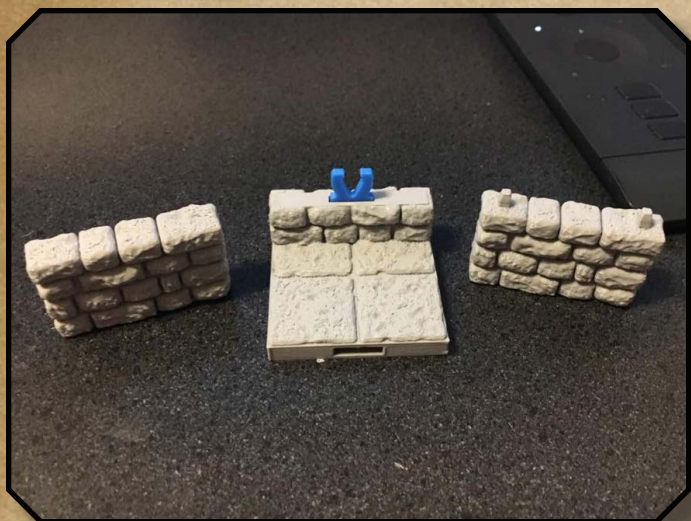


Before inserting a Dragonbite™ clip, you must first remove the printing support present in each slot on all four sides of every model. We recommend using needle-nose pliers to gently twist the support out of place (always wear eye protection when using tools.) Clips should be printed with 15-20% infill (but can be printed with 0%.)



To connect DRAGONLOCK™ Ultimate models together, simply insert a Dragonbite™ clip into the slot of one model, then slide the adjoining model into the opposite side. In addition to the standard v3.0 clip, there is an optional clip (the previous 2.0 version) that is slightly looser, should you need it. Unused slots can be covered with Dragonlock™ edge pieces.

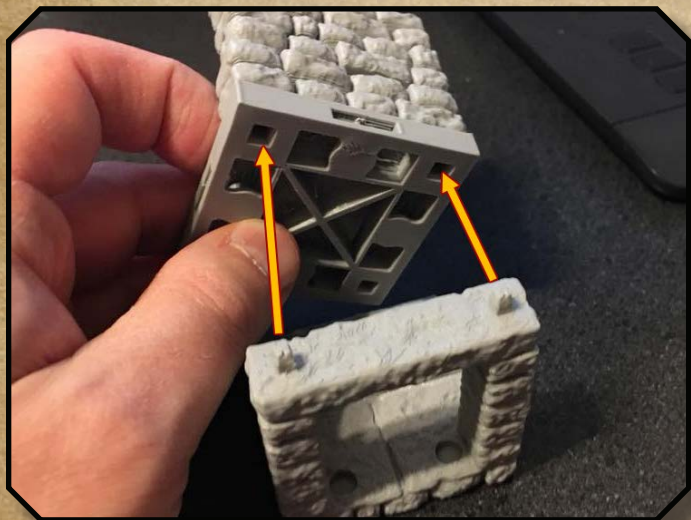
DRAGONLOCK



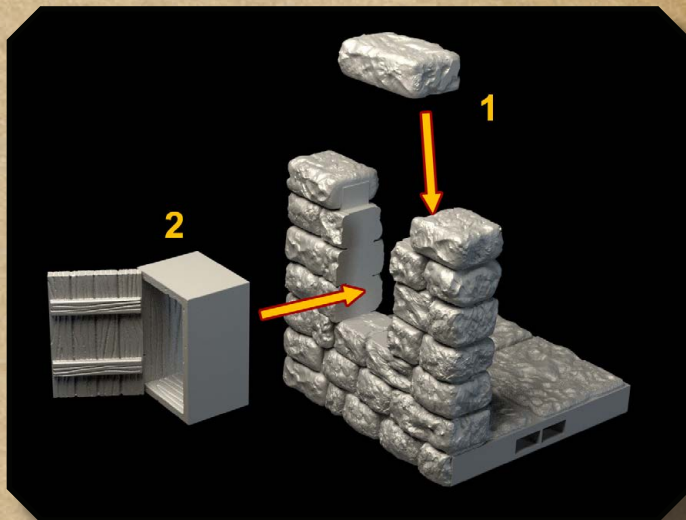
For stacking levels, some models on each level will need to have lock-tabs on their top face. Both the door models and straight wall models come with alternate tops (lintels for the door, upper half wall for the walls) that can be swapped out. In the above photo, the wall model can have either a standard top or a lock-tab top. Only 1-2 pieces with lock-tabs are required to secure a level from shifting.



On door models, the lintel can be swapped out between a standard version and a lock-tab version as required. This way you don't have to deal with unsightly tabs on your top surfaces unless you need them.



The tabs fit into the small recesses on the underside of bases. While older Dragonlock sets will be updated to this new base style, you only need a model with this style base in the places you use tabs, and that should only be two places per level.

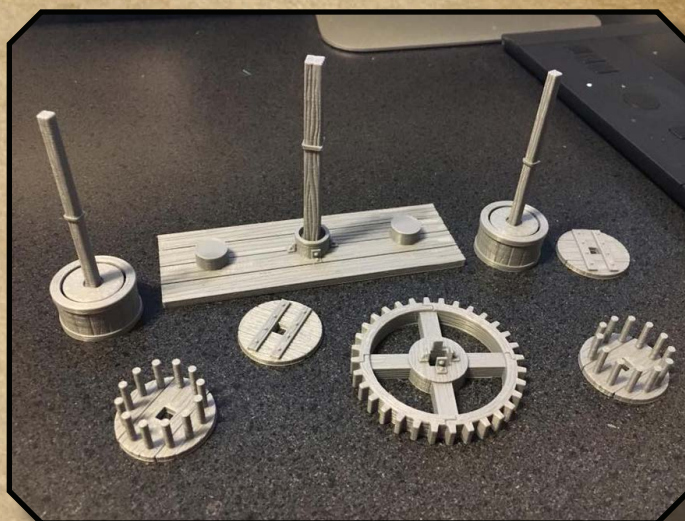


When assembling the wall with wooden window, glue the top lintel as shown, then the windows can be inserted into place (pressure fit will keep them secure without gluing, so you can swap them out as desired.)

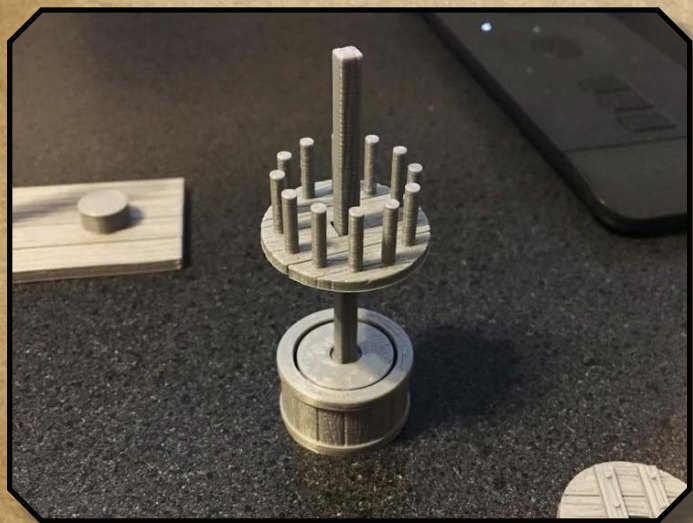
DRAGONLOCK



To secure the trap door in place, glue the frame to the base tile (be sure the underside holes for the door tabs line up) trapping the door between them.



To build the mill gear assembly, it is essential to glue the items in the proper order.

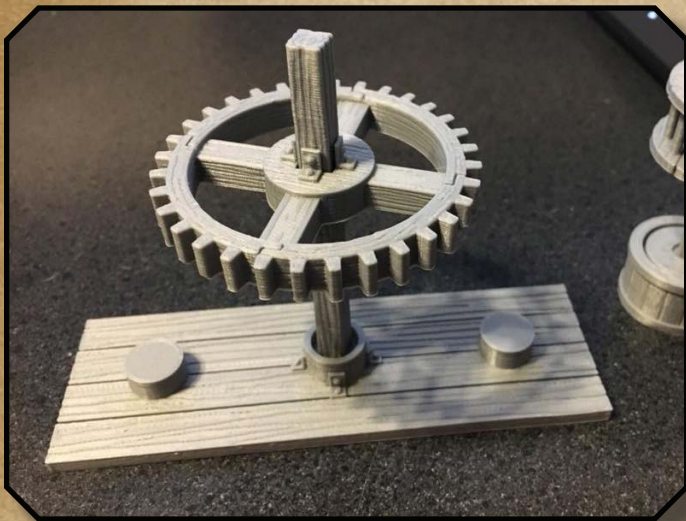


Begin by gluing the lower side gear on its shaft as shown above.

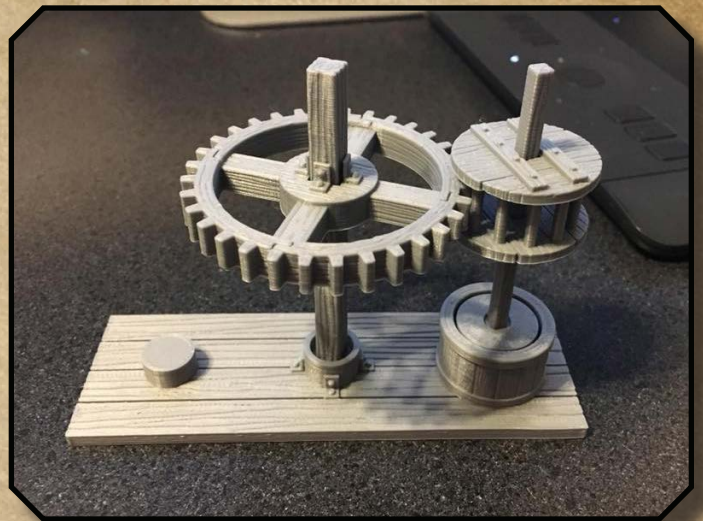


Once the lower gear is fully dry, glue the top part of the gear in place.

DRAGONLOCK



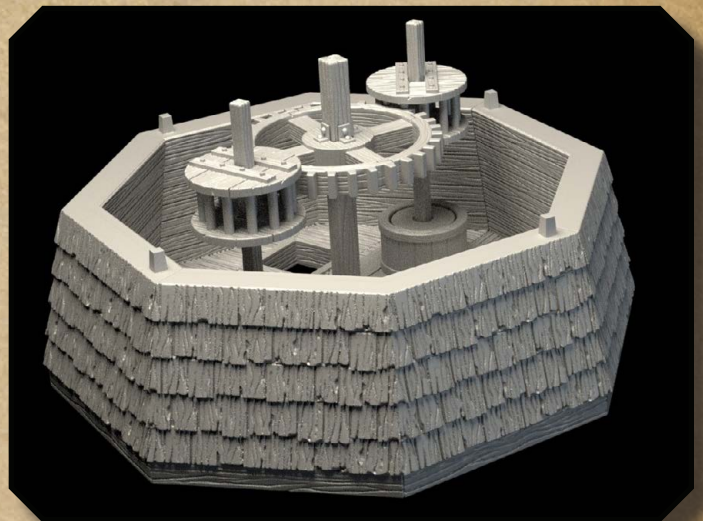
Glue the main gear to the center shaft.



Gently rock the side gear assembly into place, allowing it to rotate as needed to engage the main gear teeth.

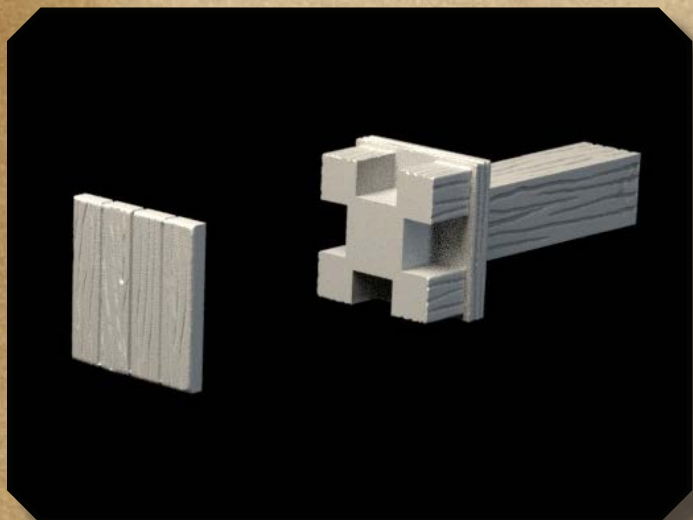


Repeat for the opposite side.

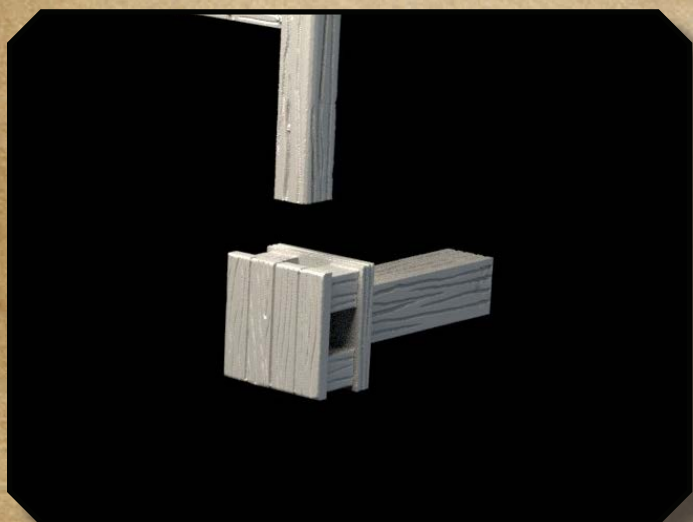


The finished gear assembly is intended to be placed on level 3 of the windmill

DRAGONLOCK



Glue the two hub pieces together and allow to fully dry before inserting the blades.



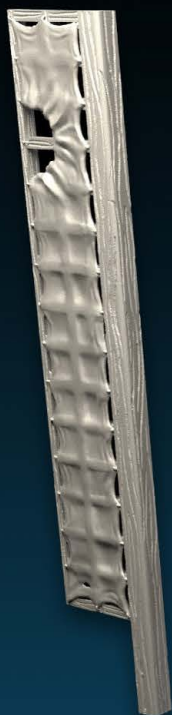
Glue the blade in place as shown above (you can mix/match any of the styles provided.) Also, for those with smaller print beds, we have included split blade files, too.



The finished windmill.

DRAGONLOCK

Blade 3



Blade 2

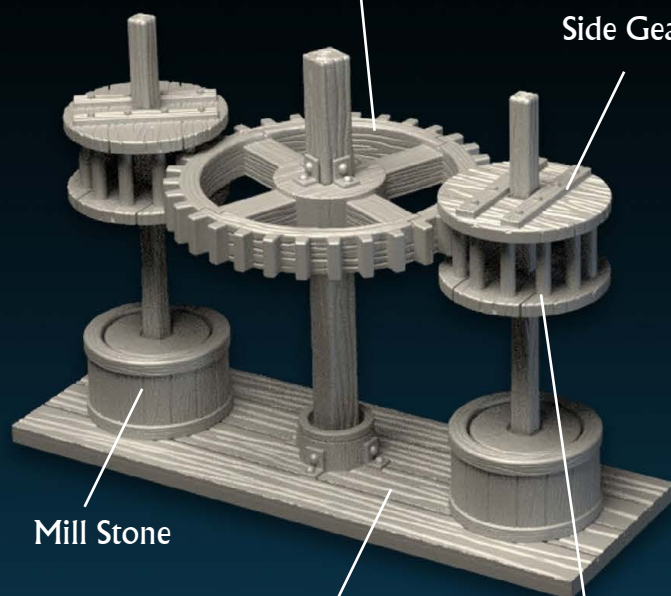


Blade 1



Main Gear

Side Gear B

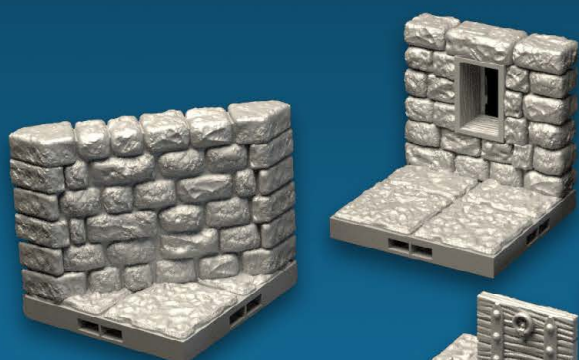


Mill Stone

Gear Base

Side Gear A

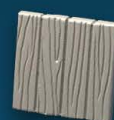
Wall with Wooden Window



Wall Angled

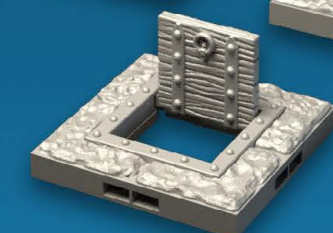


Hub A

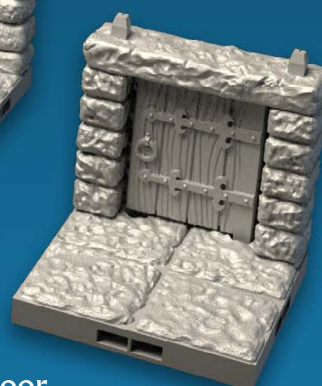


Hub B

Wall Straight (Split)



Trap Door



Door

DRAGONLOCK

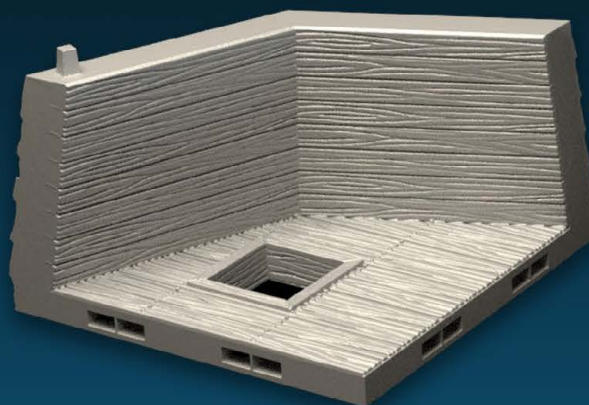
Ladder



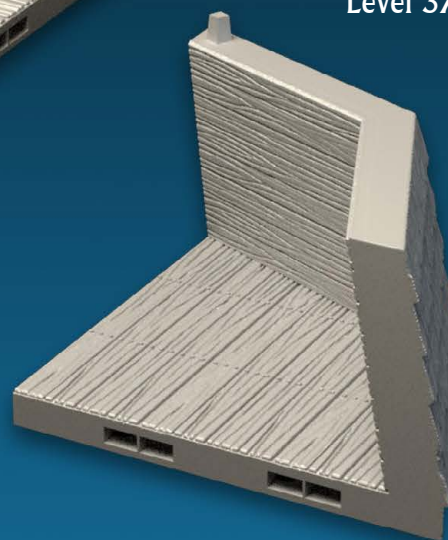
Level 5



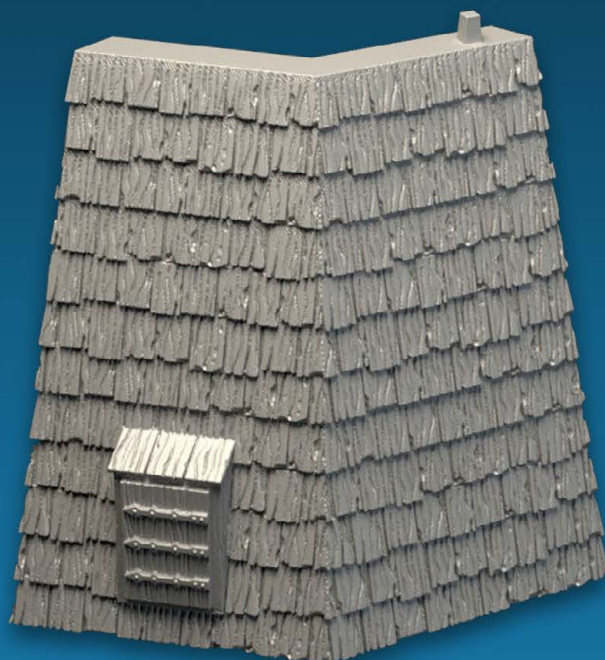
Level 3B



Level 3A



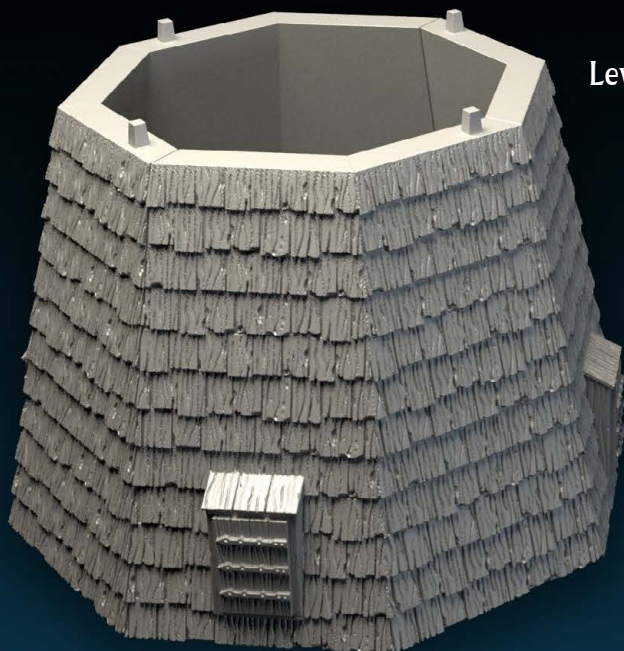
Level 4



Level 4 Tab



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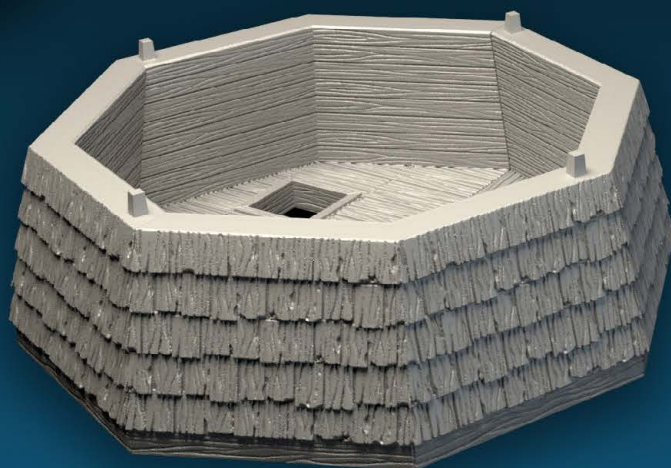


Level 4 should be glued together using the provided tabs (4 main models and 12 tabs).

LEVEL 3:

Level 3A (x3)

Level 3B (x1)



LEVEL 2:

Angled Wall (x4)

Window Wall (x2)

Straight Wall (x2, with tab top)

Trap Door (x1)



LEVEL 1:

Angled Wall (x4)

Window Wall (x2)

Door (x1, tab lintel)

Straight Wall (x1, with tab top)

Standard Floor (x1)



Printing info:

Filament:

- We recommend using PLA (we use eSun and Hatchbox in the FDG office)

Layer Height:

- All clips, & wall models 200 micron/.2mm
- Door, gears, and ladder: 100 micron/.1mm recommended

Top/Bottom layers:

- 6 layers or .9mm

Infill:

- 10% all models

Rafts:

- None

Brim:

- None except for blade models, recommend a 5-6mm brim for this model only.