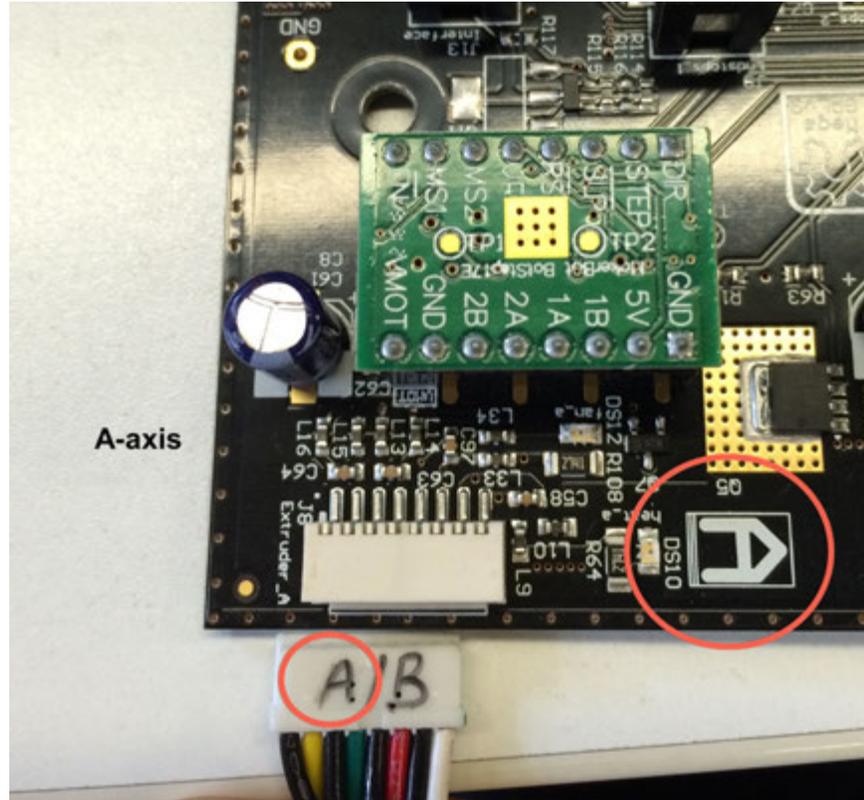


Glossary of Terms

A-Axis

The primary extrusion axis, controlled by the A-axis extruder motor. When the A-axis motor is in motion, extrusion is occurring.



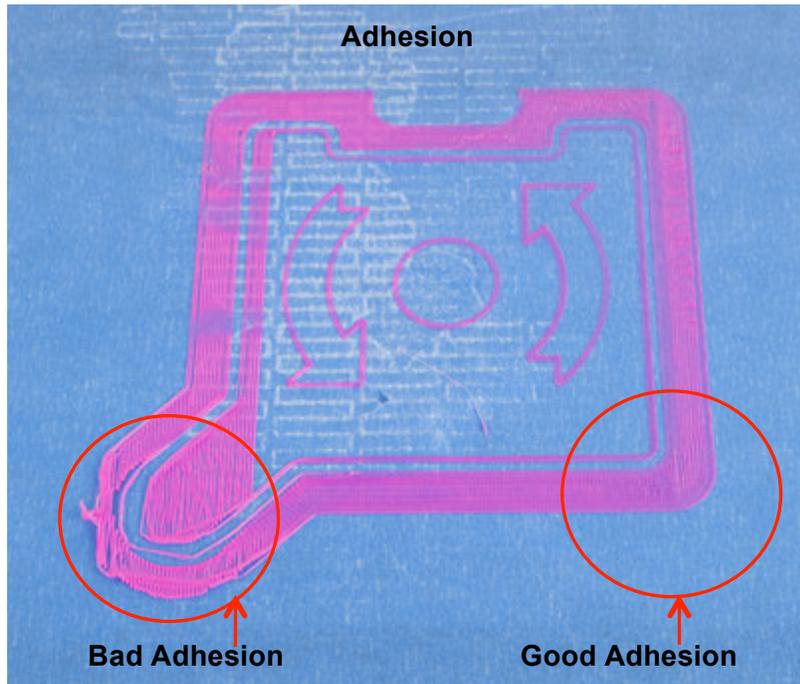
Acceleration

The rate of change in the speed of an object. MakerBot 3D Printers use acceleration to transition smoothly between different speeds on each axis. Acceleration allows MakerBot 3D Printers to safely reach higher speeds.



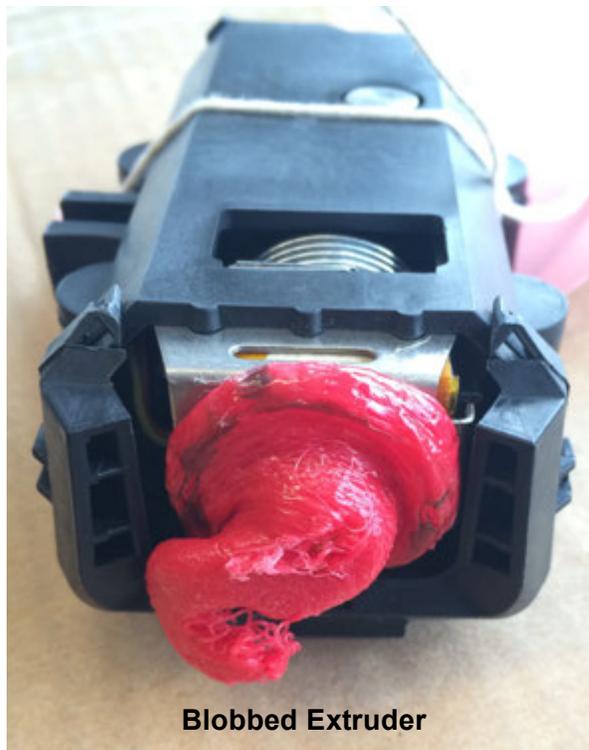
Adhesion

When extruded plastic successfully sticks to the build plate during printing. Adhesion is essential for good print quality.



Blob

Extruded material that has collected around the hot end, most often due to a filament clog.

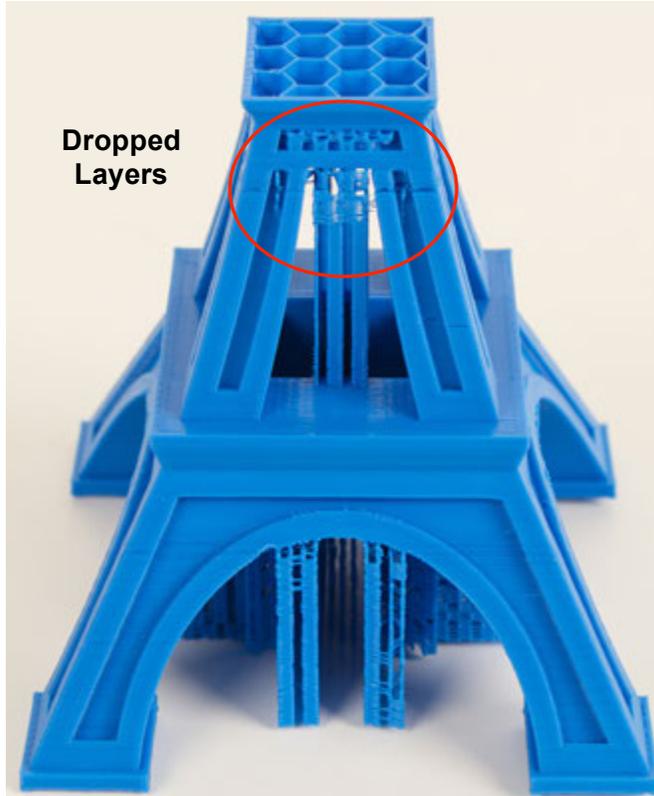


Bot	A casual term referring to any MakerBot 3D printer. This term is not customer-facing.
Build	The additive manufacturing process the 3D printer goes through in order to produce an extruded final product. <i>See also</i> Print.
Curling	<p>When a corner or edge of the print peels up from the build plate. This is usually caused by a build plate that is unlevel or dirty. Printing with a raft can help stop curling.</p> <div data-bbox="597 499 1365 869" data-label="Image"> <p style="text-align: right;">Curling Print</p> </div>
Dropped Gantry [Rep 2/2X]	<p>When the Y-axis belts are damaged or disconnected from the gantry, causing the gantry rods to fall. This is most often due to mishandling during moving/shipping. In order to repair this, you will need to remove the gantry assembly from the printer, and rebuild and realign the assembly before reinstalling it. Be sure to check for peripheral damage to the extruder and build platform.</p> <div data-bbox="591 1115 1377 1730" data-label="Image"> <p style="text-align: center;">Dropped Gantry</p> </div>

Dropped Layer

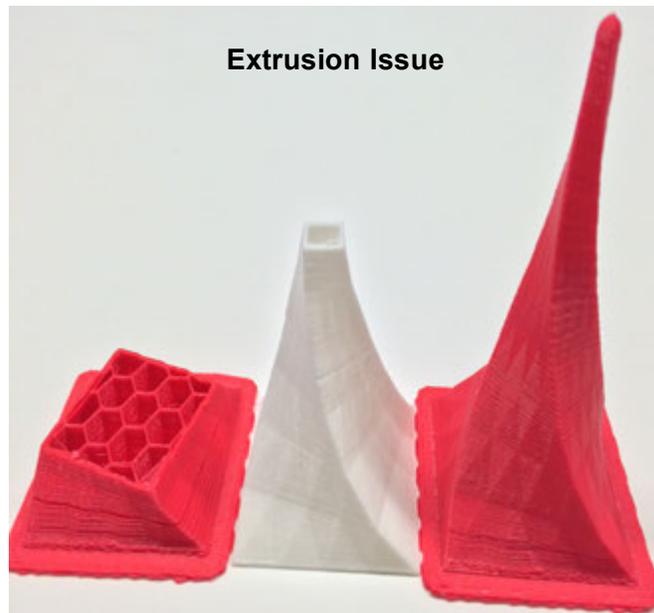
When a layer of a print is skipped due to a temporary clog or another problem with extrusion, but then extrusion restarts for subsequent layers. If extrusion does not restart, this is now air printing.

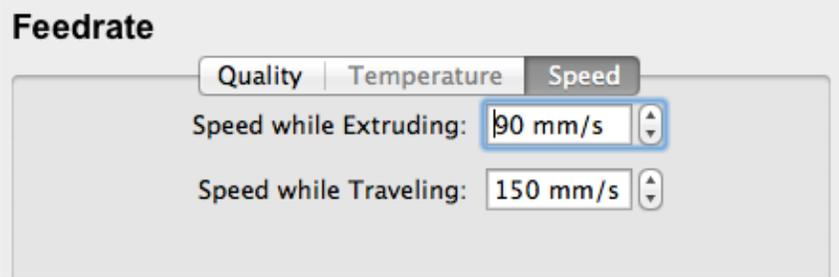
Also called a skipped layer.

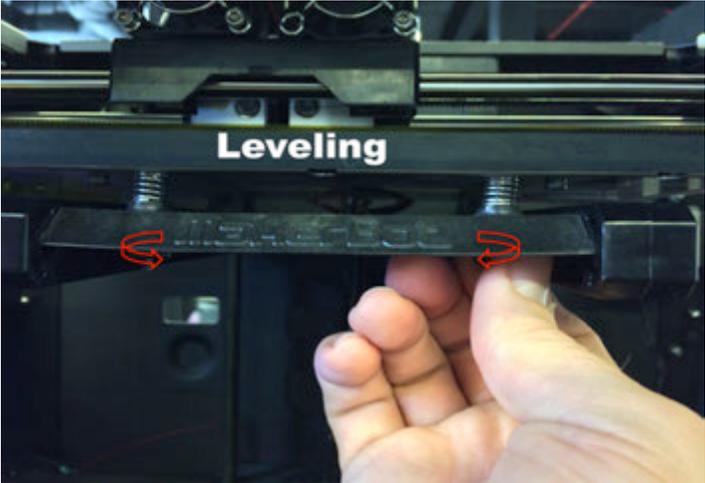
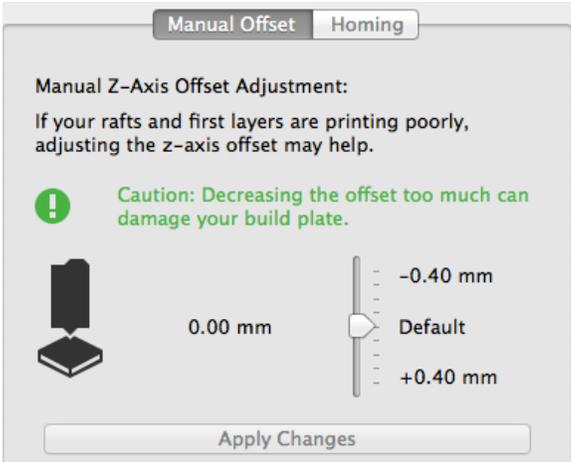


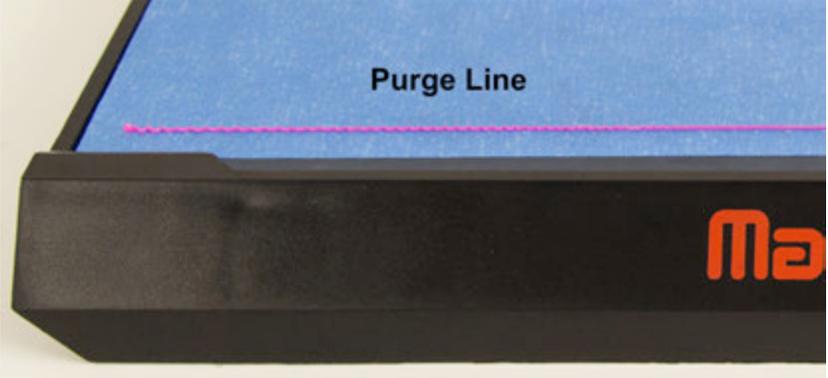
Extrusion Issue

Inconsistent extrusion or a stop of extrusion, caused by an extruder clog, poor filament quality, etc.



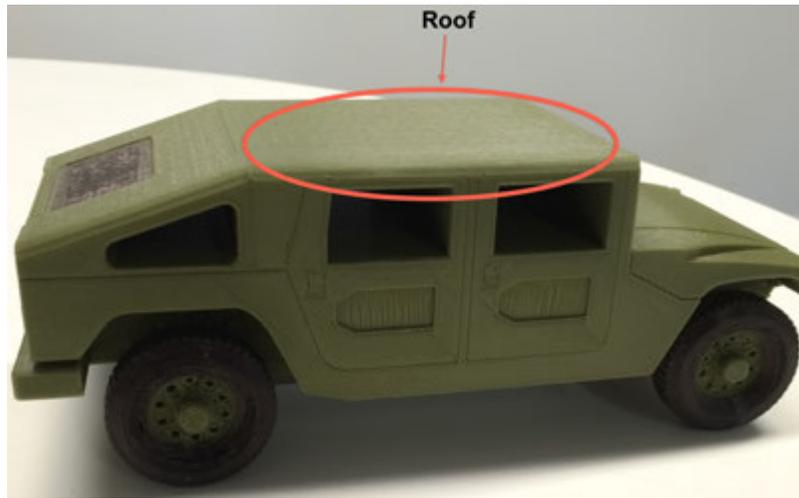
Failed Print	A print that either did not complete or completed with poor print quality due to printer malfunction or user error.
Feedrate	<p>The speed at which plastic is extruded during printing. You can edit various feedrate values when creating a custom profile in MakerBot Desktop.</p> 
Homing	<p>The process by which the 3D printer determines its extruder's location in three dimensional space. Homing occurs before each print and involves the X, Y and Z-Axis motors jogging until the axial limit has been reached. The recorded homing data determines how high the printer will position the build plate at the start of a print, and where on the XY plane the extruder will start the print.</p> 
Hot End	The sub-assembly of the extruder that produces and regulates heat. The hot end is comprised of the nozzle, thermal barrier tube, and insulated thermal core.
Layer	All extrusion on the XY plane at a given Z-height. Each layer is printed at a height determined by the layer height setting. You can adjust this within the profile settings in MakerBot Desktop (standard layer height is .2mm).

<p>Leveling</p>	<p>The process of adjusting the build platform's levelness so that it is parallel to the plane on which the extruder nozzle travels.</p> 
<p>Leveling Script</p>	<p>A set of instructions stored on the 3D printer that guides the user through leveling the build platform.</p> 
<p>Offset</p>	<p>The difference in Z-height between the homing location and the build plate. An accurate offset amount is important for good print adhesion. See Z-height for more information.</p> 
<p>Print</p>	<p>The additive manufacturing process the 3D printer goes through in order to produce an extruded final product. See <i>a/so</i> Build.</p>

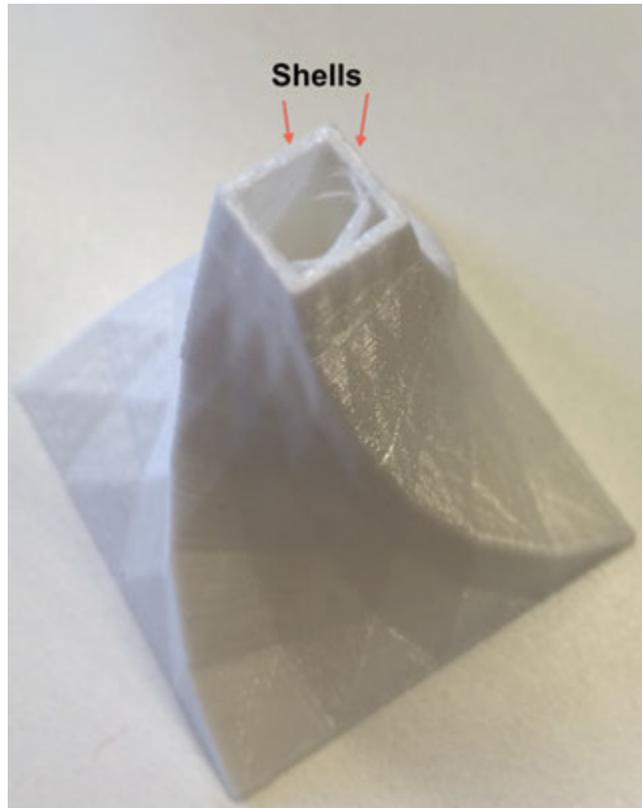
Print Quality	A 3D printed object's dimensional fidelity in relation to machine capabilities.
Purge Line	<p>The line of plastic extruded at the very beginning of a print. The line is printed along the length of the front edge of the build plate. The purge line is used to flush out the plastic that has collected in extruder from the last print.</p> 
Raft	<p>A plastic base printed on the build plate and used as a stable surface for your printed object. Rafts helps with adhesion issues and can compensate for an unlevelled build plate.</p> 

Roof

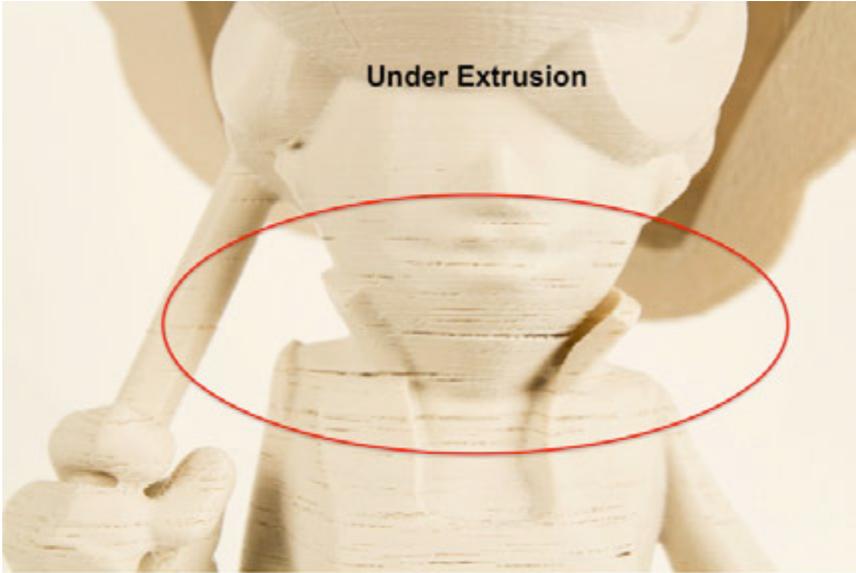
Any upper surface of a 3D print that is parallel to the build plate.

**Shells**

The extruded outlines defining the shape of the layer, also known as perimeters. Every object you print must have at least one shell. Additional shells add to an object's strength, weight, and print time. The shells on each layer are printed first, followed by infill.



<p>Shifting Print</p>	<p>A print that is slanted due to shifts on the X or Y-axis. Shifted prints are most commonly caused by either a loose motor pulley, a faulty motor wire harness, or a poorly tensioned belt.</p>
<p>Stringy Print</p>	<p>Any print featuring loose plastic threads. caused by extrusion during extruder travel or by underextrusion.</p> <div data-bbox="576 407 1403 942" data-label="Image"> </div>
<p>Tangle</p>	<p>Knotted or snarled filament on the spool or between the spool and extruder. Tangles can cause filament breaks or underextrusion.</p> <div data-bbox="576 1050 1403 1614" data-label="Image"> </div>

Toolhead	Any hot end extruder. A 3D printer with dual extruders has two toolheads.
Underextrusion	<p>A print quality defect caused by the extruder outputting less plastic than it should.</p> 
Z-Height	<p>The distance between the tip of the extruder nozzle and the build plate. Each layer is printed at a different Z-height. If the Z-height is incorrectly calibrated, the first few layers of the print will either be too far from the build plate or too compressed, potentially resulting in poor adhesion or filament jam errors. The Z-height value can be fine-tuned within the device preferences menu in MakerBot Desktop, or through the utilities menu on the MakerBot Replicator Z18.</p> 