The Official LittleBIGPlanet™ Creator Mini-Guide

BASED ON A GAME RATED BY THE ESRB EVERYONE

PLAYSTATION 3

Welcome to Your World

Welcome to the primer for the creation element of LittleBigPlanet. Using these pages, you'll be able to develop some of the easier objects and creations in "Create Mode". This won't be the resource necessary for making high-end or complex creations. For more on that, refer to the LittleBigPlanet Signature Series Strategy Guide by BradyGames.

Go Get Goodies!

This primer assumes that you've played around a bit with the Create Mode and have assembled a moderately sized collection of pieces in your Goodies and Tools Bags. If you haven't, go ahead and do so. Right now!

Living in a Materials World

Everything in *LittleBigPlanet* is composed of base materials. The more materials your sack person collects, the more you can create with. There are several types of materials, each with its own characteristics and qualities that can be used to your benefit. Scroll to the Basic Materials section on the first window of your Goodies Bag to view the most basic forms of different materials you have collected. Most materials fall into one of these categories and behave in the same way as their basic counterpart.

Basic Materials

Basic Material	Material Name	Description	Able to Grab
	Cardboard	Very Light	No
	Glass	Slippery	No
	Metal	Heavy	No
	Polystyrene	Very Light	Yes
	Rubber	High-Traction (Good for Wheels)	No
	Sponge	Light	Yes
	Stone	Heavy	No
	Wood	Basic Building Material	No

CRAFT MATERIAL BASICS

Once you select a material you would like to build with, the Choose Shape menu options opens in the Popit. Cycle between the shapes you have collected and press ⊗ to select the shape you would like to build with. Get your hard hat ready, because you are now set to build. You can control the material with the Popit Cursor in much the same way you control objects, but with a few new available options. Position your material with the left stick and rotate/adjust with the right stick. Stamp the material down with ⊗. By holding down ⊗, you can drag the material along. Holding down △ erases existing materials. If you place a new material on top of an existing one, the new material carves itself into the existing material.

Planes & Depth

Remember; use L1 and L2 to move the material through the planes and R1 and R2 to adjust depth.

Mm?

BRADYGAMES

Tools Bag Basics

If the world of *LittleBigPlanet* is made out of the crafts found in your Goodies Bag, then the tools in the Tools Bag are certainly what hold that world together. Within the Tools Bag there are six windows: Tools, Gadgets, Gameplay Kits, Audio Objects, Backgrounds, and Global Controls. This section covers some of the most basic functions of the gadgets found in your Tools Bag.

IN THE BAG

The first window of the Tools Bag has several unique editing and altering tools. It also brings together many of the Function tools from other Popit windows in one place; isn't that handy? This menu's unique tools include all the ominous-looking danger tools you've collected, as well as the Corner Editor.

Tools of Destruction

You are no doubt already quite aware of the devastating effects many hazards have on your poor sack person. Now, with the help of the danger tools, you are able to be the one putting in the peril. Select the appropriate hazard for your level and any object you apply it to. If your conscience gets the better of you, you can return any lethal object back to its inert state using the Unlethalize Tool found to the right of the danger tools.

Different Dangers

Note that the different danger tools affect sack people differently. Using the Electric Tool or the Horrible Gas Tool means an instant end to any sack person who touches the hazard. However, objects imbued with fire by the Flame Tool singe a sack person before they destroy completely, allowing for some narrow escapes.

Got You Cornered

The Corner Editor is an amazing tool that allows you to make precise adjustments to the shapes you have made. Select it from the Popit window, and tap ⊗ over the object you wish to adjust. The Popit Cursor is now restricted to the borders of the object you have selected. Move your cursor along the edge of the object until you reach the point you wish to alter. Tap ⊗ again, and you are able to pull and push the dimensions of the edge you have selected. Tap ⊗ once more to set the alteration.

You can effectively change the shape of the object by introducing multiple vertices on the object. Simply select a side of your object and push/pull the corners (once again, but tapping ⊗) until you have created a shape you desire. Using this method, almost anything can be created.

GADGETS

Moving to the next window in your Tools Bag brings you to your Gadgets section. These are the elements that hold *LittleBigPlanet* together and help fill it with amazing characters and thrilling action. As with everything, you need to start somewhere, so why not let that somewhere be Bolts, Strings, and Rods?

Hooked on Bolts

Want to make something with moving parts? Then you might want to check out the Bolt. The noble Bolt is your most basic form of connector. Bolts allow you to join one item to another and can help you do anything from make a teeter-totter to attach a branch to a tree. To use a Bolt, select it from the Tools Bag and place it over the object you wish to bolt. Next, exit out of the Tools Bag and bring out the Popit Cursor. Select the object you wish to bolt and place it over the object you want to bolt it to. Once placed, the Bolt connects the two objects. You may also pre-place the two objects with the Popit Cursor, then select a Bolt from your Tools Bag and place it over the two to connect them.

It Don't Mean a Thing if You Ain't Got That String

String is another basic connector. It allows you to tie two objects together. To attach String, first select it from the Popit Menu and attach it with ⊗ to one of the objects you want to connect. Pull the other end of the String to the second object and tap ⊗ once more. Build a small structure and attach a few sponges to the ceiling to get the swing of it.

BASIC TWEAKING

BOLTS, STRINGS, AND RODS ARE YOUR FIRST EXPERIENCES WITH ADJUSTABLE ITEMS. TWEAKING ALLOWS YOU TO ADJUST THE SETTINGS OF A TOOL SO IT BEHAVES THE WAY YOU WOULD LIKE IT TO. TO OPEN THE TWEAK WINDOW, PLACE THE POPIT CURSOR OVER AN ADJUSTABLE TOOL AND TAP ●. YOU CAN ALSO BRING UP THE TWEAK WINDOW BY HOLDING DOWN ⊗ WHILE PLACING THE TOOL. INSIDE THE WINDOW, YOU GAIN ACCESS TO ALL ADJUSTABLE FEATURES OF A TOOL. BOLTS ALLOW YOU TO SET THEIR STRENGTH. THE HIGHER THE STRENGTH SETTING, THE LESS THE BOLT CAN BUDGE. STRINGS AND RODS LET YOU ALTER THEIR LENGTH. STRINGS CAN BUNCH UP SHORTER THAN THE LENGTH YOU SET, BUT CANNOT STRETCH ANY LONGER. RODS CANNOT BUNCH OR STRETCH OUTSIDE THEIR LENGTH SETTING. BOLTS, STRINGS, AND RODS REPRESENT SOME OF THE SIMPLEST ADJUSTABLE ITEMS; MORE COMPLEX TWEAKING IS COVERED IN THE OFFICIAL STRATEGY GUIDE.

Rods

Rods work much like String and are wonderful for connecting all sorts of objects together. However, unlike String, once you set a Rod's length, that's that; it cannot bunch or stretch. "Is It Stiff?" is another interesting option found in the Rods Tweak Menu. When switched on, the selected Rod is set to its anchor without any pivot in its hinges. Go on and give it a try. Place a block of sponge just over your sack person's head. Attach one end of a Rod to the floor and the other to the sponge. Open the Rods Tweak Menu and try stretching out the Rod and turning the stiffness on. Upon leaving the Popit Menu, your Rod grows in length and remains standing straight. Turn off stiffness, and the sponge falls to the floor.

Glue

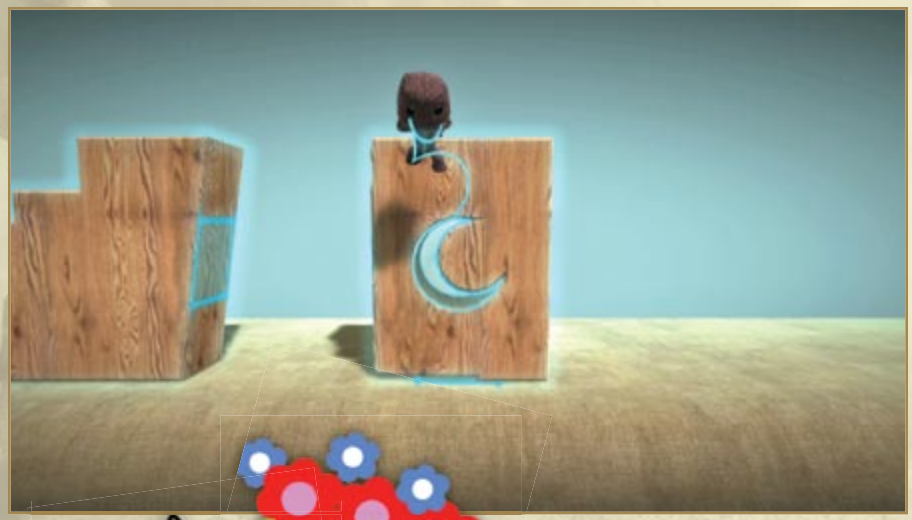
Glue is a function of your Popit Cursor, not a tool. Glue creates a solid connection between two objects or an object and the floor. To use Glue, select an object with the Popit Cursor and move it where you would like to place it, either against another object or on the floor, and hold down ⊗. When the Popit Cursor detaches from the object, the glue is set. To separate the objects, select one with your Popit Cursor and tap △. Be careful: if you tap △ twice, your object is deleted.

Tutorial Set 1

Here's your first set of tutorials. There are two sets in this primer. These first tutorials may seem simple, but make sure you learn them since many of the tutorials in set two require you to know these simpler elements.

GAPS

Once you have created an elevated walkway, you can create gaps as minor obstacles. Fortunately, gaps don't require a whole lot of work. Choose any material out of the Goodies Bag and select the shape you wish your gap to be. Use △ to cut the shape out of your walkway. This technique can also be used to create decorative features within the walkway.



TUNNELING

When you can't go over, go under. Tunneling is an incredibly useful technique in level building. It allows you to cut out shapes and walkways from one material using another. Try making a large block, three layers deep, out of Basic Metal. Then choose Basic Glass from your materials and select the square shape. Adjust the size to something slightly larger than your sack person and set it to the back-most plane. Next, ensure your glass is only one plane deep. Starting from the base of the metal structure, stamp down your glass and move it across the bottom of the metal block. This should result in the formation of a tunnel running through the base of the metal.

MORE THAN ONE WAY TO THE TOP—ONE

To practice, try to make a path your sack person can use to get to the top of the metal structure. Use different techniques to reach your goal. Both diagonal tunnels and level based paths can help you get your sack person to the top.

PLATFORMING

Using Basic Metal once again, create another large block of approximately the same size as what you created for the tunneling tutorial. However, this one should only be one layer deep and placed on the farthest back plane. Return to your material selection window and choose Basic Cardboard and select the square shape. Adjust your cardboard so that it is approximately the height and width of your sack person and set its depth to cover all three planes. Stamp several blocks into the metal to create a series of platforms. You can also drag the cardboard across the metal to create a solid path.

MORE THAN ONE WAY TO THE TOP—TWO

To practice, try to create another path your sack person can use to get to the top. Use several shapes and methods to help achieve this goal.

ROCKING WALKWAY

Try adding a little wobble to your walkway by creating sections that rock. Select Basic Cardboard and choose the teardrop shape. If you have yet to earn the teardrop, you can create it using the circle and triangle shapes. Turn the teardrop on its side and adjust its depth to one layer. Make its size roughly three times taller than your sack person at its highest point, and stamp it down. Return to the shape selection window and select the triangle. Increase its size and rotate it to cover the top arc of the teardrop you just placed. Tap △ to delete the covered section. Next, select Basic Sponge from the Materials window and set its shape to circle. Make the circle roughly the size of your sack person's head, and line the top of the teardrop as well as the top lip.

SWING

One of the best ways to get by an obstacle is to swing over it. Select Basic Wood to form the stand for a sponge. Construct a small base, column, and support bar. All can be achieved with the square shape. First, construct a small base, and then narrow the size of your square and drag the wood upward from the center of the base to create your column.

Lastly, when the column is of a sufficient height, increase the wood's depth and stamp it down to create the support beam. Return to the Materials window and select Basic Sponge. Choose the circle shape and place it midway up the column on the layer beneath your support beam. Exit out to the main Popit menu and scroll down to your Tools Bag, select String, and attach one end to the sponge and the other to the support beam.

SWINGING TO SAFETY

To create a small trial for your swing, pick it up with the Popit Cursor and use **L3** to copy it. Place four swings in a row roughly the same distance apart, and return to the Materials window. Use Basic Metal and select the circle shape. Drag a thin strip of metal across the base of the swings and use the Electric Tool out of your Tools Bag to add a little spark to the metal panel you have created. If everything is lined up correctly, you should be able to swing across the danger.

RUNNING THROUGH HOOPS

Rolling hoops can be a fun and useful tool in your level construction. Use Basic Cardboard to make a large circle one layer deep. Shrink the circle's proportions slightly and use △ to carve a smaller circle out of the larger one you just placed. Your sack person can then jump inside and travel over hazards, or just roll around.

More Goodies in the Goodies Bag

If building with the basic Materials in your Goodies Bag begins to feel, well, a little basic, do not worry. There are a few unique materials that should put a bit more zest in your construction. So roll up your sleeves and prepare to get crafty.

Unique Materials

Unique Material	Material Name	Description	Able to Grab
	Dissolve	Very light material that dissolves when triggered.	Yes
	Dark Matter	Unmovable Material.	No
	Peach Floaty	Material that floats away if not tethered.	Yes
	Pink Floaty	Material that floats where placed.	Yes

VANISHING ACT

Dissolve is a truly magical material. Select it from the Basic Materials section of the Materials window in your Goodies Bag. Try dropping down a few small shapes and let your sack person drag them around a bit. Dissolve has the same basic characteristics as Polystyrene. Next, choose the square shape and place a wall of insurmountable height in your sack person's path. Leave the wall in place and continue on. Like all good magic tricks, anticipation fuels amazement, and this trick is sure to leave you stunned.

STAYING PUT

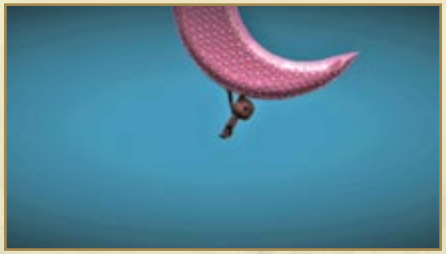
Dark Matter is not as scary as it sounds. In fact, once you start using it, you're bound to think it's quite lovely. Dark Matter is not constrained by the laws of Physics; it is unmovable, it is gravity defying, it is just darn cool. Wherever you place Dark Matter is where it stays. So go ahead and place it mid-air, deep in the base of a wall, or anywhere else you can imagine. The only thing in all of *LittleBigPlanet* that has the power to affect it is your Popit Cursor. Quite handy, don't you think?

BUOYANT BUBBLE

If you need to add a little levity to your level, Peach Floaty is just the material for you. This grab-able wonder is quite literally lighter than air. Try placing it somewhere to see what happens. Just remember to tether it down with a little String.

Picking up the Pieces

If you happen to exit the Popit menu prematurely, causing your carefully placed but unconnected objects to fall or float off, there is an easy way to fix it. Rather than taking hold of each item with the Popit Cursor and returning it to its proper place, simply Pause Create Mode with a tap of the directional button up, then hit Undo and immediately thereafter hit Redo. Everything is restored to its proper place and frozen there until you have had a chance to glue, bolt, and tether the objects to their proper place.



FLOAT ON

Pink Floaty is another interesting material, to be sure. It is said to be the most impartial of all materials. This is probably because it always stays neutral, or at least neutrally buoyant. Pink Floaty stays exactly where you place it until it is bumped, then, well, you know what Newton said about objects in motion.

Tools Rules

Now that you have had a chance to experiment with the last few remaining materials, it's time once again to visit the Tools Bag. Here, you can hone your level building skills.

GET MOVING WITH GADGETS

The Gadgets Window of your Tools Bag is destined to become one of your most invaluable recourses. Whether you're looking to add a little up and down to your level or give one of your creations a voice of their own, this is where you need to be.

Creative Connectors

There's a lot more to connectors than just basic Bolts, Strings, and Rods. If you're looking to add a bit of a wobble or maybe even some side-to-side action to one of your creations, then one of these more advanced connectors is sure to fit into your plans.

ADVANCED ADJUSTING: CONNECTORS

WHEN YOU START DELVING INTO THE MORE CUSTOMIZABLE CONNECTORS, YOU'LL FIND THEIR TWEAK MENU LITERALLY TEEMING WITH MORE OPTIONS. HERE'S A BREAKDOWN OF THE NEW CONNECTOR OPTIONS AND THEIR EFFECT.

Connector Adjustments

Adjustment Type	Adjustment Name	Effect
Basic Settings	Set Angle (Bolt)	Set Bolt's resting position angle. Toggle between 0^0 and 360^0
	Set Speed (Bolt)	Controls the speed of a Bolt's action. Toggle between 0.0 and 12.0.
	Set Number of Turns (Bolt)	Controls the number of Revolutions a Bolt terns before resetting.
	Set Maximum Length (Winch and Piston)	Set connector's maximum length.
	Set Minimum Length (Winch and Piston)	Set connector's minimum length.
Timing	Set Time Taken	Set the amount of time it takes a connector to complete its action.
	Set Pause Interval	Set the amount of time before a connector repeats action.
	Set Movement Phase	Set to synchronize the movement of all the mechanized, motorized, and winchized objects in your level.
Direction (Bolt)	Clockwise/Counter-Clockwise	Set direction of a Bolt's movement.
	Is it Stiff? Yes/No	Determines whether connecting angle is solid or loose.
	Flipper Motion (Winch and Piston) Off/In/Out	Establishes direction of motor force.

Bouncing back

A Sprung Bolt works like a normal Bolt, but adds a little bounce. Create a basic seesaw, but this time use a Sprung Bolt. Open the Tweak menu and adjust the resting angle. The orange marker in the center of the Bolt represents the new resting angle. The strength setting determines just how much spring is in your Sprung Bolt. Try adjusting the Bolt several times until you're comfortable with its properties.

Stretch it out

If you feel your level is lacking a little bounce, why not add some Elastic? Elastic works just like String with one major exception: it's elastic. This connector can be bunched up shorter than its length setting and also stretched out further. Just how stretchy it is depends on its strength setting. The stronger you make your Elastic, the less it can be stretched. To test this flexible connectable, build a basic swing and attach the sponge to your support beam with Elastic. Grab hold and swing around. Try different strength settings to see their effect.

A Bouncing Bound

If bounce is more what you were looking for in your stretching connector, then Spring is the tool for you. Similar to Elastic this connector behaves just like Rod but, rather obviously, springy. Replace the Elastic connector on your newly built swing with a Spring and test it out. Remember, as with Rod, you may also make a Spring stiff.

Expandable Strength

It is important to understand the effect of a strength setting for your stretching connectors. When set to 0.0, your connector has no elasticity and provides no resistance. If set to 10.0, your connector behaves almost identically to its non-stretchy counterparts (e.g. String or Rod).

JUST HOW LONG IS IT?

WHEN ADJUSTING STRETCHY CONNECTORS, THEIR LENGTH IS DISPLAYED WITH A WHITE AND ORANGE LINE. WHITE IDENTIFIES THE ACTUAL LENGTH OF THE CONNECTOR, WHEREAS ORANGE SHOWS HOW MUCH IT IS BEING STRETCHED. THIS IS IMPORTANT TO THINK ABOUT WHEN SETTING THE STRENGTH OF YOUR CONNECTOR. BE CAREFUL NOT TO SET ANYTHING TO TAUT.

Let's Reel This in

The Winch is another example of String like connectors, but the difference here is this tool has been mechanized. Use a Winch to replace the Spring connector on your swing and pull up its Tweak Menu. Winches have two length options under basic settings: Maximum Length and Minimum Length. The three green marks on your Winch represent its movement based on these length settings. The first green marker, paired with the orange marker, identifies the Winch's base. The center green marker shows its Minimum Length and the final marker displays Maximum Length. As always, your strength setting determines the integrity and power of your connector. Tweak away to see the effect of different settings.

A Powerful Piston

The final connector at your disposal is the trusty Piston. This tool is a cross between Winches and Rods. Its Tweak Menu has all the same features as the Winch, with the additional stiffness setting. This connector is ideal for controlled up/down or side-to-side motion. To test the Piston, attach a block to the floor and create three more blocks around it (one on top and one on either side). Attach each block to the base with a Piston. Try adjusting each differently to examine the effects.

Flipper Motion (Winches and Pistons)

The way activating Flipper Motion affects the motion of your connectors is essential to understand. The In and Out options are in relation to the connector's base, identified by the orange marker. If used incorrectly, your connection breaks.

THINGS FALL APART

BE SURE TO FIND A BALANCE WHEN ADJUSTING YOUR CONNECTORS. IF THE ACTIONS YOU HAVE SELECTED ARE TOO FAR OUTSIDE THE REALM OF POSSIBLE BEHAVIOR FOR YOUR OBJECTS, YOUR CONNECTION EVAPORATES.

Switches

Your sack person is not merely a casual observer of the actions going on around *LittleBigPlanet*. Switches give you the ability to decide how, when, and why adjustable objects function. Once you stamp one into the world, simply grab the Connector Tab (the green and yellow wires connected to the Switch) with the Popit Cursor and attach it to the adjustable objects (such as Wobble Bolts or Pistons) you wish the Switch to control. Scroll down to the Switches section of your Gadgets window to start exploring your activation abilities.

ADJUSTING: SWITCHES

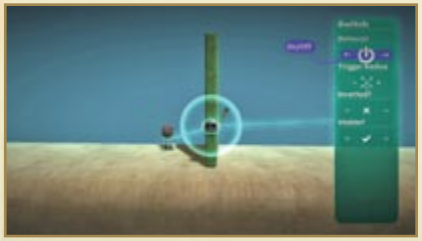
SWITCHES HAVE A VARIETY OF HUGELY HANDY ADJUSTMENTS. HERE IS A BREAKDOWN OF ALL THE OPTIONS AVAILABLE WITHIN THE SWITCHES TWEAK MENU.

Switch Adjustments

Adjustment Type	Adjustment Name	Effect
Behavior	On / Off	Triggering the Switch causes affected objects to activate.
	Direction	Alters the direction of affected objects when activated.
	One-Shot	Affected objects perform action once.
	Speed	Controls speed of affected objects (when trigger is fully activated, affected objects reach speed set in their Tweak Menu).
	Set Minimum Length (Winch and Piston)	Set connector's Minimum Length.
Item	Item Selection Field	Select activation item from either your Stickers or Decorations window.
Trigger Radius	Set Trigger Radius	Controls certain Switches' activation area.
Magnetic Key Color	Toggle between color options for Magnetic Keys.	Sets color of Switch.
	Inverted (Yes / No)	When activated, Switch inverts action of affected objects.
	Visible? (Yes / No)	Determines whether the Switch is visible in Play Mode.

Proximity Performance

The Sensor Switch is the most basic proximity-based Switch. Whenever a sack person gets close to it, the Switch activates. Just how close they need to be is up to you. Now, remember that wall you built when you learned about Dissolve material? Well, the magic trick is about to begin. Place a Sensor Switch on the Dissolve wall and attach its Connector Tab to the wall. Open the Tweak Menu and set the Switches Behavior to On/Off. Next, set the Trigger Radius to just outside the border of the wall. Have your sack person walk up to the edge of the wall, and prepare to be amazed. Without any warning, a material called Dissolve disappears before your very eyes.



Grab and Go

Something's bound to happen if you can just hold on. Attach a Grab Switch to any grab-able material and activate it by grabbing that material. Pretty straightforward really. Grab Switches have all the adjustments you have come to know and love in a Switch, so go ahead and give it a Tweak.

ADDING AN ELEMENT OF DANGER

The Gameplay Kits window of you Tools Bag holds a bit more than just the Basics. Use the Dangerous Kit to help add a new layer of intrigue to your level. Tucked away in the darkest corner of your Tools Bag lurks the nefarious Dangerous Gameplay Kit. These items don't need any help from the hazard tools to have a lethal impact. If you'd like to add a bit of a boom to your level or you're just looking to make a point, this is the place to go.

Get to the Point

As you can imagine, spikes and sack people are not the best of friends. They can, in fact, knock the stuffing right out of the poor sack people. Place a spikes strip down wherever you'd like to see a little peril. Spikes come in two convenient sizes, small and large. If you'd like to test their lethality, drop a spike down and have your sack person jump aboard.

Under Pressure

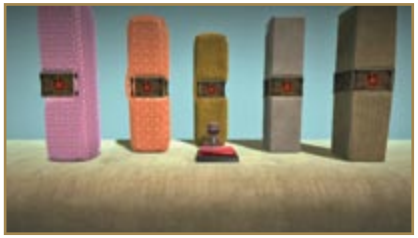
Impact explosives are one of the most high-strung tools you're ever going to meet. Add just a little pressure and BOOM, they blow up in your poor sack person's face. Your sack person can grab impact explosives, but remember to handle them gingerly. If dropped or tussled too hard, they blow up.

Wired to Blow

Trigger explosives need a bit more incentive to go KABOOM. That incentive comes in the form of Switches. Simply attach any Switch's connector tab to a trigger explosive and as soon as the Switch is activated, so is the bomb.

COLLATERAL DAMAGE

WEAKER MATERIALS LIKE CARDBOARD, POLYSTYRENE, SPONGE, PINK FLOATY, PEACH FLOATY, AND DISSOLVE ARE DESTRUCTIBLE. IF AN EXPLOSIVE GOES OFF NEAR ONE, THEY CAN BE PARTIALLY OR EVEN FULLY DESTROYED IN THE BLAST. WATCH OUT, YOUR SACK PERSON IS ALSO DESTRUCTIBLE.

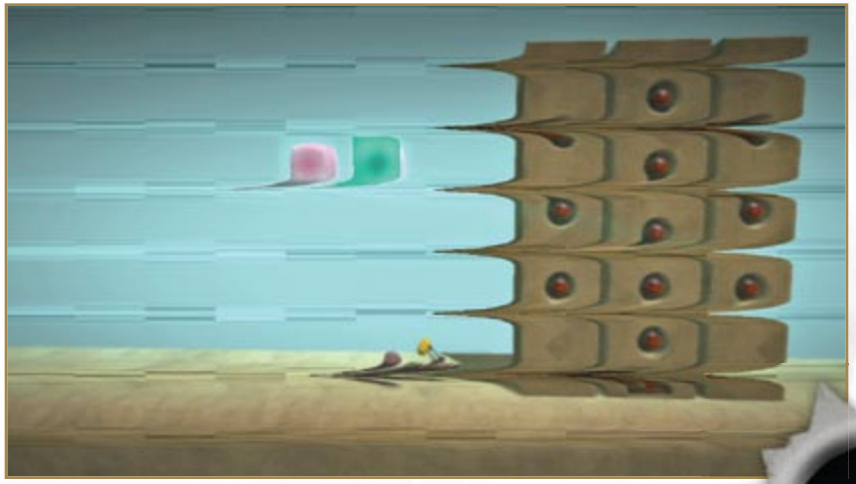


Tutorial Set 2

By combining the basic building principles you've learned and some of the more advanced tools and techniques just covered, you can begin building larger scenes and level elements. Again, these tutorials should be used as both learning aids and as a quick reference guide to assist with building your own levels.

SAFETY BLOCKS

THE BEST WAY TO TEST YOUR CONSTRUCTIONS IS TO SWITCH TO PLAY MODE. IF, HOWEVER, YOU WOULD LIKE TO QUICKLY CHECK A LEVEL ELEMENT IN CREATE MODE, YOU SHOULD START OUT BY DROPPING A SAFETY BLOCK. SAFETY BLOCKS CAN BE ANY MATERIAL OR ITEM THAT IS NON-ESSENTIAL TO YOUR LEVEL. ONCE THE SAFETY BLOCK IS STAMPED DOWN, YOU CAN TRY OUT YOUR CONSTRUCTION AND EASILY RESET IT BY TAPPING REWIND (WHICH RETURNS YOU TO BEFORE YOUR SAFETY BLOCK'S CONSTRUCTION). THIS IS BENEFICIAL BECAUSE ACTIONS AND MOVEMENTS PERFORMED BY SWITCHES AND CONNECTORS ARE NOT UNDOABLE STEPS.

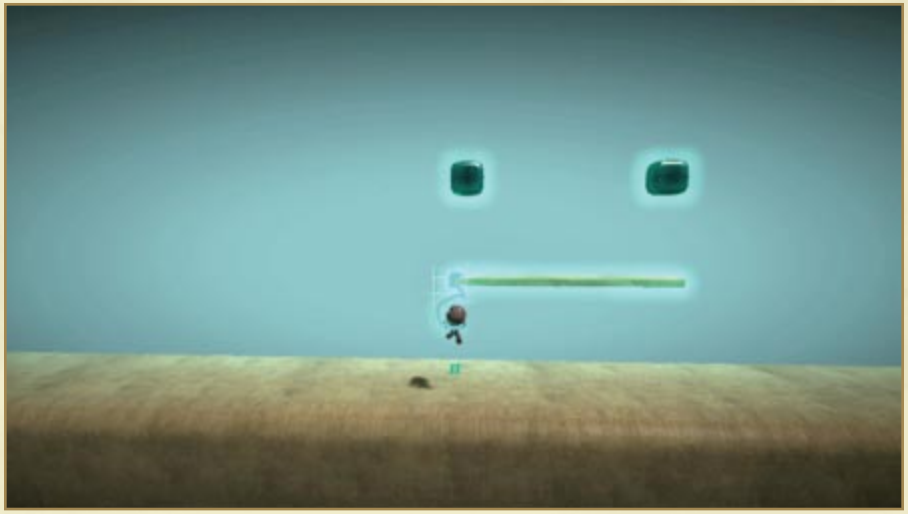


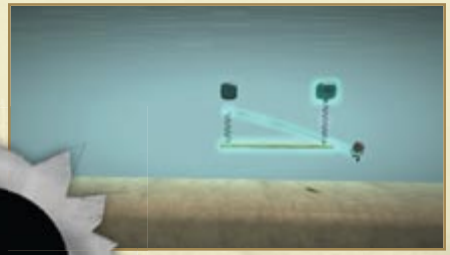
A BIT OF BOUNCE IN YOUR STEP

Use of flexible connectors can help add a bit of bounce to your levels. Use them to augment your path or provide a challenge for your sack person.

Springboard

To create a springboard, place two squares of Dark Matter at the same height. Separate the squares by the width of the springboard you would like to create. Run a plank of cardboard across their base at your desired height. Finally, attach one end of a Spring to a piece of Dark Matter and the other end to the edges of your plank. Adjust the strength of the springs to give more or less bounce to your board. Place Springboards at the base of tall platforms to get the most bounce out of your board.





Up, Down, and Side-to-Side

Use moving connectors and Switches to create unique and fun moving parts like elevators and catapults. These elements can help sack people move through your levels, give them puzzles to solve or just provide a good scare.

Rising Winch

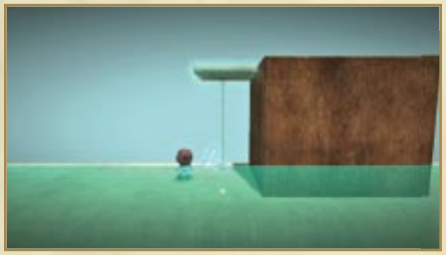
Winches can help your sack person make it to the top or bottom of anything. To make a simple rising winch, place a square of Dark Matter well above your sack person's head. Place a sponge circle below it within reach of an athletic jump and connect the two with a Winch. Open the Winch's Tweak Menu to determine its Minimum and Maximum Length as well as its speed and pause interval. Once everything is set to your liking, pull a Grab Switch from your Tools Bag and apply it to the sponge. Attach its Connector Tab to the Winch. Now all your sack person must do for a ride up is jump and grab it.

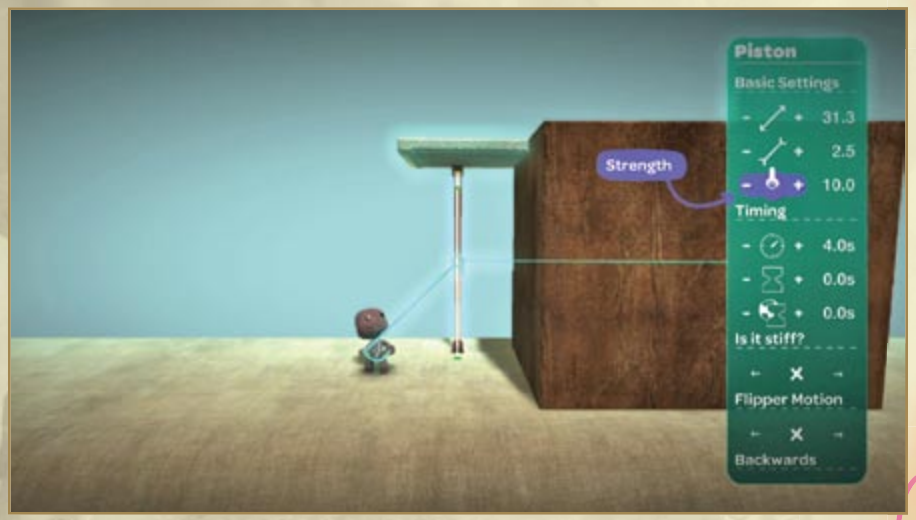
Launch Pad

You can also use Pistons to create launch pads. Utilize cardboard to create a base for your launch pad. Use the octagon shape, embedding the cardboard in the floor so only the top three sides are above floor level. Next, use the square shape to delete a space for your launch pad. Fill the space you have made with a cardboard plank. Place one end of a Piston on the center of your base and the other on the bottom of the plank. Open the Piston's Tweak Menu and set its Minimum Length to 2.5 and its Maximum Length 5.0. Your Piston's speed setting affects just how far your sack person is launched. Set between 10.0s and 20.0s for a controlled boost, and 20.0 to 30.0 for a major blast off. Turn Stiffness on and set Flipper Motion to Out. Now, attach a Button to the plank and fix its Connector Tab to the Piston. Lastly, adjust the Button's Behavior to One-Shot. Leave the Button's Tweak Menu and have your sack person jump onto the Button to test its boosting ability.

Elevators and Moving Walkways

Basic elevators and moving walkways are another simple way to help a sack person go from one place to another. Build a large platform, then place a small cardboard plank next to the structure so that it runs parallel to the top of the platform. Now, get a Piston from your Tools Bag and connect one end to the floor and the other to the center of your cardboard plank. Open the Piston's Tweak menu and reduce its Minimum Length to 2.5 (the Maximum Length should be fine because the plank was set to its intended height). Adjust the speed of the Piston relative to its maximum height. For a comfortable ride, try to give between 0.5s and 1.0s for every 10.0 of space traveled between Maximum and Minimum Height. Next, add a small Pause if you would like to give your sack person a larger window to board and exit the elevator. Lastly, choose to make your Piston stiff. Your sack person can now travel to the top of the platform with ease.





You can use the same technique on the other side of the platform to make a moving walkway. Create a second cardboard plank and place it off the non-elevator side of your platform. Connect it to the platform with a Piston and perform the same adjustments as before. Once set, you have created some lateral transportation to compliment your up-and-down.

Now try adding Sensor Switches to the center of each plank and attach their Connector Tabs to the relevant Piston. Adjust their Trigger Radius to the border of the plank. Each moving component now only functions while a sack person is riding it.

Quick Switch

It is always wise to use Switches whenever you create something that requires quick motion and precise timing to work correctly. For example, without a Switch, the launch pad still works, but it is much harder for your sack person to board it and to receive the full power of the boost.

Pulled to Perform

Though the 3-way Switch may look awfully similar the 2-way Switch, this fine lever functions a bit differently from its twin. 3-way Switches start standing straight up. Pull it in either direction to activate the Switch. Release the lever to reset it and deactivate the Switch.

Is It Coming or Going?

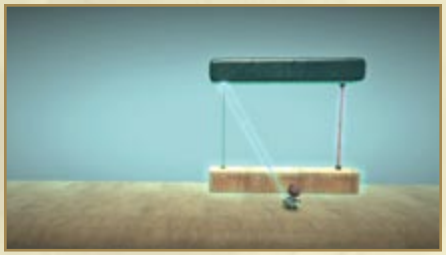
Setting a 2-way and 3-way Switch's behavior to Direction has a unique effect. The Switches are active when pushed to the right and inverted when set to the left.

Attention All Sack People: Dangers Ahead!

Adding dangerous elements to your levels is a sure-fire way to keep things interesting. By combining dangerous elements with techniques you have already learned, you can generate some small scary stretches and some huge treacherous trials.

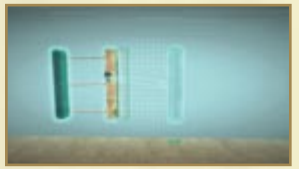
SIMPLE CRUSHERS

Use the same techniques employed in elevator construction to create crushers. Start by making a simple crusher. Run a strip of Dark Matter above your sack person then build a wooden block and rest it on the floor below the Dark Matter Strip. Attach the block to your strip with a Piston. Open the Piston's Tweak Menu, leave the Maximum Length set to its current height and adjust the Minimum Length to its shortest possible setting. Now, activate Stiffness and set Flipper Motion to Out. Any unfortunate sack person caught underneath is going to be crushed. To add a little flair to your crusher, try using the Flame Tool to set it ablaze, or add a row of spikes to its base.


ADVANCED CRUSHERS

If you want to go really advanced, try turning your crusher on its side to create a squishing obstacle. Build a crusher as before, but attach it to a wall rather than a ceiling structure, causing the crusher to shoot out at a 90˚ angle rather than downward. Highlight your creation with your Popit Cursor and copy it, then use the **R3** to invert the crusher. Place the copied construction so the two crushers meet when fully extended. To ensure your timing is right, open each Piston's Tweak Menu and set their Movement Phase to 1.0. When you exit the Popit, your two crushers should now be moving in and out in tandem, transforming the two crushers into a squasher.


EXPLOSIVES

Explosives are as handy as they are deadly. To start getting a feel for their destructive power, place a trigger explosive near the base of a large cardboard structure. Embed several impact explosives into the cardboard, ensuring that each is close enough to another to cause a chain reaction. Place a Button on the floor nearby and attach its Connector Tab to the trigger explosive. Have your sack person activate the Button to see just what a blast explosives really are.

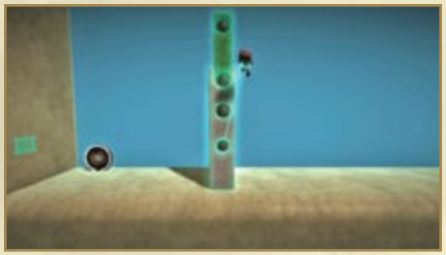


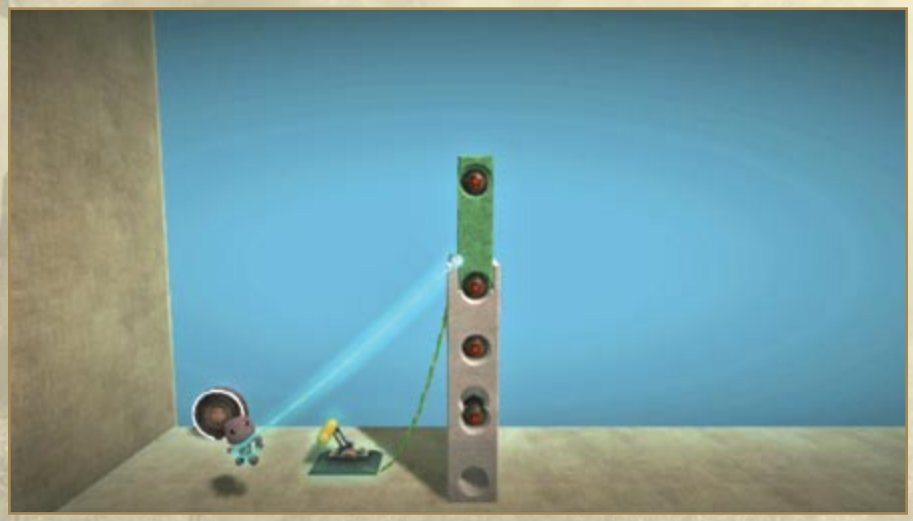

Put It Together

Try using aspects of all the tutorials just covered to build a sample scene for your sack person to navigate. This scene is composed of four elements working together to form one unified section.

ELEMENT ONE

Near the Entrance of an empty level, build a tall polystyrene column three layers deep. Use Dissolve to create a slim column starting just above the top of the polystyrene and continuing a quarter of the way down. Embed an impact explosive in the top of the Dissolve, then several more incrementally down the length of the column. Place a 3-way Switch near the base of the column and adjust its Behavior to On/Off, and then attach its Connector Tab to the Dissolve.



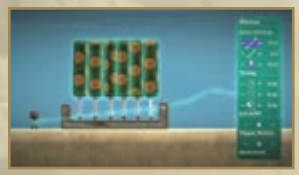


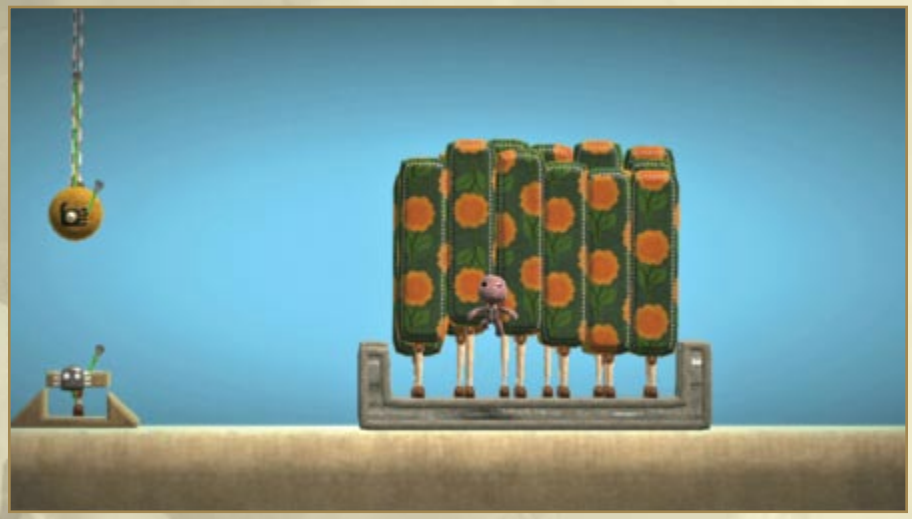
ELEMENT TWO

Build a launch pad to the right of your polystyrene column. Adjust it to give your sack person a decent amount of vertical air travel. Test how high your launch pad launches your sack person, and then create a sponge circle just within reach. Attach the sponge to a rising Winch using a Grab Switch to activate the connector.

ELEMENT THREE

Use metal to create large base with raised columns on either side. Select a sponge material and make six identical columns that fill the base snugly. Lift the six sponge columns and attach each to the base with a Piston. Set each Piston identically with Stiffness on. Vary each Piston's Movement Phase 0.5 apart. You have now created a repelling walkway. Adjust the height of the metal border column on the left side of your walkway to correspond with the sponge on the rising Winch. Copy your rippling walkway and place one on each of the three layers. Tweak the Movement Phase on the central rippling walkway to disjoint the motion, or leave it as is to keep the motion synchronized. Use more metal to extend both metal columns, making them into platforms your sack person can jump onto. Next, add a Checkpoint to each Platform. Now, cover your work by creating a thin piece of metal and gluing it to your rippling walkway's base. Finally, use the Electric Tool to add an element of danger to several columns within the rippling walkway.





ELEMENT FOUR

Use Dark Matter supports to help create a springboard to the right of the rippling walkway. Place the springboard so an athletic jump is needed to reach it. Have your sackperson jump from the rippling walkway onto the springboard several times to see how big a bounce it can get off of the board, then construct another platform just within range. Place a block on the floor between the two platforms and use the Horrible Gas Tool to lethalize it. Lastly, place a Score Board on the final platform. You can now switch to Play Mode and have your sack person test its skills.