



# Water



Brick Built



Exe Sandbox



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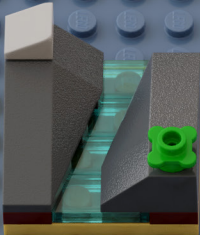
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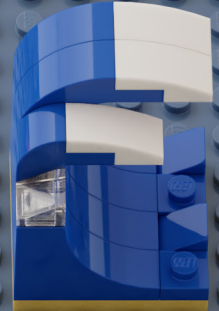
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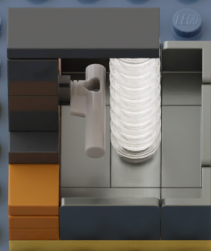
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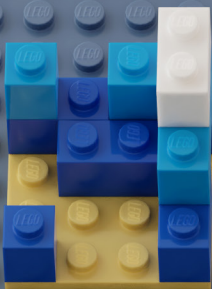
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# Introduction

Building water with LEGO bricks is really easy, but it can also be really tricky if you're trying to build it in more complex ways.

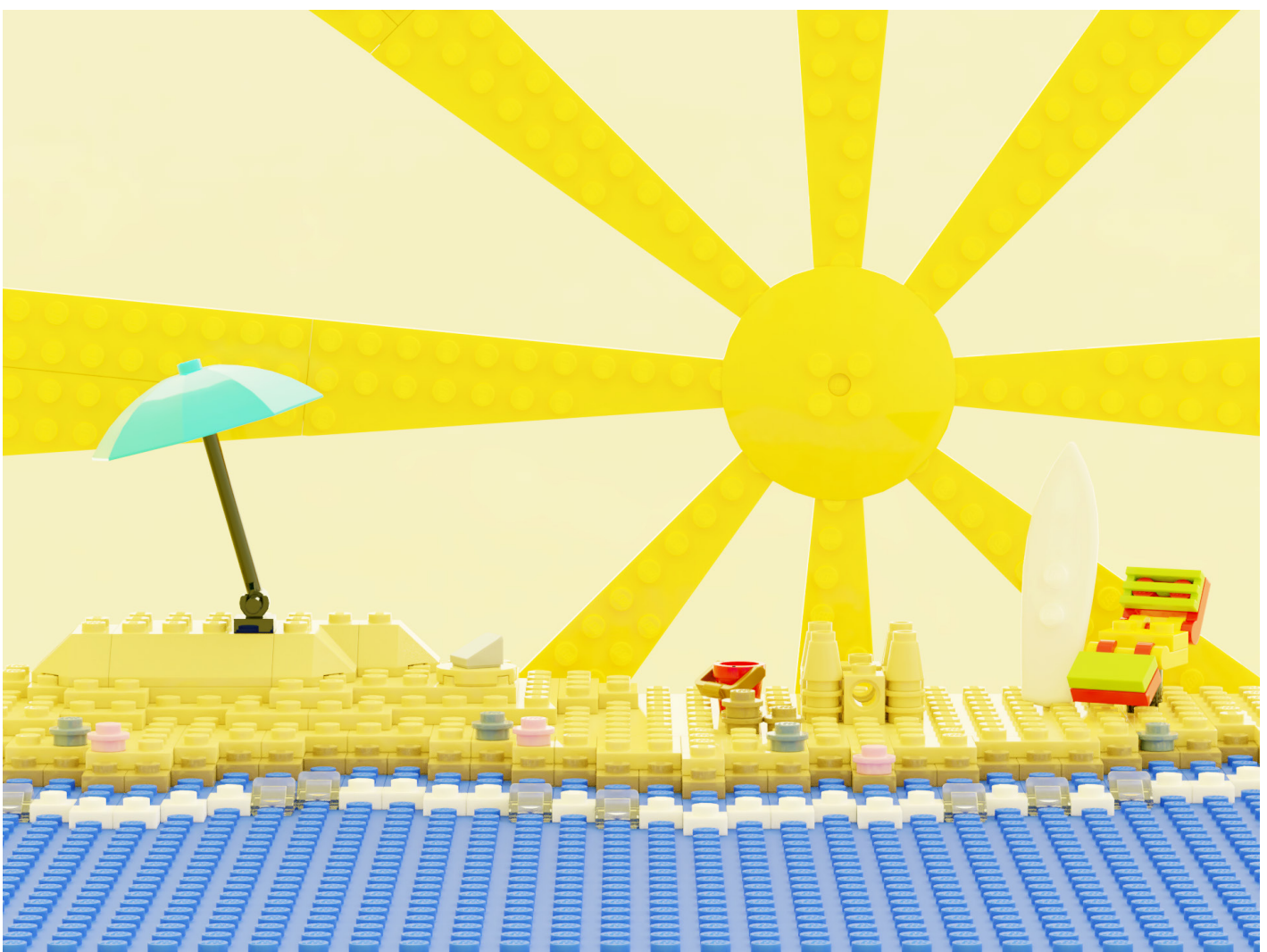
Water is an essential component in many things that we build, whether it is a small lake in a forest, a bottle of water or a waterfall from the sky, there are endless ways water can be built and used, and it makes the scene look better too.

Still waters such as lakes or ponds are very simple, but waterfalls, geysers and splashes are very fluid and is always in motion, which makes it tricky to accomplish in LEGO bricks (especially for beginners) due to

it's blocky nature.

But anything can still be done with enough of skill, building techniques, and clever usage of parts! This book will guide you through the different methods and techniques to build water from the very basic to the more advanced (Don't worry, it is actually pretty easy, with the pictures and all).

This book covers a wide range of techniques to build water in it's different states. Packed with illustrations, examples and detailed descriptions to fuel your creativity and provide you with enough knowledge to experiment and build water with LEGO bricks!

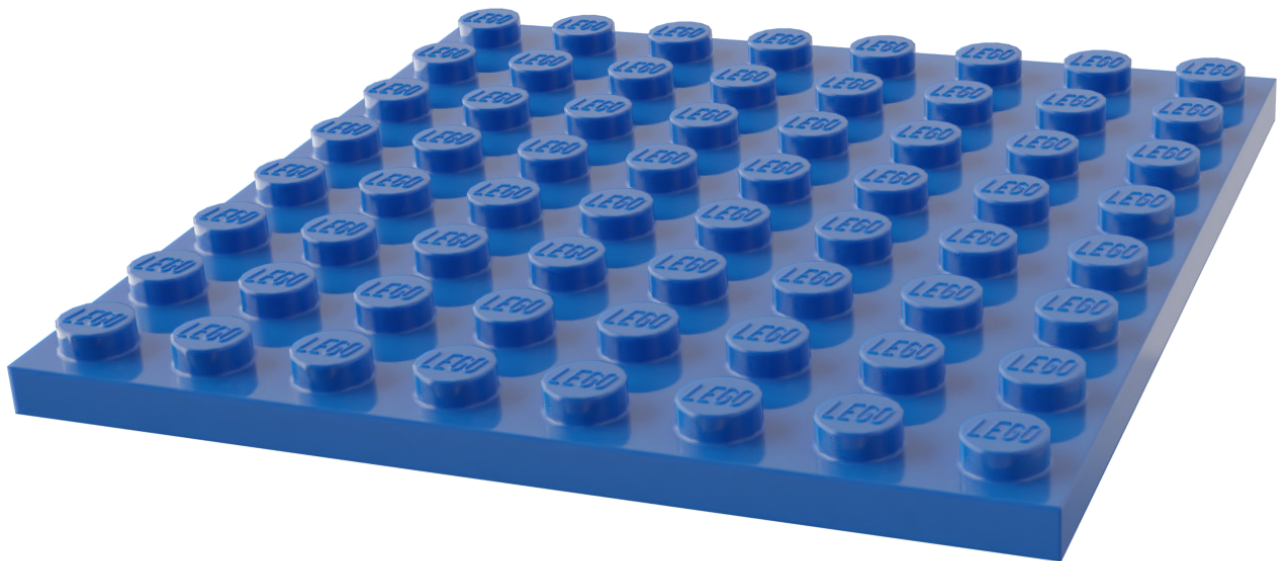


**Beach Scene:** As you can see in this example scene, regular studs and plates are used for the water on the beach, which is rather uninteresting. The added "beachscape" helps to sell the scene and makes it look more interesting than it is. No matter the techniques used to build the water, it will only be as good as the scene that holds it.



# Basic Water Builds

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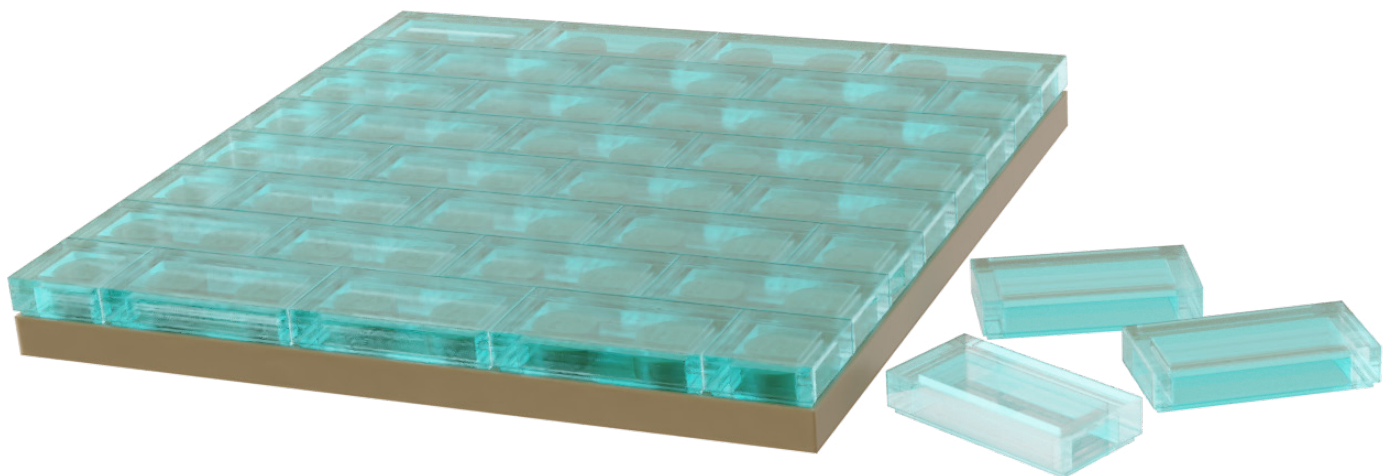


The most basic variation of water in LEGO. A simple blue-colored LEGO plate of any shape and size.

It excels in its simplicity of use, requiring no special building techniques and is also very compact and does not take up much vertical space. Because of this, it is very versatile for many creations, but it still has its limitations.

Aside from its function, it does not look good or bad. That would depend on how you use it.

This method of building water is better suited for classical style LEGO creations where not much detail is required. But that doesn't mean it cannot be used for complex creations, there is always some creative ways to use bricks!



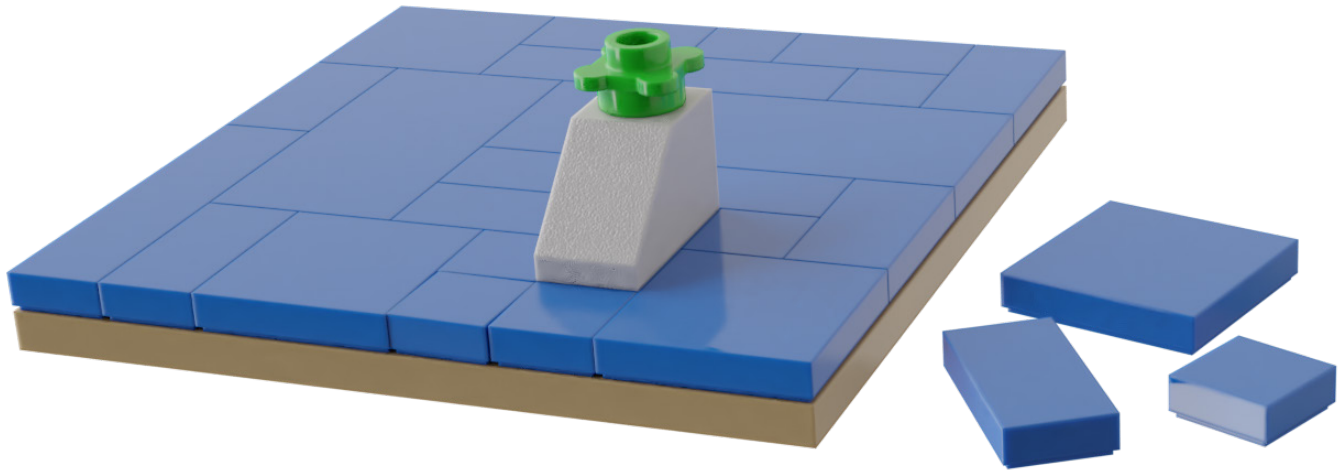
By far the most common and the most good looking way of building water, using these transparent tiles. It doesn't even have to be blue, the transparency is good enough to show that it's water.

As mentioned above, these transparent tiles do look really good as water. The light blue color, with the transparency mixed with the slight reflection

creates an effect that no other (non-transparent), bricks in LEGO have been able to create.

Although these transparent tiles do not come in bigger sizes and is commonly a 1x1 or a 1x2, which means there would be plenty of seams in between the tiles, but from a distance, it would be hardly noticeable.

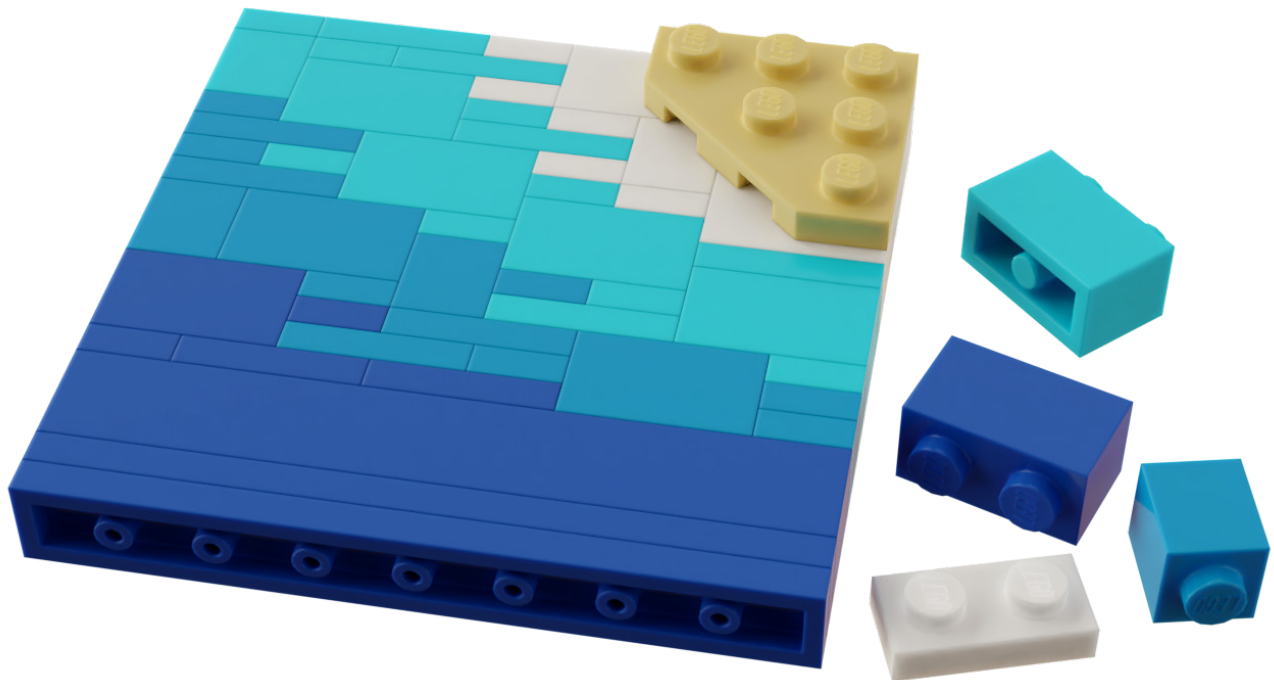




A mix between the plate and the tile. There may be certain instances where transparency is not needed, or you simply do not have enough of them and do not want to use plates because of their unpolished

looks, you can use opaque blue tiles instead.

While they are not transparent, it is more reflective than a plate with all the studs on top.



There is also another technique of placing bricks on their side, it does have some disadvantages and advantages.

The disadvantage is that it takes more space and requires extra pieces to mount it sideways.

The advantage is the extra details you can

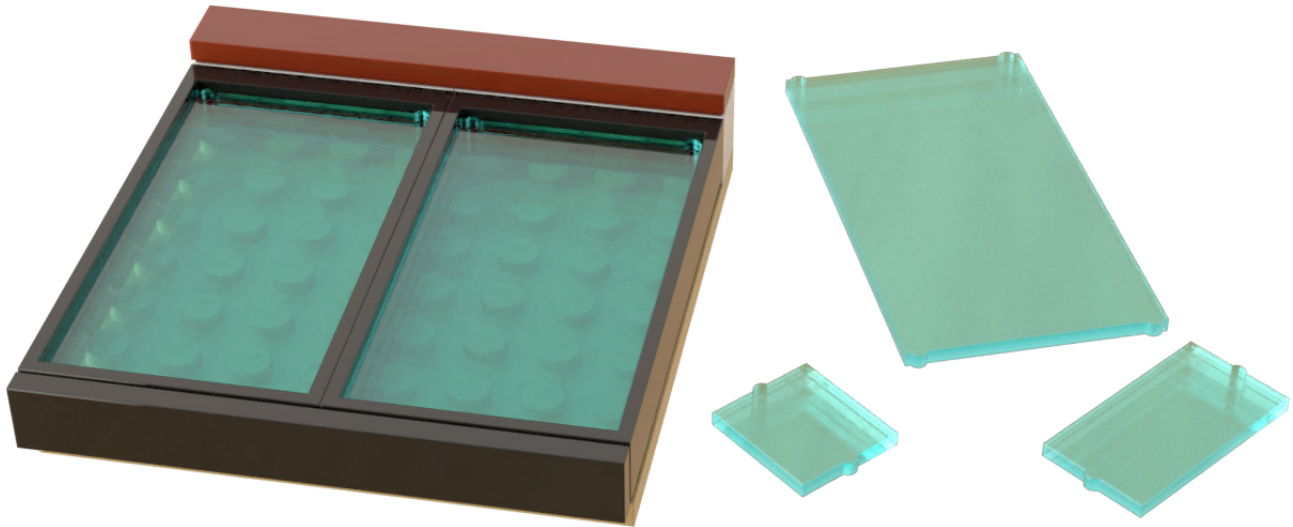
achieve because the lines are thinner.

It may not always be useful, but depending on your scene, the little extra detail can add a lot of depth and visual impact to your water.



# More ways of Building Water

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There are countless more ways of building water, so here are some non-standard methods you could use for building water. In the image above, I have used large window frames with a transparent light blue window as the water.

This is useful if you want a small segmented area of water, like a miniature pool, or a fishing farm. It is easy to use and has a clean look to it. Keep in mind that these windows have to be placed sideways. You can use any window sizes you like.

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Similar to the window frame technique above, you can optionally use transparent wall panels if you want a continuous area of water without the window frames. It is cleaner than using tiles and the thickness gives the water a sense of depth.



For a slightly cartoonish look, you can use these curved tiles to achieve a wavy effect. There are many types of curved bricks and tiles of varying height, which allows for many possibilities of waves,





This is a pretty quick and easy method to achieve a water effect. Using some blue-ish or white transparent studs and just pouring it over a surface. You can easily create a swimming pool, a beach, or an ocean with this method.

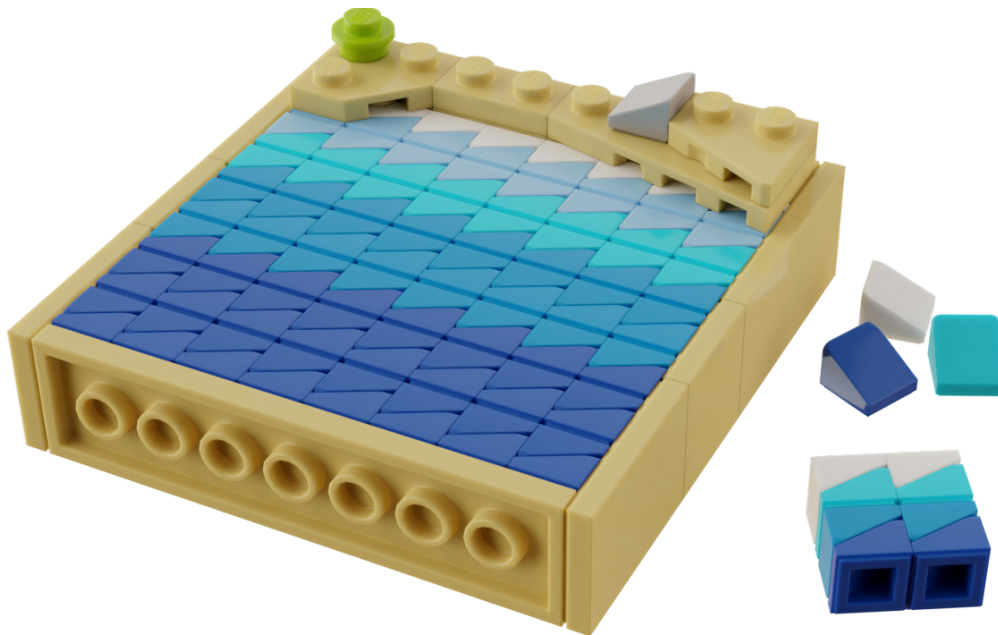
The shape of the studs creates a bubbly effect, and it gives the illusion of moving water, which would be useful in many cases. If your goal is to create calm waters, like in a lake, it would be better to use tiles instead.



Optionally, you can just scatter a bunch of transparent studs on a surface and place a ship on top or

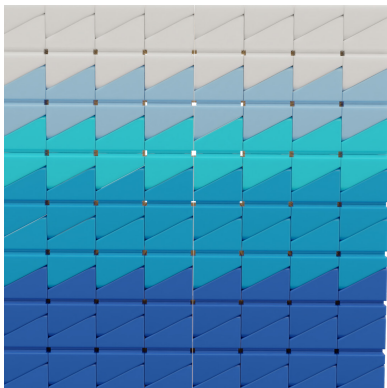
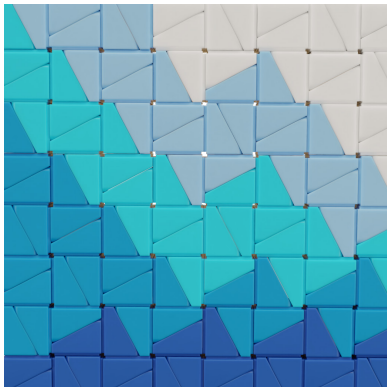
scatter them around an island. When placing them, you can also sort the colors to go from light to dark.

*(Ship model from 21313 LEGO Ideas Ship in a Bottle set)*



By far the weirdest technique when building water. Arranging the little "cheese slopes" like a jigsaw puzzle to create an interesting mosaic pattern. The cheese slopes has an interesting geometry that allows it to fit together in many ways, but they are not

actually connected to each other. It is also the most unpractical method of building water, and it only works to make things more interesting and to show off your building skills. Nonetheless, it does have a very unique flair and design.



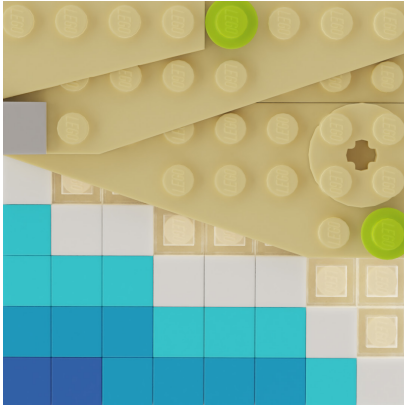
**Note:** You can experiment with different arrangements to create some interesting patterns.



Since all of the little pieces are loose and not connected to each other, it can be a little tricky to hold them all together. Like the example in the image above, depending on the size of your water, you have to build a box to hold all the pieces together.



## Some tips



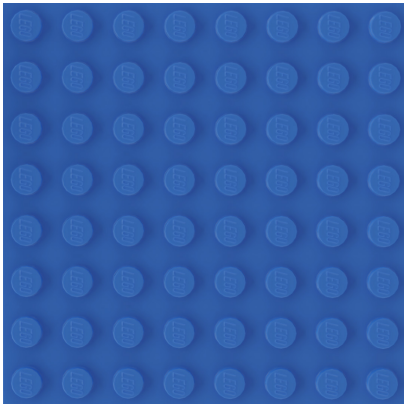
### Closer to land

Especially in a beach where the surface gradually descends down into the water, the nearer the water is to the surface the shallower it will be and therefore the water will be lighter in color. Transitioning from blue to a light blue, white or even transparent color would achieve this effect.



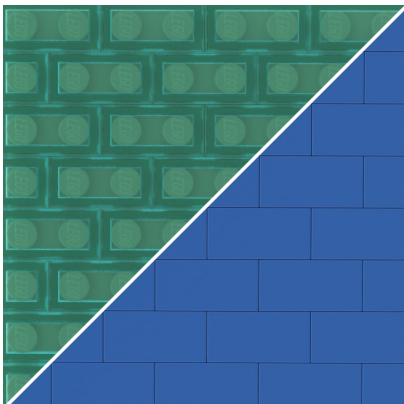
### Gradient

Water would sometimes look dull as a single solid color. Transparent pieces would not suffer much from dullness as compared to solid colors, but it makes the scene more interesting with the addition of more shades of color to create a gradient. It is not necessary to add a whole bunch of colors for the water, sometimes as many as two colors is enough.



### Solid Blue Plate

A regular blue colored LEGO plate should not be underestimated as well. Water in LEGO is originally just a blue plate. There are still countless opportunities to use this part to create stunning scenes and designs, especially in creations that go towards the classic LEGO style of building.



### Transparent or Opaque

Depending on certain scenes, you may want to use either transparent parts or opaque parts. Sometimes it may just be a matter of parts availability. Most times the transparent parts look a lot better than the opaque counterpart, and that is very true. Although there may be a rare instance where it is better to use opaque parts, and there are times where you have to use both together.

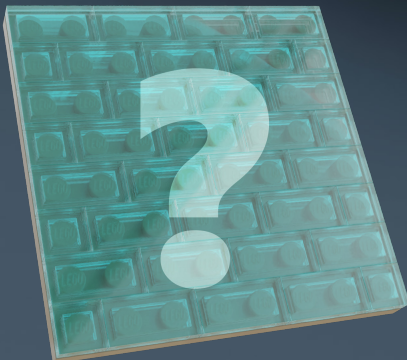
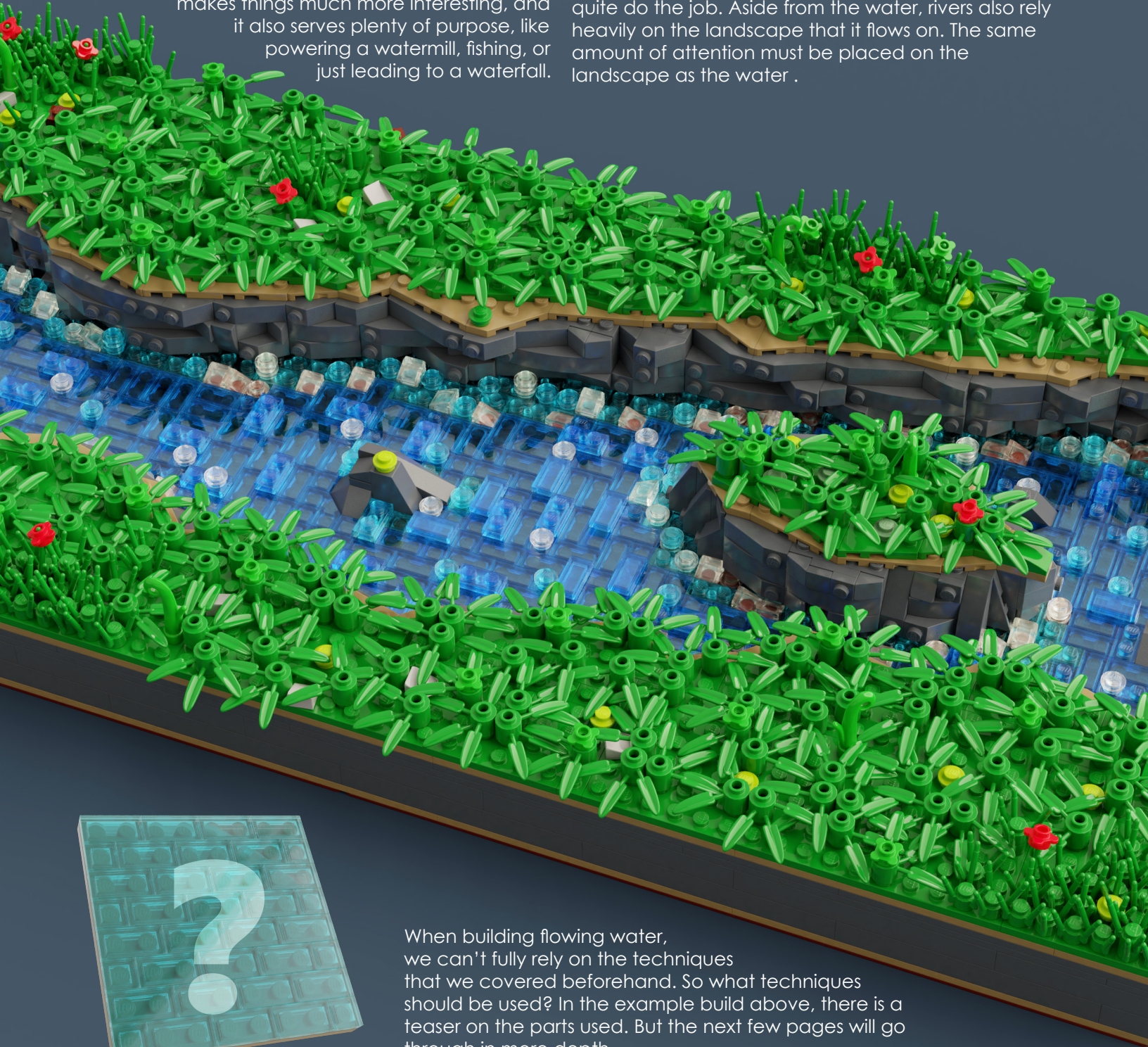


# Water in Natural Environments

## Rivers

Rivers are a very common thing when building landscapes. Having a river cut through a piece of land makes things much more interesting, and it also serves plenty of purpose, like powering a watermill, fishing, or just leading to a waterfall.

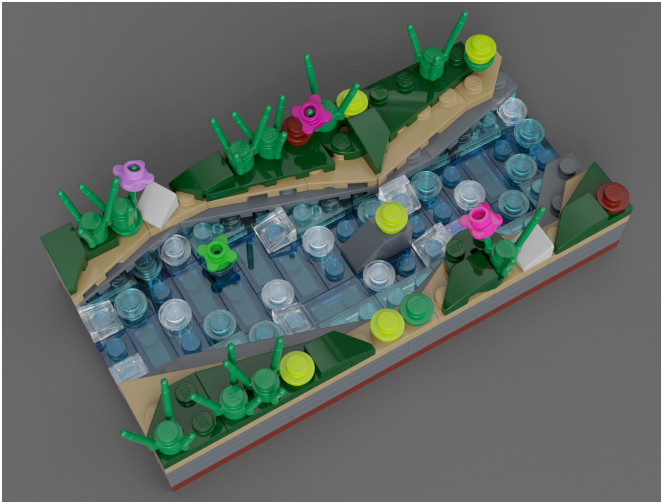
One important factor in rivers, is that it is always moving. When building it, normal techniques doesn't quite do the job. Aside from the water, rivers also rely heavily on the landscape that it flows on. The same amount of attention must be placed on the landscape as the water .



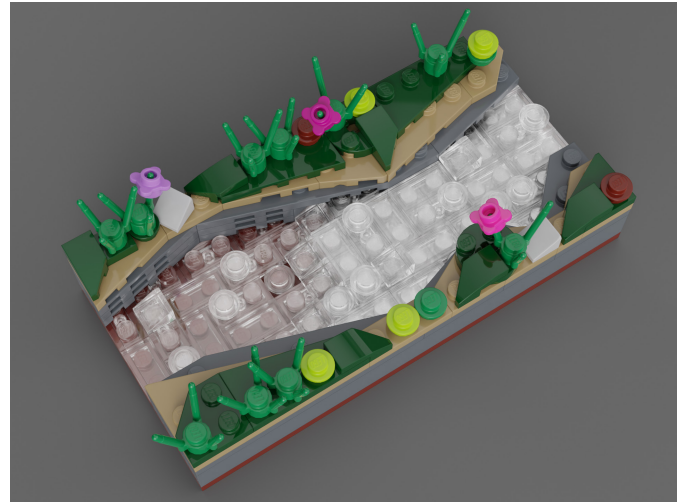
When building flowing water, we can't fully rely on the techniques that we covered beforehand. So what techniques should be used? In the example build above, there is a teaser on the parts used. But the next few pages will go through in more depth.



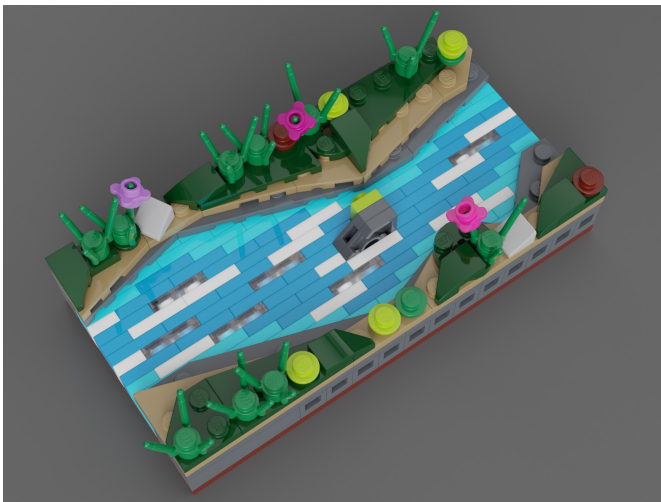
## Methods of Building Rivers



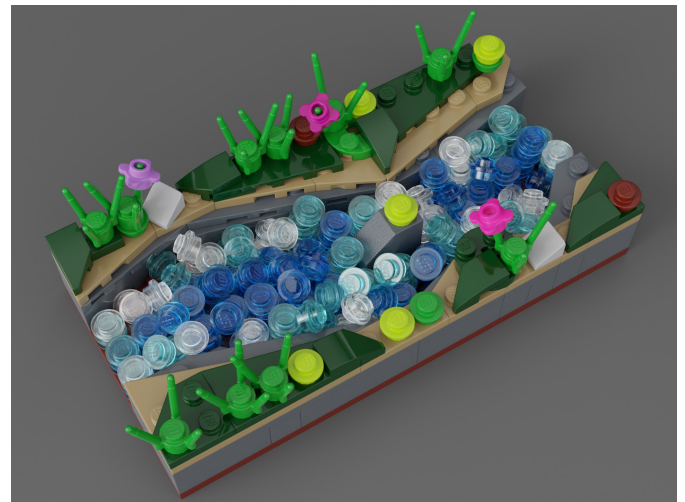
Using transparent plates, tiles, studs, and cheese slopes to build a river is an easy method to create water that looks more complex than it is. The combination of these parts creates an effect of moving water. Notice that the edges of the river are still lighter in color and is more rough due to the impact of the water on the riverbank.



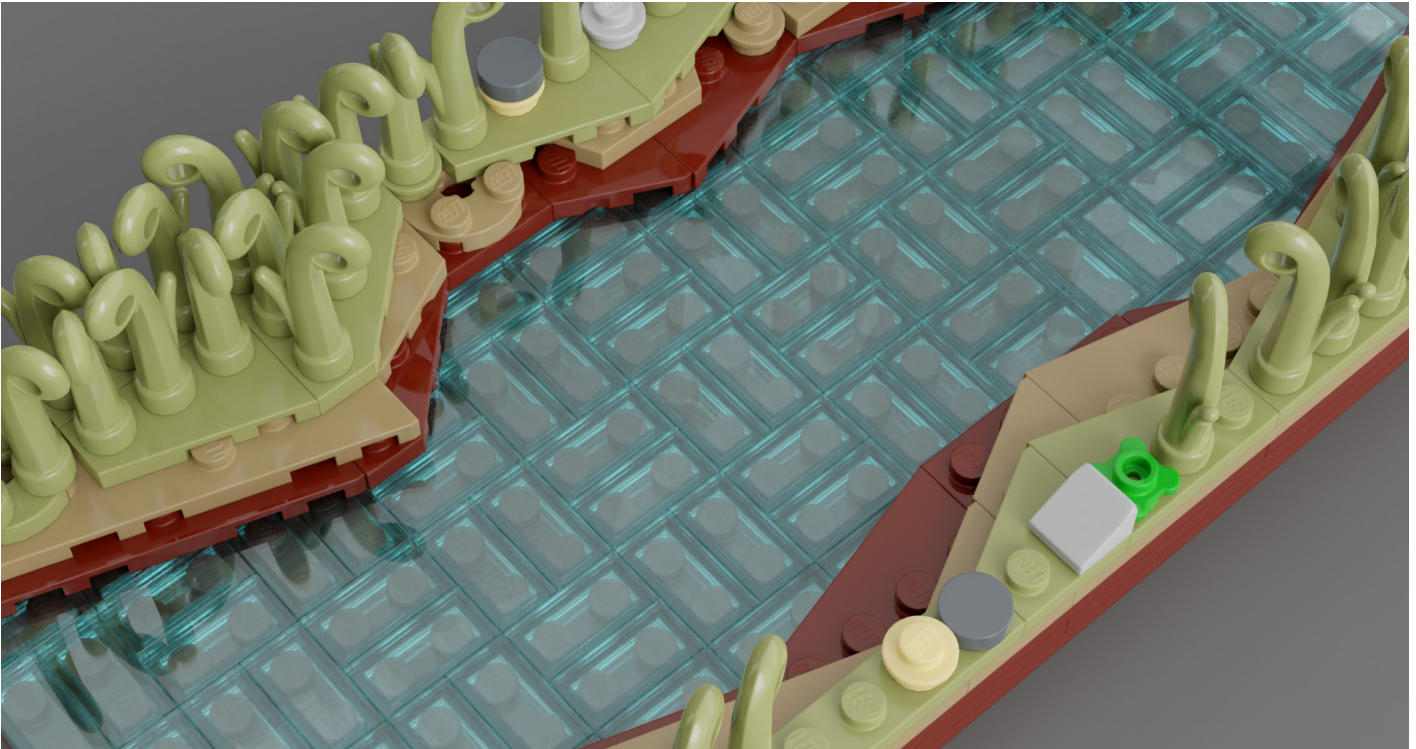
Alternatively, you can resort to using purely transparent white pieces to build the water. It not only looks a lot more realistic but the overlapping transparent pieces makes the water seem like it's moving rapidly.



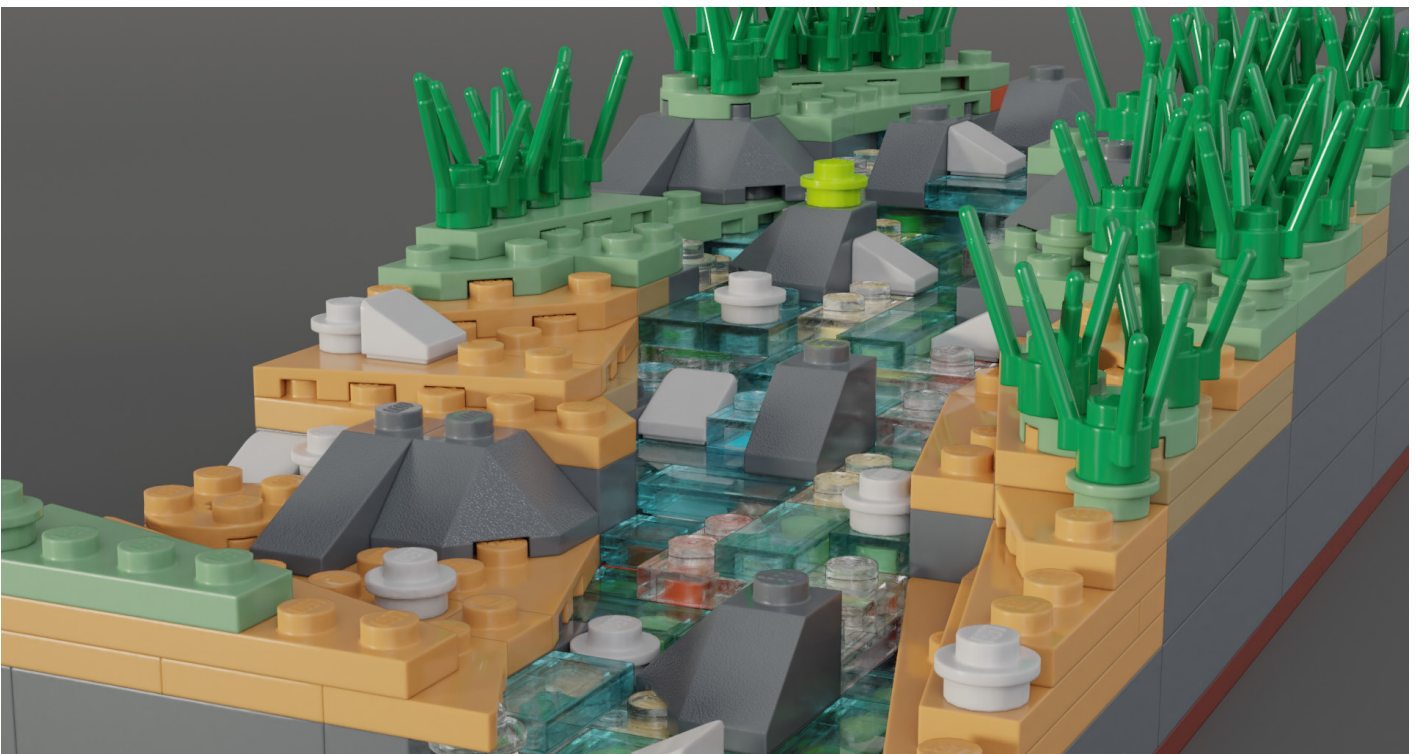
The sideways building technique is also useful when building rivers. Placing the plates parallel to the flow of the water, you can create little "streaks" to achieve the flowing effect. In the image above, I used white and transparent for the streaks, but you can experiment with other colors.



This method, as seen before, is also very useful to fill up rivers quickly and easily. Although if you want to achieve some gradients, you would have to carefully place the studs by their color. For rivers, you could use a mixture of blue and white, or you could go for pure transparent white.



**Note:** Not all rivers have to be rapidly flowing. There are many instances where rivers are still and gently flowing. In such cases, using basic building techniques are good enough.

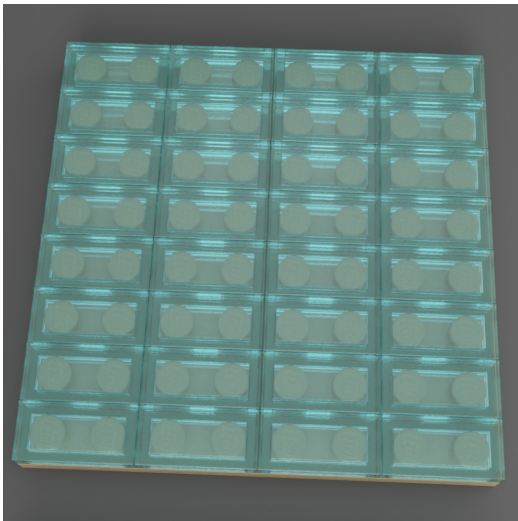


Rivers are dependant on the landscape that holds them. If the land is filled with rocks and slopes downwards, the river will follow along as it collides with the

rocks and flows downstream. So when building a river, it is important to plan out the landscape first before you add the water.



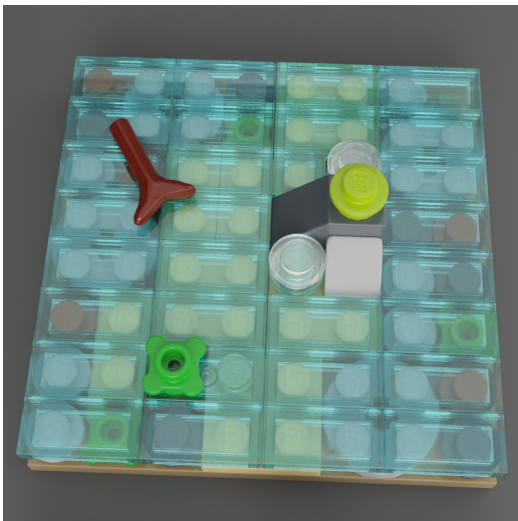
## Decorating a River



### No Decorations

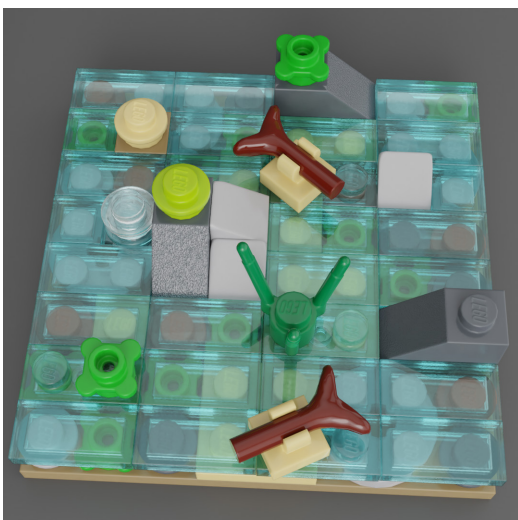
Without any rocks, leaves, or debris, a river can look pretty plain and uninteresting.

But still, it is sometimes best to leave an area empty as to not distract the focal point of the scene to somewhere unnecessary.



### With Decorations

The image to the left shows some added decorations both above and beneath the water. These decorations should try to be random and not placed in an even row because nature is always random. When using transparent tiles, you also have the opportunity to add some rocks, dirt and plants beneath the water.



### Overdone

Placing too many of these nature elements can be done to no good effect too. Unless you are building the end of a river where the debris and rocks collect together, you would always want to keep the decorations simple and just enough to add some visual interests.



## Waterfalls

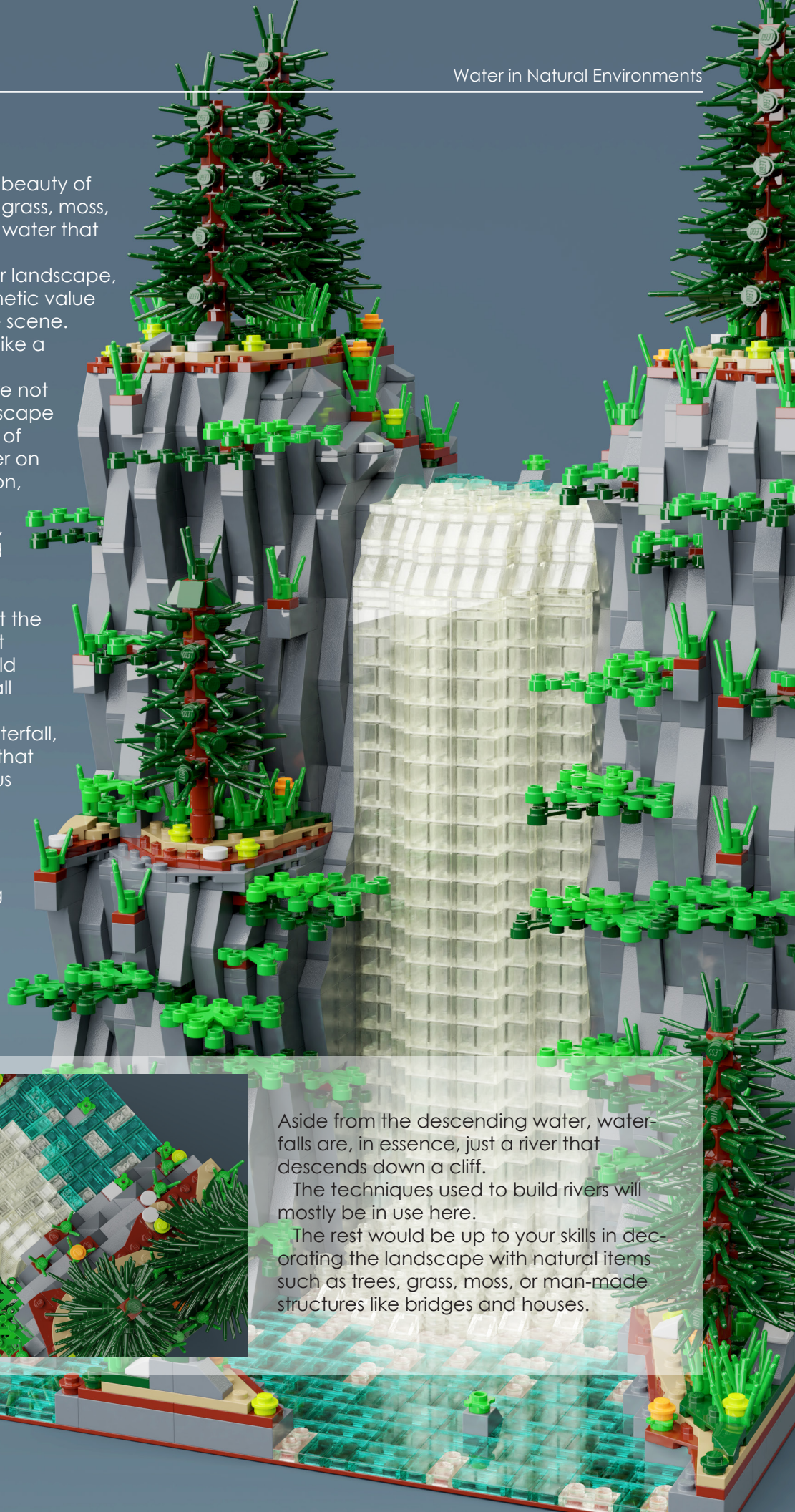
Waterfalls are a truly remarkable beauty of nature. The towering hill of rocks, grass, moss, trees, and the majestic torrent of water that gushes down.

When built as part of a scene or landscape, it can certainly add a lot of aesthetic value and a strong visual impact to the scene. There is nothing else that is quite like a waterfall.

But (good looking) waterfalls are not a simple task to create. The landscape itself would take a good amount of skill and design to build. The water on the other hand, is always in motion, and is very fluid and alive. With the blocky nature of LEGO bricks, achieving the same effect would be really difficult.

Still, there are plenty of tricks, and building techniques to cheat the looks of a waterfall using different sorts of bricks. The end result would still look like a convincing waterfall that still looks amazing.

Especially when it comes to waterfall, accuracy to the real thing is not that big of a deal. LEGO bricks gives us the opportunity to be creative with it's parts and bend the rules as we like it. As long as you stick to a few tips, you can create any waterfalls that looks amazing and recognizable no matter what parts you use.



Aside from the descending water, waterfalls are, in essence, just a river that descends down a cliff.

The techniques used to build rivers will mostly be in use here.

The rest would be up to your skills in decorating the landscape with natural items such as trees, grass, moss, or man-made structures like bridges and houses.



## The Essence of a Waterfall



This is a real life photograph of a waterfall. Aside from the landscape, observe how the water looks like as it pours downwards.

At the point where it falls, the water is no longer blue in color, but it takes on a white milky look due to all the air bubbles formed.

Another thing to take note of is at the point where the waterfall collides with the water below, there is a radius where the water is also a milky white. Because of the impact.

The amount of detail a real waterfall contains cannot be fully achieved using LEGO bricks, unless you build an absolutely massive one. So don't stress yourself out trying to build all of the little details.

Here is a LEGO version of a waterfall. You can see that the water greatly benefits from the transparent white bricks because it has that milky white look that is just like the real thing.

In a real waterfall, there are some lighter parts and some darker parts. Transparent bricks also has thicker parts around the edges and lighter parts in the center, and this unintentionally creates the effect.

This build of the waterfall is fairly small in scale and isn't that tall, so the part where the waterfall collides with the water surface would have a small radius. So if you are going to build a bigger and taller waterfall, the impact radius has to be bigger relative to the size of the waterfall.



## Methods of Building Waterfalls



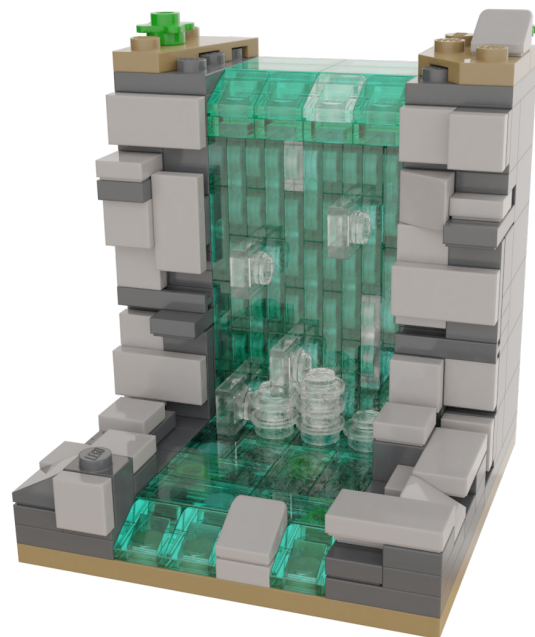
This method of building a waterfall requires a specific piece to achieve. It is a panel element that curves downwards. It is useful for creating a clean descending water. Although the size of your scene would be limited to the size of the panel.



You can stack studs, bricks, or plates together to simply form a waterfall. It doesn't require a lot of fiddling, and is very effective in showing that it's a waterfall.



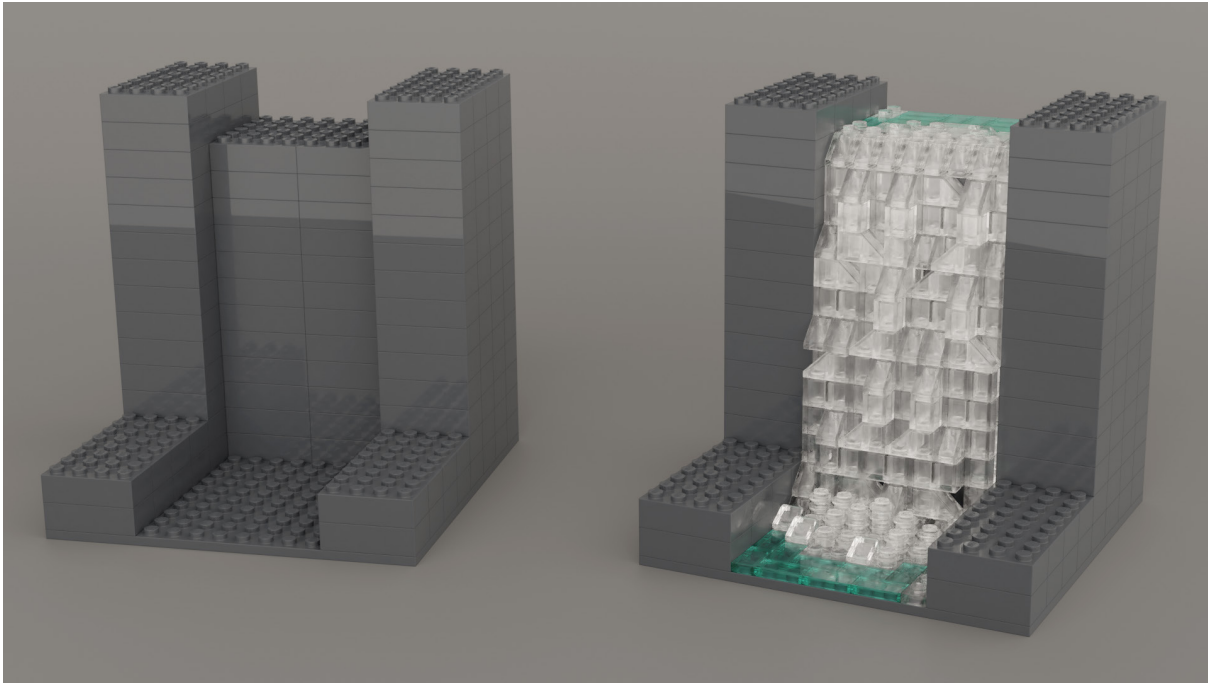
Placing parts frontways gives the opportunity to have some small pieces stick out of the waterfall to break up the uniformity and make it more natural.



The basic technique of placing bricks sideways is also useful for waterfalls. Much like rivers, the streaks of white helps a lot in portraying motion.

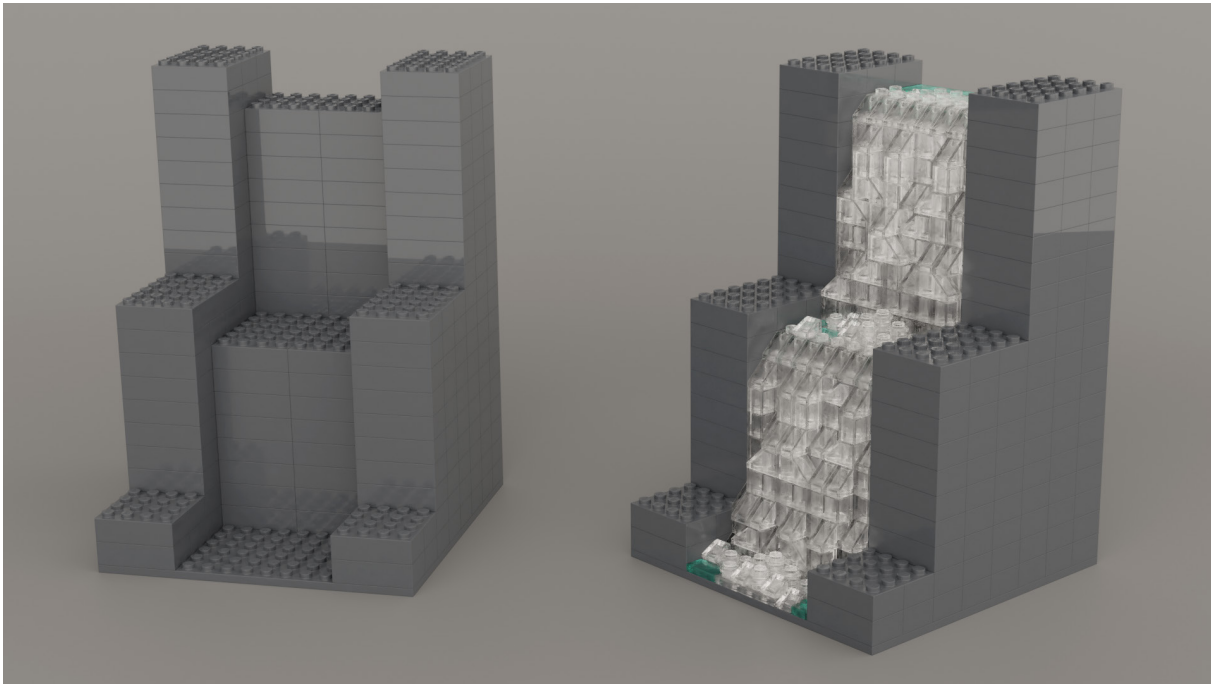


## Landscape



The structure of a waterfall is really simple if you take away all the grass, rocks, and trees. The boxy looking build you see in the image is the most basic shape

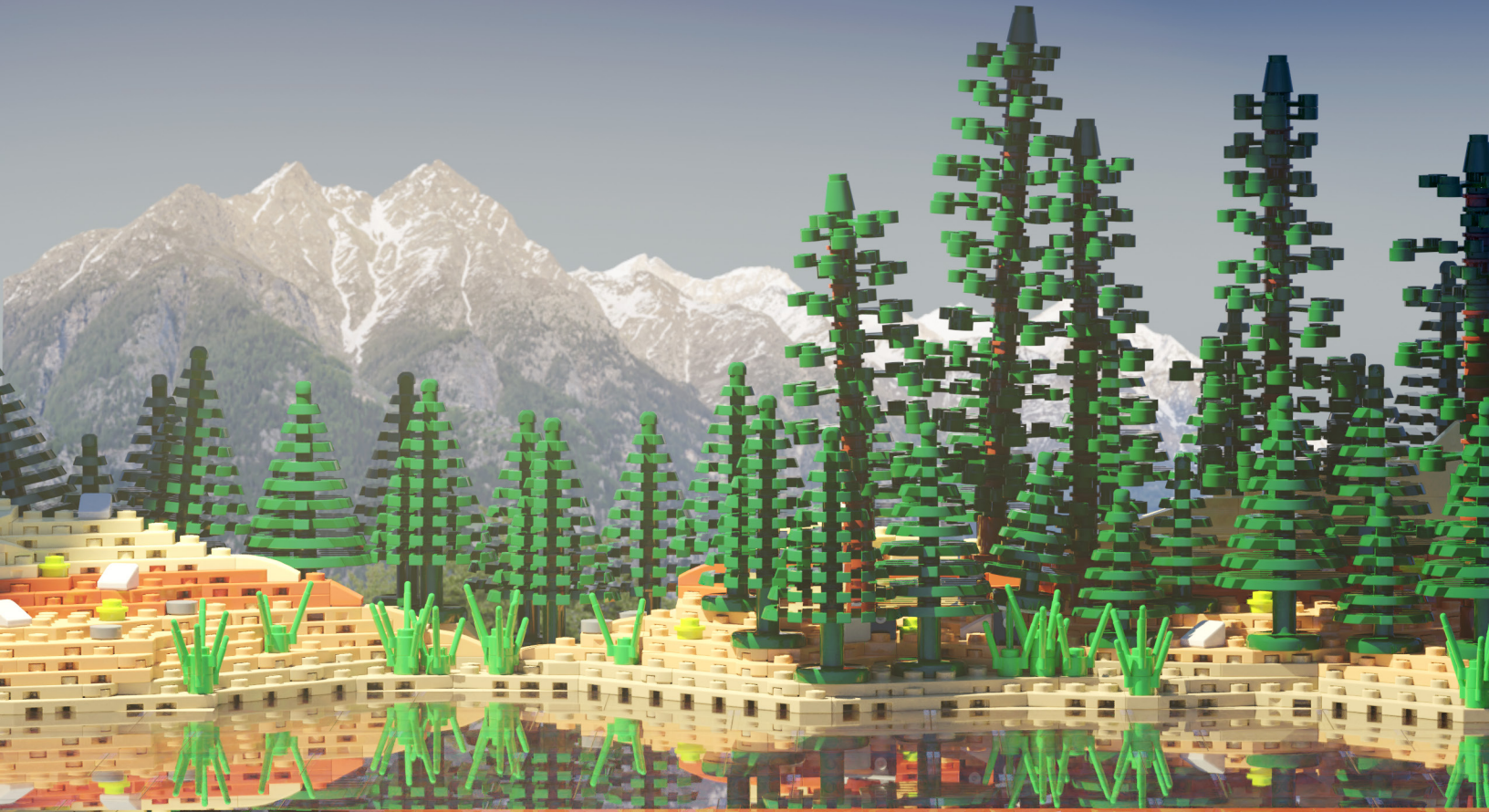
of the landscape. It almosts look like a chair, except with the indentations to hold the water. The water itself, in it's basic shape, is just a rectangle.



When thinking in terms of basic shapes, it is really easy to create some interesting landscapes, like the double waterfall above. Double waterfalls aren't

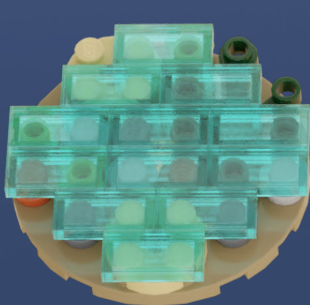
a common thing in nature. But what's stopping you from creating a triple or quadruple waterfall! As long as you think in basic shapes, it becomes a lot easier!

## Lakes/Ponds



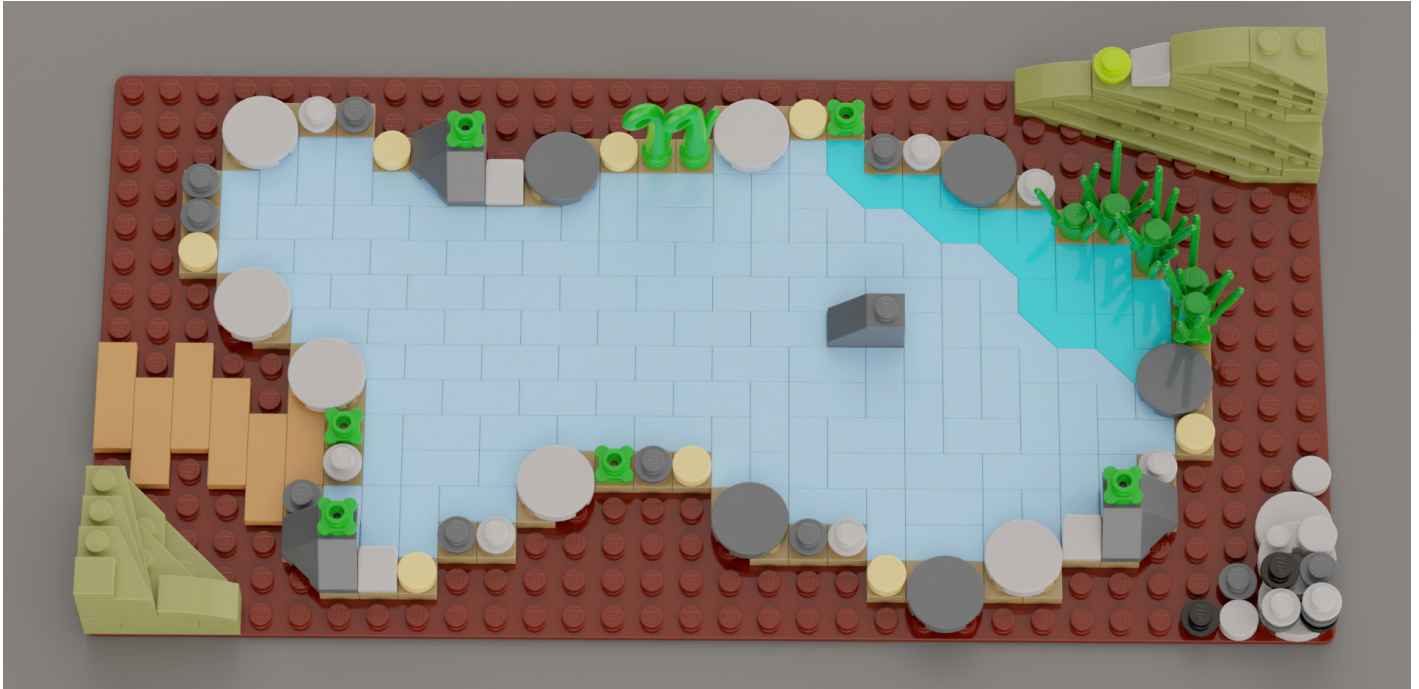
Lakes or ponds, and especially lakes are heavily reliant on their environment to look good. The water is especially calm unlike rivers. In the photograph above, many large transparent panels, placed side-ways, were used. With the help of specific camera angles and lighting, I was able to achieve the

nice reflections from the environment and to minimize the seams from between the panels. But if you do not intend to create a lake for a photograph you wouldn't need to worry about the reflections and just use simple techniques to build the water and a good landscape around it.



The basic techniques that were covered in the beginning of the book is more than enough to build lakes or ponds. The transparent light blue tiles is one of the best choices especially for lakes. The balance of reflectivity and transparency allows for more details above and underneath the water.





Lakes and ponds are just as good as their landscape allows them to be. The landscape can range from simple to complex. For simple scenes like the one in the image above, I used a bunch of circle tiles and studs and placed it around the edges of the water because they looked like pebbles, along with some plants. It's an easy way to create a pond and the round tiles help to smooth out the jagged edges.

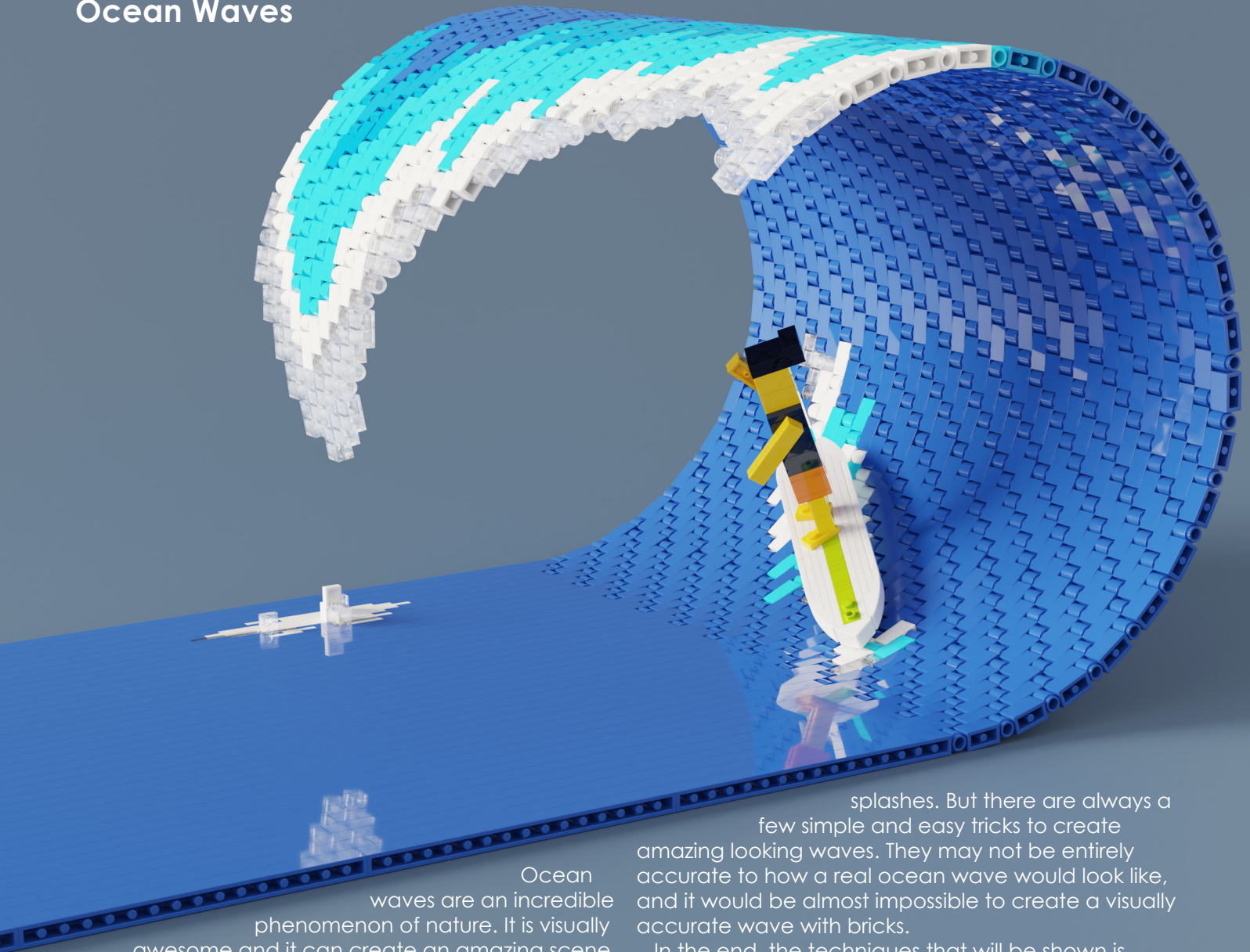
For more complex landscapes, you can resort to using angled plates to create the edges of the lake or pond. It is much more useful for bigger environments and there is no jagged edges.

When building the landscape, layering the plates and tiles properly is important if you want to avoid any weird edges sticking out. This would be a little more challenging if you want to build your landscape with a lot of hills and bumps.

Also, you can place some plants on top of the water itself, like cattails or bullrushes. If you place them in a tight bunch, it act as a nice decoration to the water surface.



## Ocean Waves



Ocean waves are an incredible phenomenon of nature. It is visually awesome and it can create an amazing scene. But they can be quite tricky to pull off, maybe more-so than waterfalls. There are many things to get right when building ocean waves. The shape and angle of the curve, the gradients, the techniques, and the

splashes. But there are always a few simple and easy tricks to create amazing looking waves. They may not be entirely accurate to how a real ocean wave would look like, and it would be almost impossible to create a visually accurate wave with bricks.

In the end, the techniques that will be shown is more than enough to create great looking waves for any scene you like!



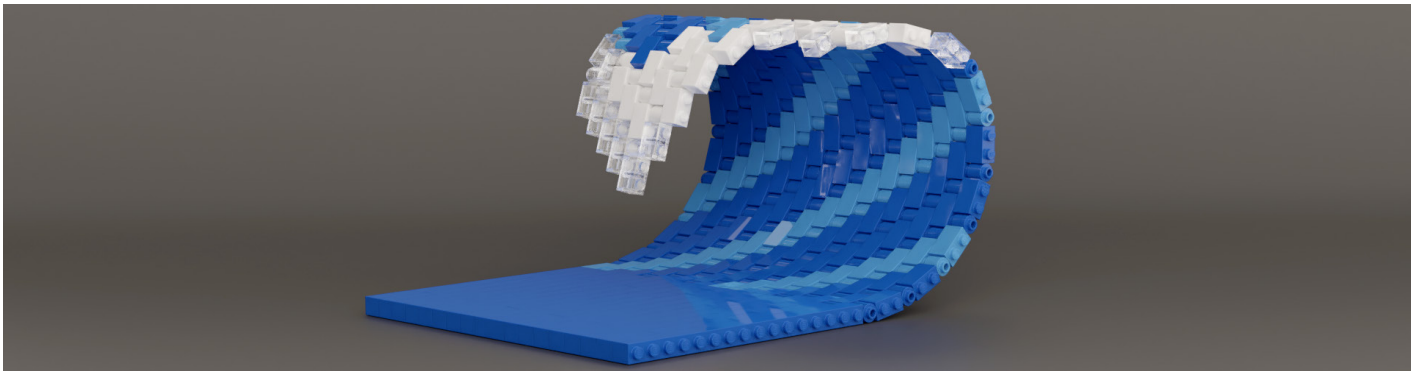
### Realistic Waves

As you can see in the image to the left, a realistic looking ocean wave has an incredible amount of detail, color and shape that cannot normally be achieved with LEGO bricks.

Only a massive 10,000+ parts sculpture would come close to replicating the essence of a real ocean wave.



## Curved Ocean Wave

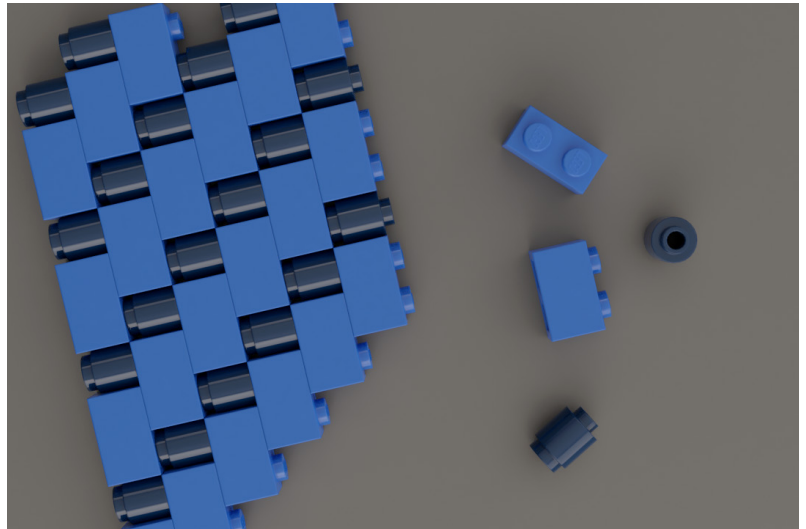


This technique of building a wave uses many small bricks placed in a way that it can bend and curve. Because there is many small elements, it enables you to achieve some fine coloring and gradients. There is also plenty of space inside the wave to add one or two surfers. But due to the nature of the building technique, it is a little tricky if you want to integrate more elements into the wave itself.

The building technique itself consists of two bricks. A 1x2 brick and a 1x1 cylinder. By placing them in a diagonal row as shown in the image, they remain connected and is able to curve because of the cylinders.

This type of connection isn't very sturdy, so you would have to add some support or simply make the wave bigger to increase the friction from the added bricks.

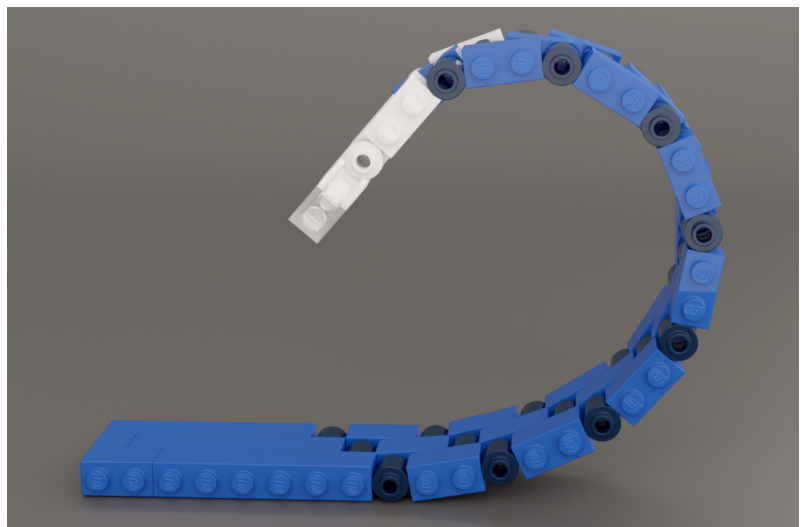
A helpful tip to always get the pattern of the bricks right so that it curves properly, is to never have two 1x2 brick placed right beside each other. There must always be a cylinder in between the 1x2 bricks.



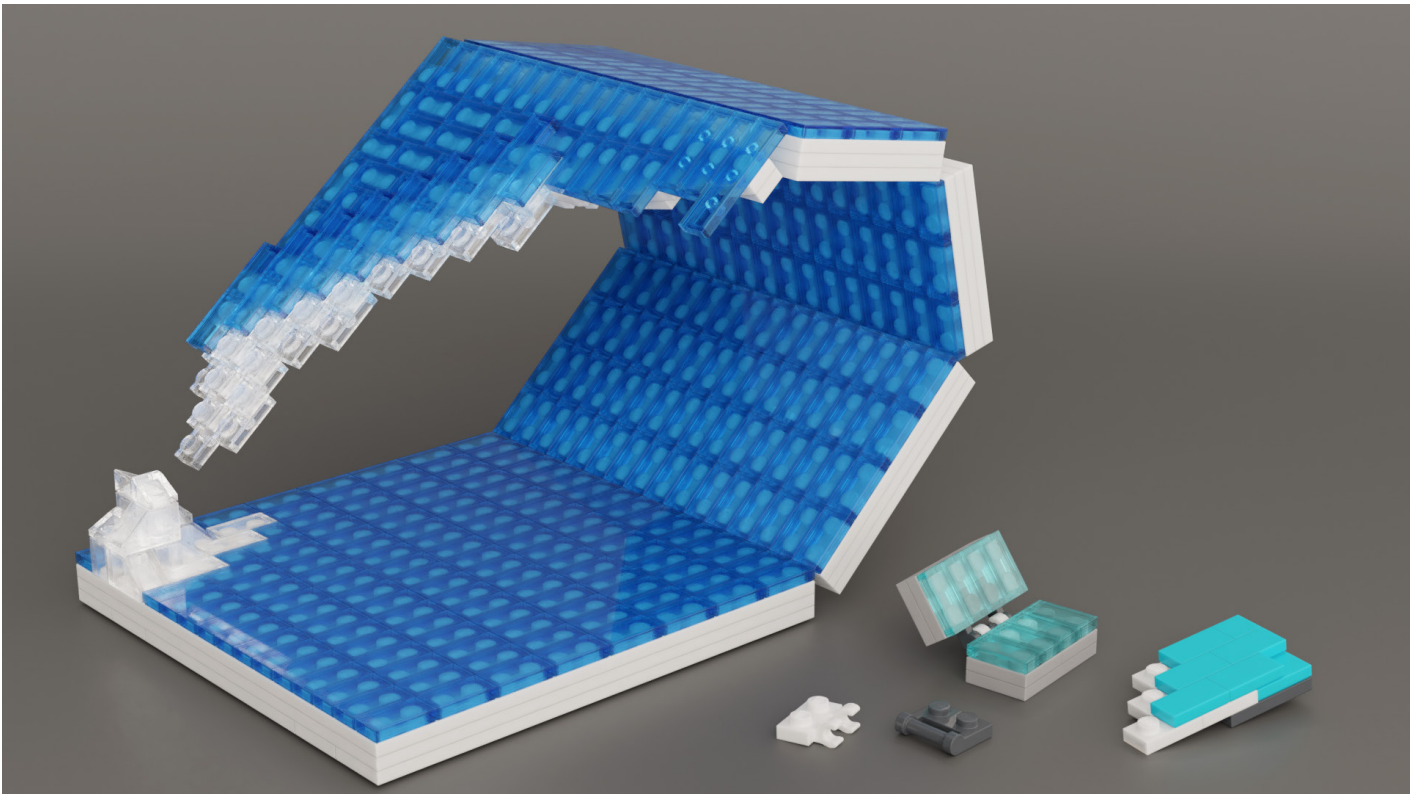
Once you got your row of bricks built, you can simply curve it however you like.

If you want to achieve more complex curves, like a wavy curve, or something really weird, you would need a lot more bricks to make it big enough to accommodate the extra curving.

But aside from that, once you have curved it to however you like it, you have successfully created a wave! With this technique, it is pretty easy. But it requires a lot of taking apart to fit in some extra colors and getting the colors to look right.



## Landscape



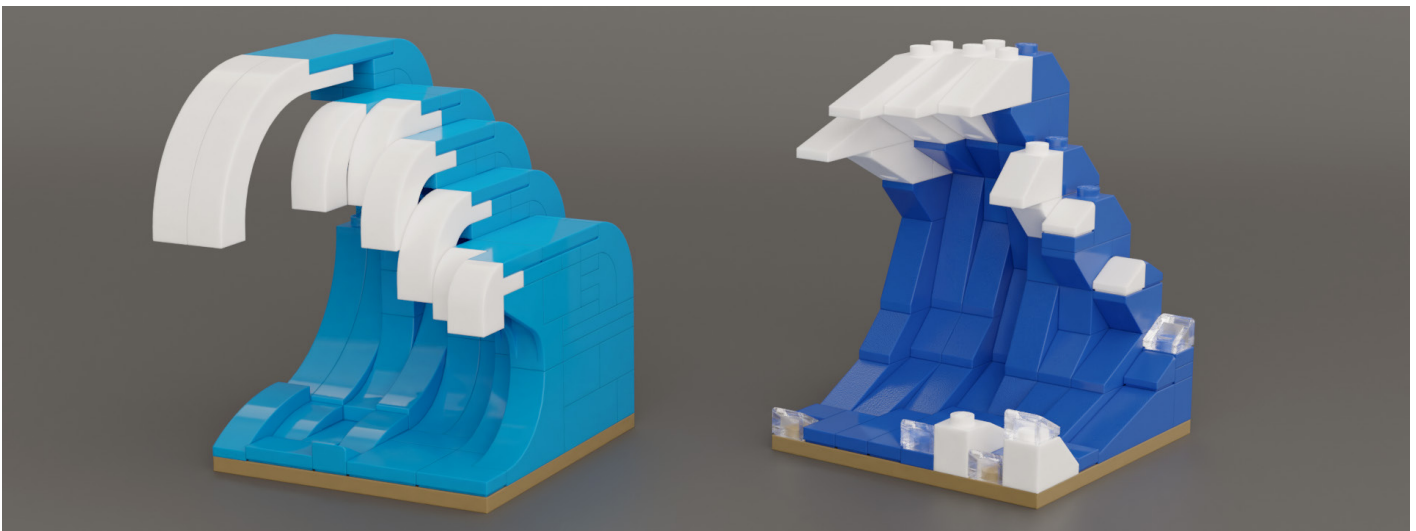
Another fairly simple method is to use a bunch of large plates and attach them together using clips and angle to segments to form the wave shape.

This method gives you the opportunity to use transparent tiles and it is easily modifiable since the studs are always facing outwards.

This method doesn't produce a very rounded curve

But if you don't mind that, this might be a better alternative.

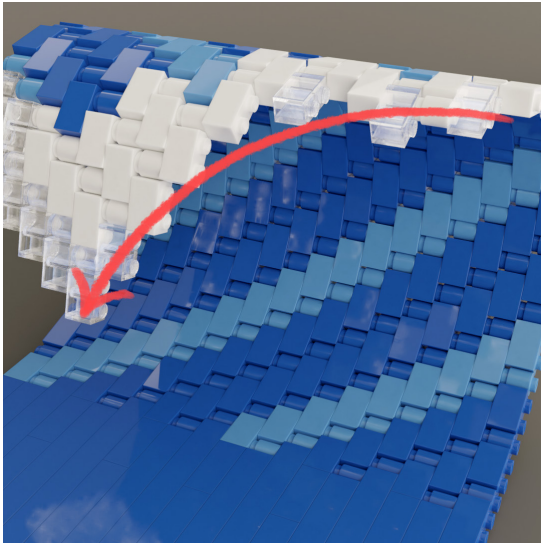
One thing to make sure that there are no gaps in between the segments, is to experiment with the thickness of each segment so that when you bend it, it will properly conceal the clips and bars and you will get a seamless transition from one segment to the other.



Here are a couple more methods of building waves using sloped and curved bricks. Nothing difficult ;)



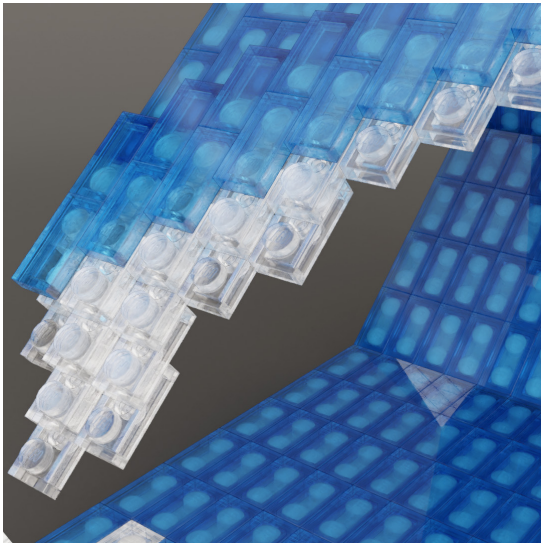
## Tips and Techniques



### Arc

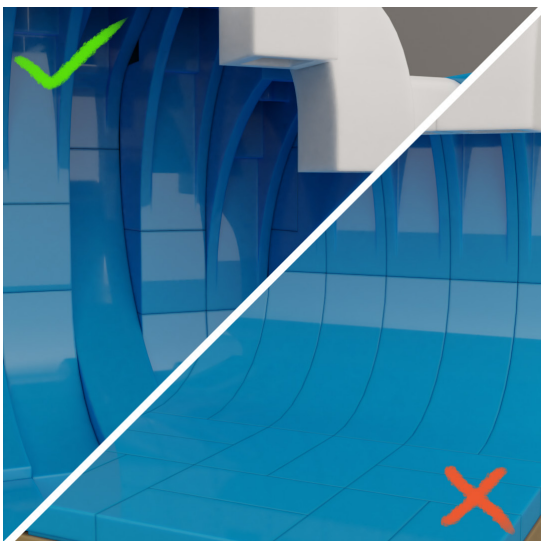
At the edges, or the tip of the wave, it is never a smooth and straight edge. There will be an arc or a curve that leads right to a point where it will splash down on the water first. Having an arc at the edges of the wave helps make it look a lot more dynamic and cooler as well.

If you're confused as to what this "arc" is, you can take a look at some of the waves that I have built in the past few pages and you can see the same arc applied to all of them.



### Transparent Edges

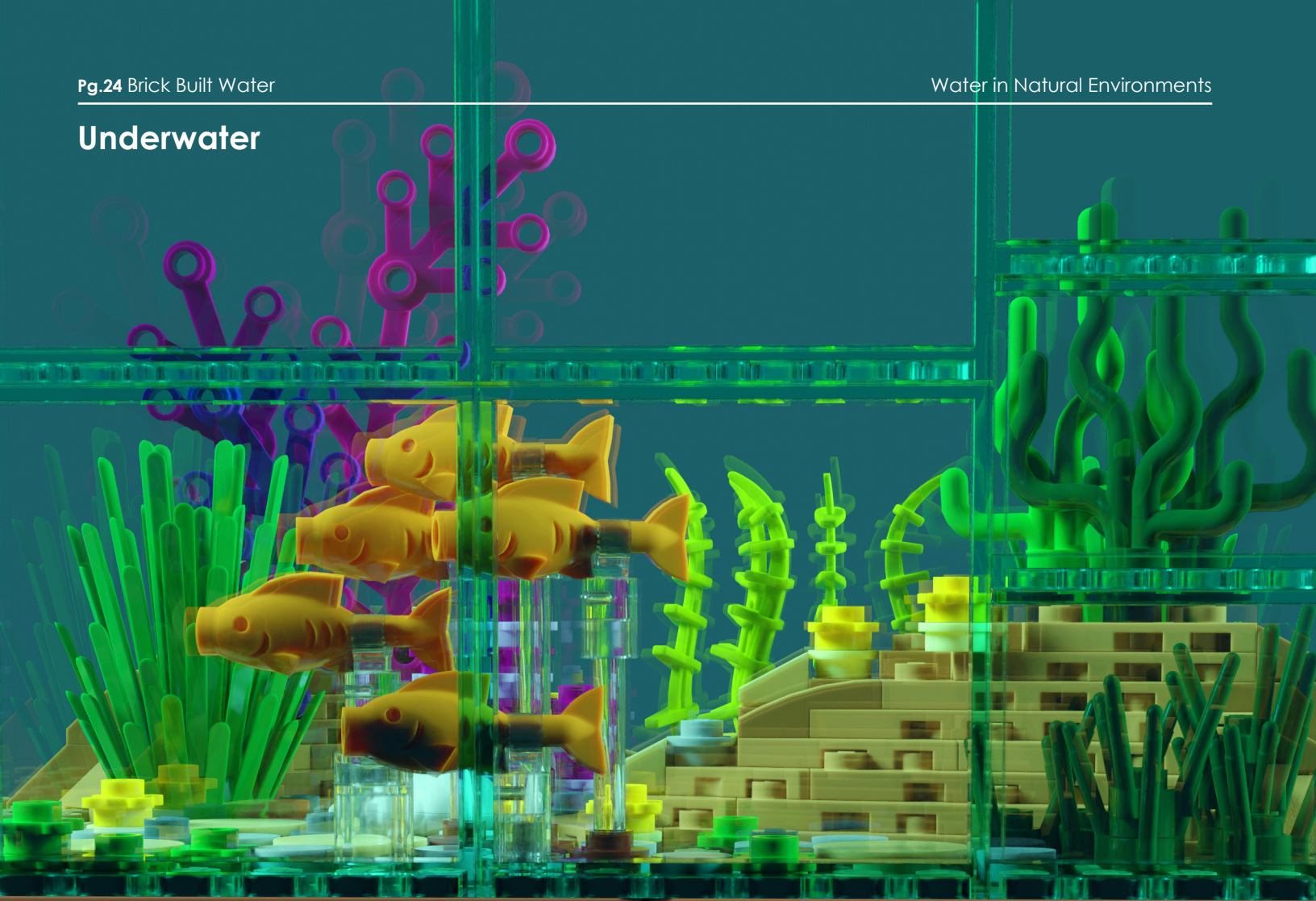
When water is moving very quickly with force, it will always appear milky white or translucent, just like a waterfall. But in the case of ocean waves, the edges, or more prominently at the tip of the wave will take on a translucent white color where it collides with the water. This happens because the tip of the wave splashes forward thus creating lots of water drops and air bubbles.



### Non Symmetry

Waves are almost always not symmetric in it's shape. So if you are building the ocean waves using curved or sloped bricks, it is always best to line them up unevenly with height and curve differences. The verticle lines caused by the uneven placement of bricks further helps to emphasize the rising motion of the waves.

## Underwater



Water on the surface is one thing, but underwater scenes are really cool too! There is a whole new realm of colorful landscapes and ocean life that can be built underwater.



Even though it's underwater, most of the construction would be for the landscape and plant life but not really for the water itself.

Creating a good looking underwater landscape is essential before topping it off with the "water" part of it. The water itself uses fairly basic techniques and isn't hard to build. So the main challenge will be on the landscape, which we won't really touch on, but there are plenty of inspiration for the landscape in the example images!

### Transparent Panel

In the example image above, the underwater effect is created by a wall of transparent light blue panels placed in front of the underwater landscape.





This simple underwater landscape is the basic requirement for any underwater scene no matter the technique!

Building the landscape is pretty easy. Fill it with plants, corals, rocks fishes, and make it really colorful! A funny thing with underwater decorations is that you can overdo it as much as you like. The more you cram it with plants, fishes, and corals the better it is.

Not everything has to make sense underwater too. Looking at the image on the side, I wouldn't know what those purple things are. They don't really look like corals, but I thought they fit the scene well. Feel free to add whatever you like in your underwater scenes.

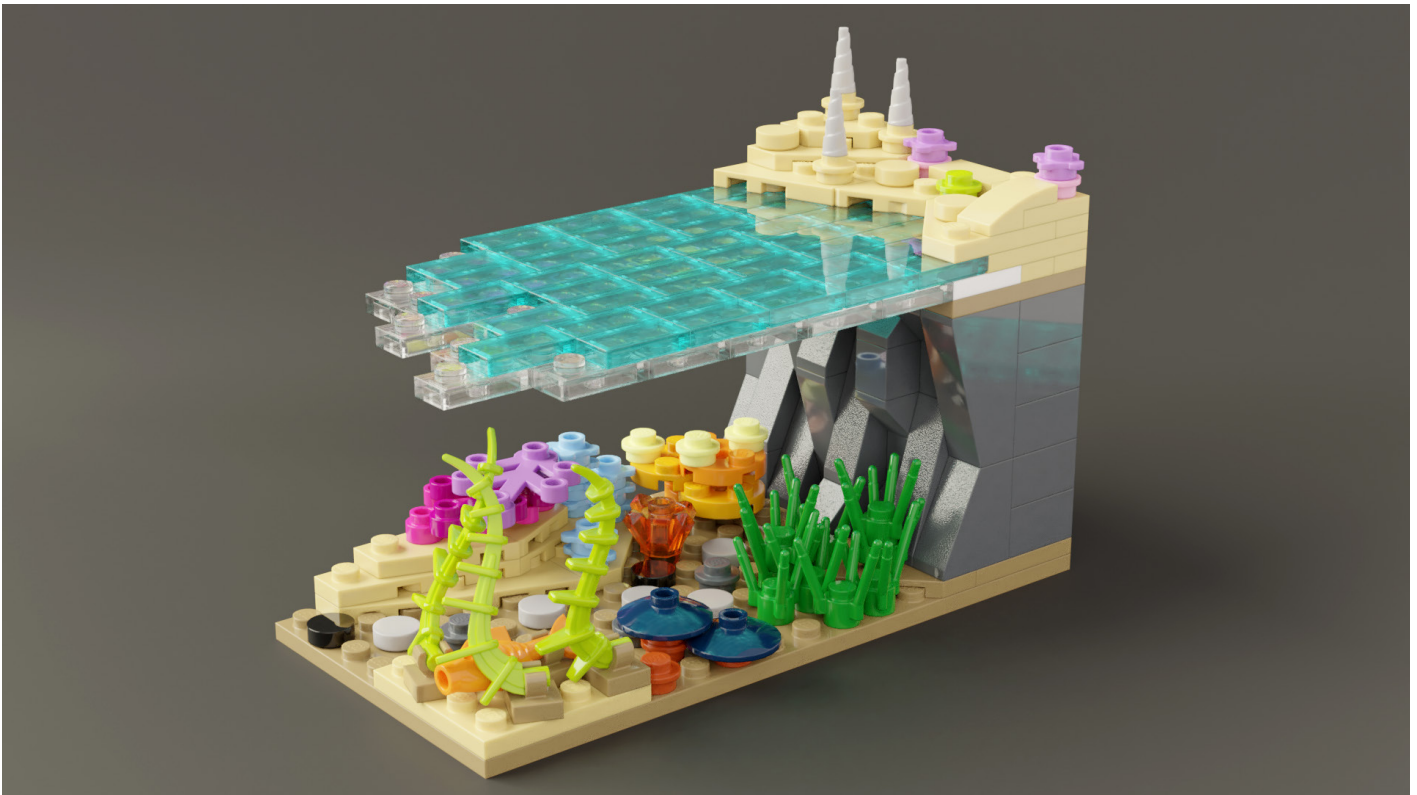


To create the "underwater" effect, there are many things you can use, even non LEGO items. Such as lighting your scene with blue light. This would be especially helpful if you have a large diorama that you don't want to move around and you want to be able to see the landscape without any transparent panels blocking the view.



Using transparent panels would be helpful for smaller scenes. In a manner, it does look like a glass panel and make it look like an aquarium. Due to not being available in a lot of sizes and shape, you would have seams in between which may not look nice. You can simply use an actual blue glass box instead of using the panels.

## Water Blanket



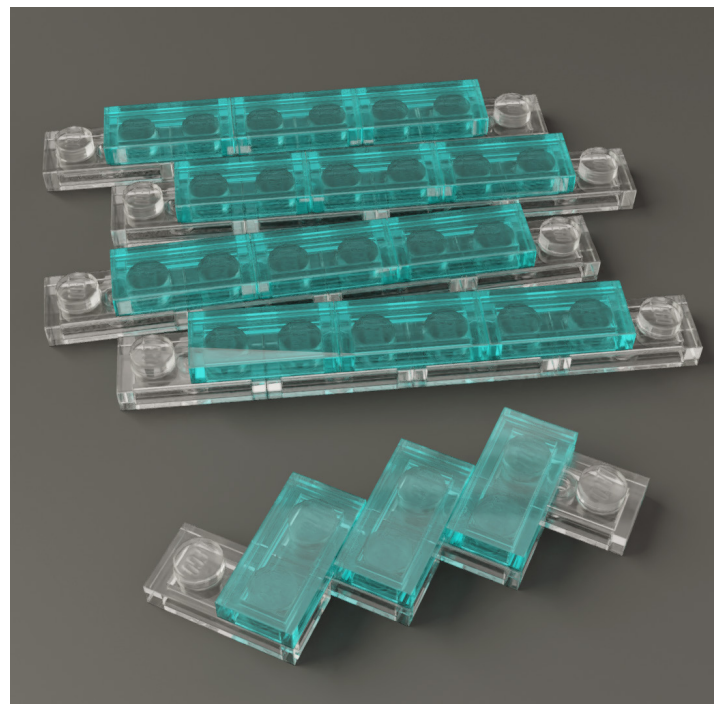
This water blanket technique allows you to combine the surface landscape with the underwater landscape smoothly. The underwater landscape remains the same but with the addition that it needs a hill or

a cliff to contact the surface land where you can place the water blanket over. The image above is a simple example, but you can take it to more extreme levels with full underwater and surface landscape.

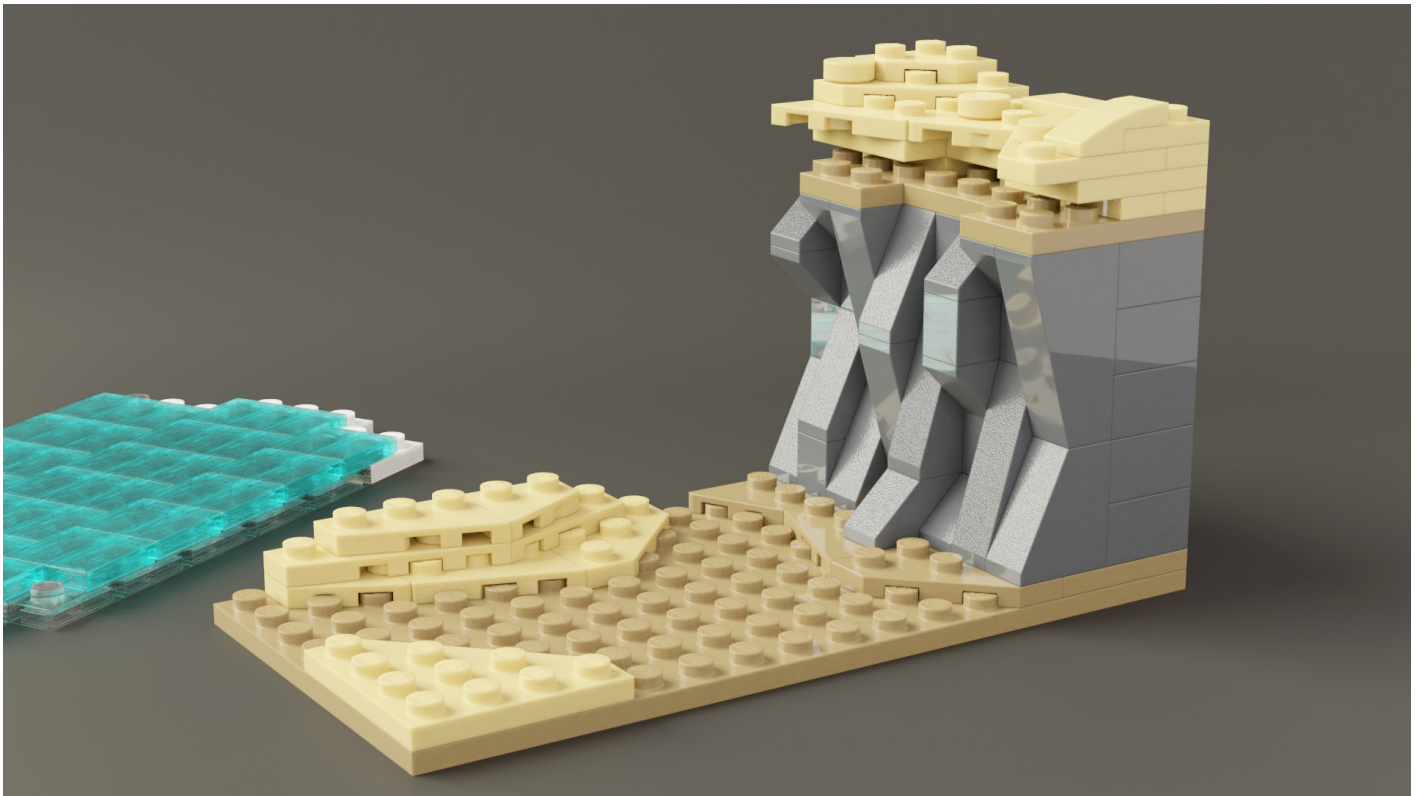
The technique for the water blanket is very simple. It only consists of two types of pieces, a 1x2 (or sometimes a 1x1) transparent blue (or any color you chose) tile and a 1x2 transparent white plate, and layering them that they connect to each other (as shown in the image).

But because every plate is only attached by one stud on each tile, it is not a solid connections and can easily fall apart.

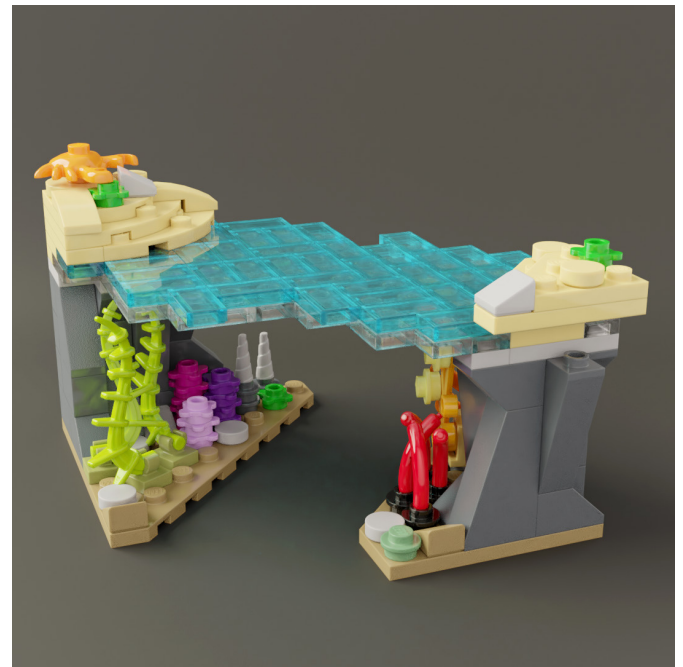
This technique is quite versatile for building many different types of shapes to fit onto any kinds of landscape.







Here are some examples of using the water blanket technique for landscapes of different shapes and sizes. The landscape, without the water and the decorations, is just a hill, and it can be easily built into any shape using the same types of parts.



The water blanket can be formed into a circle, a diagonal shape connecting separate pieces of land, and a lot more!

But if you're creating a really big water blanket, you may need several rock pillars or hills to support the extra size.

## Geysers/Splashes

Geysers! Yet another phenomenon of nature. A tower of scalding water splashing all over, with jets of steam. It also resembles a splash of water, in a way. So the techniques used to create geysers can easily be used for any kinds of water splash effects. But more will be explored when we get to building fountains.

At this point, geysers isn't anything new, considering that we have done waterfalls and waves. Geysers are also water in rapid motion and therefore the same principles apply, such as using transparent white bricks, etc, with the main difference that a geyser erupts upwards, so it would not have the same shape and dynamics as a waterfall would.

As usual, a real geyser has so much detail, that cannot be easily replicated with bricks. Thus I have compiled a few building techniques to "cheat" the look of an actual geyser! Which building techniques to use would be completely up to you and also depending on the scene you are building.



Here is a photograph of a real geyser for reference. As you can see, there is steam coming out of the ground, and the water eruption is so powerful that it almost looks like clouds.

The shape of a geyser resembles an elongated cone, or in some cases, a hot-air balloon.



## Methods of Building Geysers



Here's a familiar technique. Stacked up 1x1 studs! It's a really easy technique for geysers. If you want a bigger geyser, you can use round bricks instead.



You can also stack up these "chi" crystals together to create a geyser. It is not quite as realistic, but the crystals create an interesting pattern.



You can also place plates and tiles sideways to create a geyser. This technique is pretty complex, but if you are good at it, it can be quite useful.



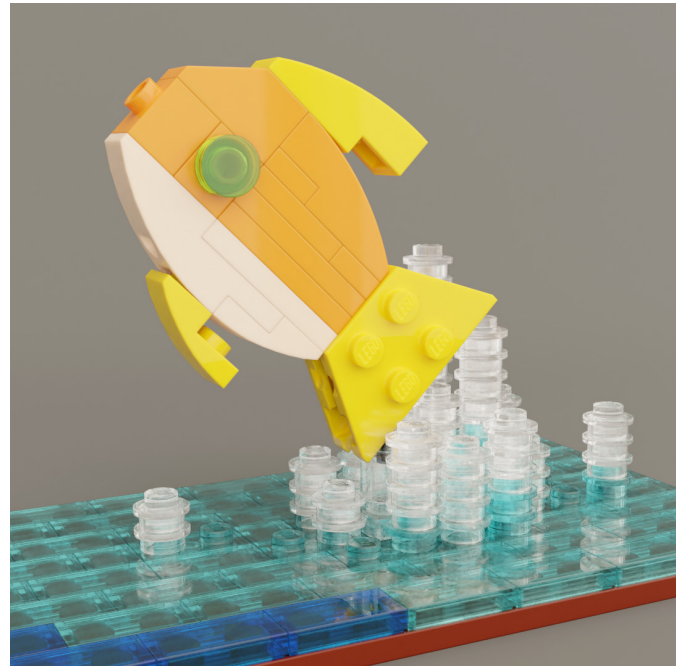
Using larger pieces, such as a 1x2 brick, or a 2x2 sloped brick can be useful to create more random and natural designs.

## Splashes



Here is an example of a splash caused by a burst fire hydrant. Here, I used a combination of regular bricks and sloped bricks along with plates that are connected sideways.

The splash is actually pretty easy to build, and the shape isn't complicated too.



Using the stacked studs technique, you can build some easy splashes like the one in the example above. This technique is better when you have a large object around (in this case, the fish), as the studs don't take up a lot of space, and can be easily adjusted.



### Curved Splashes

An interesting thing that can be done is to slightly curve the stacked bricks. It does take some patience to place each piece at a slight angle, especially for those 1x1 studs.

This little building technique puts an interesting spin to these basic geyser techniques and makes it look a bit more dynamic.

But each brick is like only half connected because it's at a slight angle, it is quite fragile and can be easily knocked off. If it is always falling off, it can be quite cumbersome to fit it back. Caution is advised...



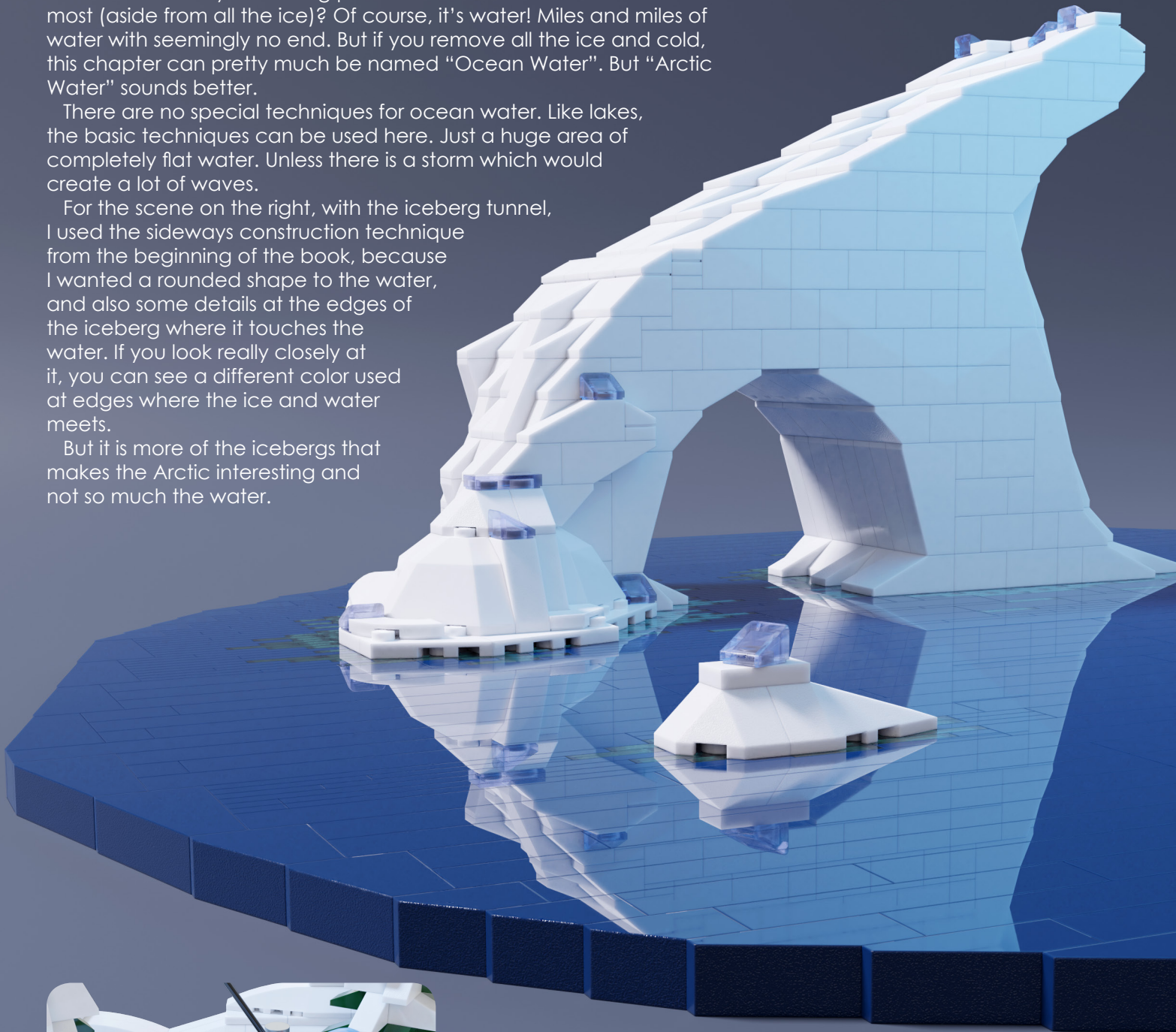
## Arctic Water

The Arctic is a very interesting place too. And what does it have the most (aside from all the ice)? Of course, it's water! Miles and miles of water with seemingly no end. But if you remove all the ice and cold, this chapter can pretty much be named "Ocean Water". But "Arctic Water" sounds better.

There are no special techniques for ocean water. Like lakes, the basic techniques can be used here. Just a huge area of completely flat water. Unless there is a storm which would create a lot of waves.

For the scene on the right, with the iceberg tunnel, I used the sideways construction technique from the beginning of the book, because I wanted a rounded shape to the water, and also some details at the edges of the iceberg where it touches the water. If you look really closely at it, you can see a different color used at edges where the ice and water meets.

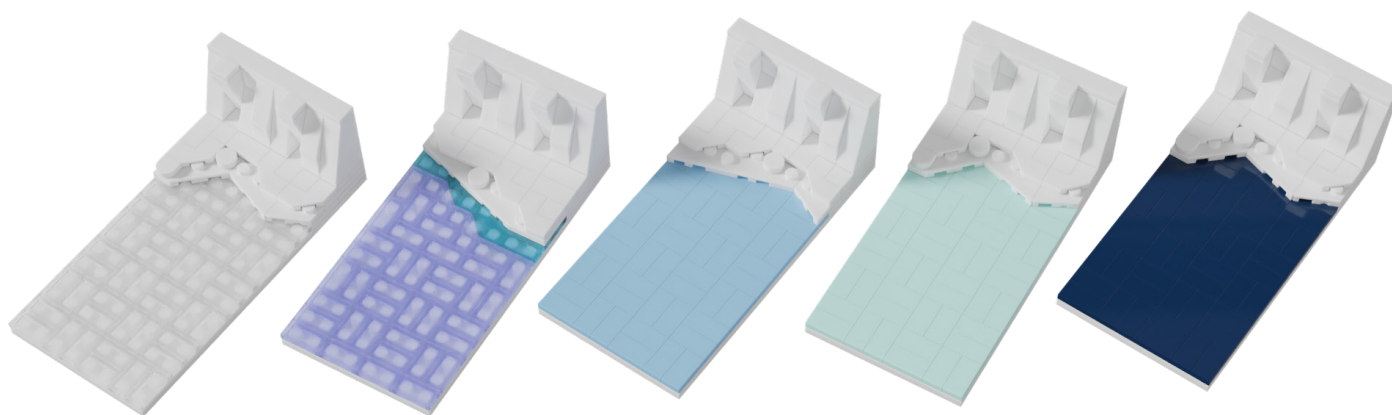
But it is more of the icebergs that makes the Arctic interesting and not so much the water.



There isn't anything too much about building water in the Arctic. Aside from all the icebergs (which is a separate subject), the only thing would be the color of the water, and which ones would fit into the right scenes.

I would still recommend transparent light blue tiles though.

## Color Variations



### Transparent White Tiles

Transparent white tiles create the effect of a completely frozen thick sheet of ice above the water surface.

### Transparent Blue Tiles

While transparent white has a fully frozen look, while transparent blue tiles retains a water look to it, while the transparency creates the frozen effect.

### Light Blue

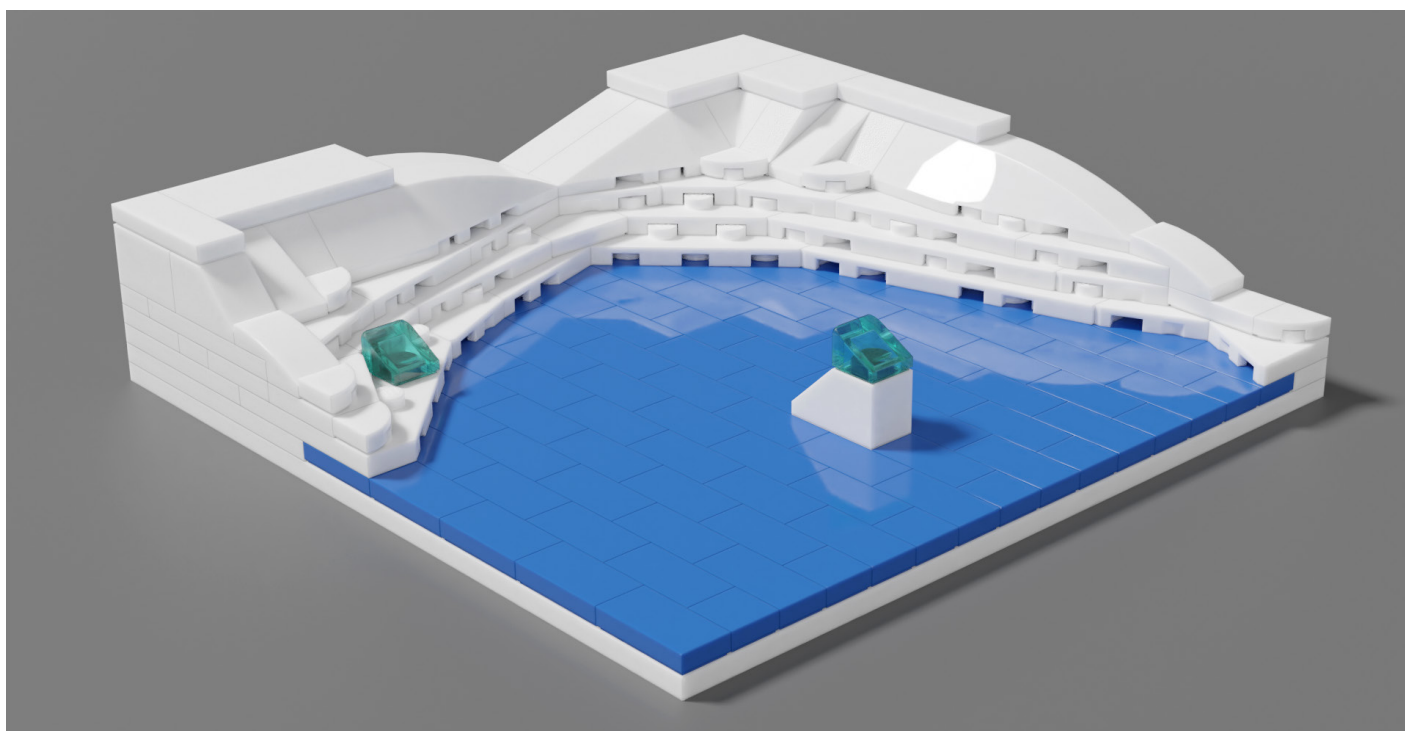
If opaque colors are your choice, you could use a lighter blue for the water. Lighter colors gives a slight frozen effect while still maintaining the icy aesthetic throughout the scene.

### Aqua Blue

You can also use a very pale colored blue such as Aqua if you really want a solid frozen look to the water. The lighter the blue, the more frozen it looks.

### Earth Blue

Darker blue colors gives the water a feeling of depth, and does not look frozen. Considering how deep the water is in the Arctic, dark blue is a fitting choice as it also contrasts all the white.



Bright Blue is an okay choice for water in the arctic, but it is quite bright and saturated, which takes away from the realism of the scene and makes it look a little cartoony. But if that's not a problem, bright blue looks okay and it's also a very common blue color in LEGO bricks.



# Water as a Decor

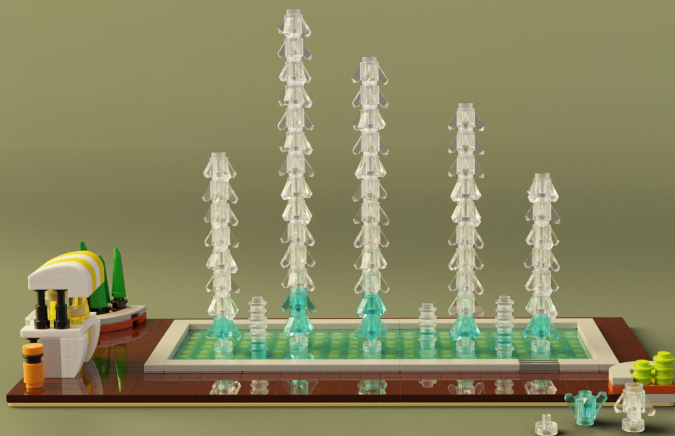
## Fountains



One thing for sure is that water looks good. That's why we use it as a decoration. Fountains are one of the most common and best form of water in it's decorative state. There are so many ways you can present the beauty of water in a fountain.

There countless variations of fountains some ranging from simple to pretty complex with water splashing everywhere.

There isn't any strict rules to building a fountain, you can almost do anything you want with it. The next few pages will show a few basics techniques and methods to get you started in building fountains.



### Modern Fountains

You may have seen these sort of fountains in real life or in a photograph where the water sprays upwards, or otherwise known as a jet fountain.

While it is not the only type of modern fountains, it is a pretty distinct one. It resembles a mini geyser, but it is not as random and has an artistic element to it.

A tip to buiding modern fountains is too keep the build simple and consistent.

## Various kinds of brick built fountains



This is the version of a fountains that most will remember it, with the bowls of water with the water streaming down or spraying upwards.



This is a more fancy version of the classic fountain with water pouring down from the top which adds plenty of aesthetic appeal.



Here's another variation of a classic fountain, but without any bowls. It's a pillar with some decor on the top and some water pouring down the sides.



Another example of a modern fountain with a unique flair.

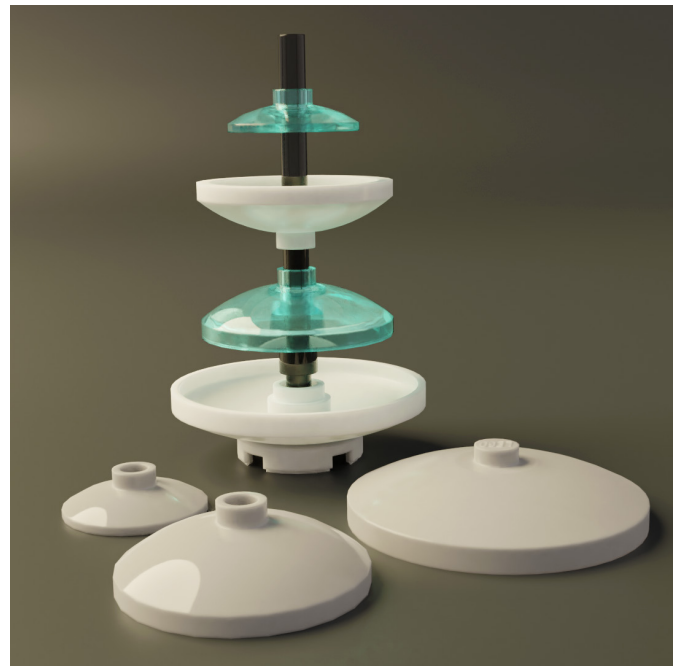




Here is an image that shows the building technique of the green fountain. For this example, I used a 1x1 brick with studs on all four sides (you can also use those that have two studs on it's side only), with several 1x2 plates that have been attached and angled to form a curve.



The spiral effect is pretty straight forward. Use a bunch of 1x2 plates and connect them in an angle until you form a spiral.



For the fountains with the bowls, you can use these "rounded" pieces upside-down and use a stick to attach them all together.



There are plenty of other parts that can be great in creating fountains. The possibilities are almost endless.

As long as you have water moving in a decorative manner, it can be considered a fountain. Whether it's just some water pouring down to a bigger pool of water, or a full blown fountain scene with water splashing everywhere.

There isn't any need to worry about realism that much. When it comes to LEGO bricks, and especially with fountains, as long as you're using transparent pieces, it's gonna look just fine.



I've built three different kinds of fountains here just to demonstrate the possibilities and give you some inspiration! The building techniques used for these are very basic and should be easily discernable. Feel free to build any of the fountains shown above and use them in your creation as you like



## Water Bottles

Another part of water decor would be water bottles. They come in all shapes and sizes, minifigure scale or even large enough to be held by your own hand. Water bottles can be a nice addition to a picnic, in a kitchen, or even just sitting on a table top. They look good, they are easy to build and most of the time doesn't take up that many pieces. It's a nice way to spice up an area of an interior or an outdoor scene.

They look really good in photography as you can see with all the bottles on the side of this page. Building a couple bottles is pretty easy, given that you have the parts, take a good picture of it and done! Something quick and nice that you can show off to others.

Once you learned of the basics on creating water bottles, you can easily customize the design of the bottle to something entirely different and unique. And sometimes there doesn't need to be any water inside of it.



Water bottles, or water containers in general doesn't have to be standalone. They can be used along with other things like a water dispenser for example. From similar techniques, you could build aquariums, water tanks, a bucket of water, or other things that would generally be used to hold water. It's fun to experiment and see what cool stuff you could build from this!

## Small/Minifig Scale Bottles



Building these tiny bottles can't get any easier. Using whatever small and transparent pieces you have around, you could easily create a bottle of water.

Although there exist a piece in LEGO that is shaped as a bottle that is perfectly minifigure scaled. But it lacks any water inside of it, and when you're building it from bricks, you get to pick which color you need for the glass and the water. After all there is always such a thing as big bottles!

Oh and don't forget about the bottle cap/lid/cork as well. It's just as simple as a 1x1 stud. Unless your bottle is open of course.



With transparent bricks, you will be able to see through the inside and it has all these shapes on the inside. In reality it's so that the brick can attach. But you can view them as air bubbles.



Here are some simple bottles that I've built. There is nothing much to it. It uses bricks that we have seen many times throughout this book.



## Large/Scale Model Bottles

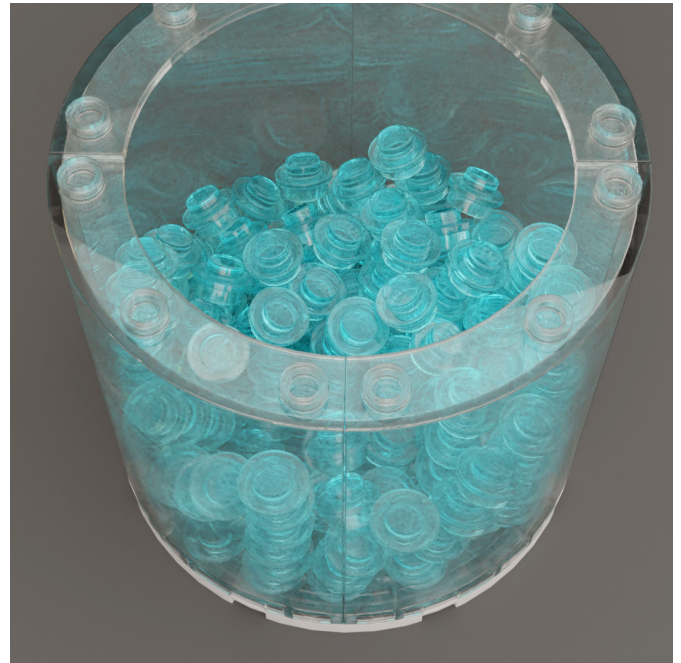


If large bottles is what you're going for, you'll need some of these large transparent panels. They are quite uncommon, but there is always Bricklink. LEGO has also released the *Ideas Ship in a Bottle* set a while back which has a good source for these parts. Or you could just build in a digital software.

One thing to note is that not all of these curved panels match up in their diameter. So you'll need to find the right ones to match up with one another.



The water is really straightforward, as you would have seen a few times by now. Much like building underwater scenes, the transparent blue color is all you need to create the water.



An alternative would be to use transparent light blue 1x1 studs. They have the advantage of being able to remain flat if the bottle is placed sideways, much like how real water would behave.



*The above example is a digitally rendered product, and contains parts in colors that don't exist in real life. Unless you're building in a software such as LEGO Digital Designer, you wouldn't be able to build something like the \*ahem\* Kelp Shake.*

With the basics out of the way, you can experiment with all sorts of bottle designs. Stuff like tupperwares and water tumblers come in all kinds of fancy designs, you can find plenty of inspiration online. The drawback is that these transparent panels don't come in a lot of shapes and colors, that means it wouldn't be easy, if not possible at all to change the color of the water or the bottle.

But as stated above, you can use a digital LEGO building software (there are a few around), you can pretty much use anything in any color. So as long as you know how to render out a nice image of your creation. But that's a separate book.



## Tap Water

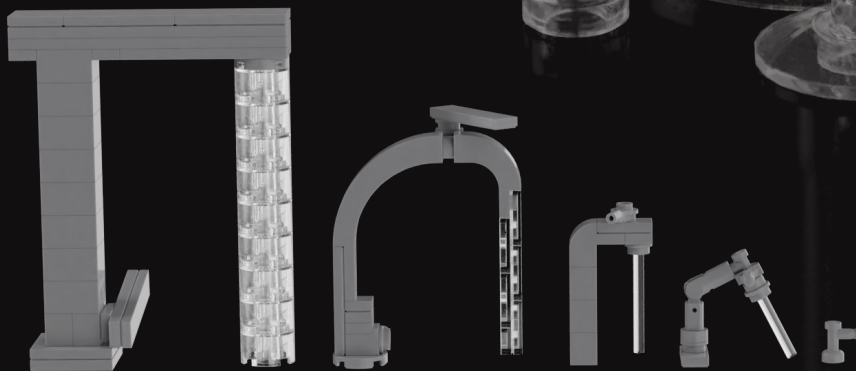
Water flowing out of a faucet may not be the most interesting thing compared to waterfalls, or waves, it can still look really nice especially in large scale model interiors. (Which not many people seem to be building...)

Tap water isn't the hardest thing to build at all. It's really easy. Unlike water in natural environments where it is random and unpredictable, tap water is controlled and predictable, because it just flows out of a cylinder pipe, and the water would in turn just look like a cylinder.

As with most of what we have covered, the real challenge is not with the water but rather with the faucet. Again, depending on the type of scene you may be building, you might want to build a modern simple faucet or a vintage faucet

But that's for another book! We will simply go into some of the simple techniques to build the flowing water!

*This faucet/tap uses LEGO bricks that has a chrome coating applied on it. The water is made with a transparent LEGO antenna piece.*

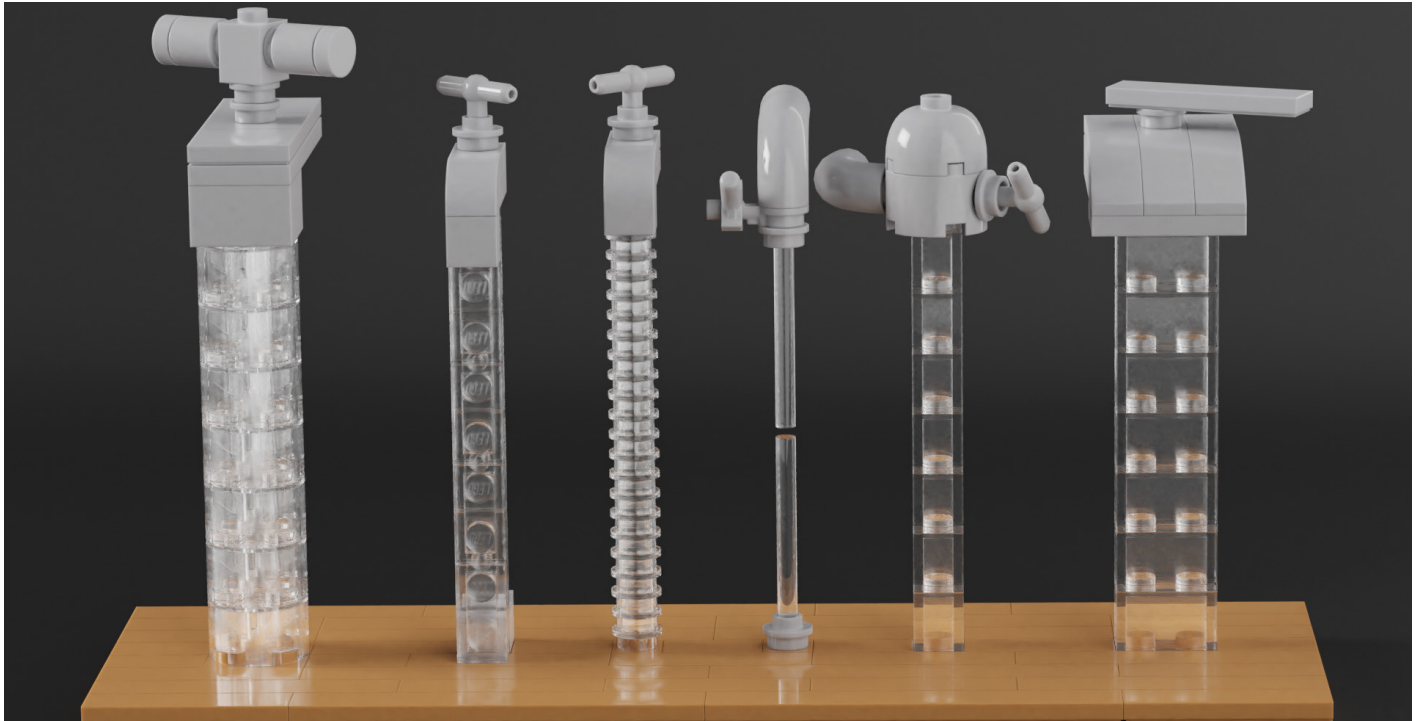


I've created a little example here on the various types of water faucets and their different sizes.

For each of the sizes, a different construction for the flowing water is needed.

Which type and size of water to use would depend on the scene that you're building.

## Methods of Building Tap Water



Here are a bunch of faucets with different types of water flowing out. As you can see the techniques are pretty simple. Round bricks, studs, lightsaber blades, and bricks stacked together to create a stream of water. One thing in particular would be the second faucet, which is built sideways.



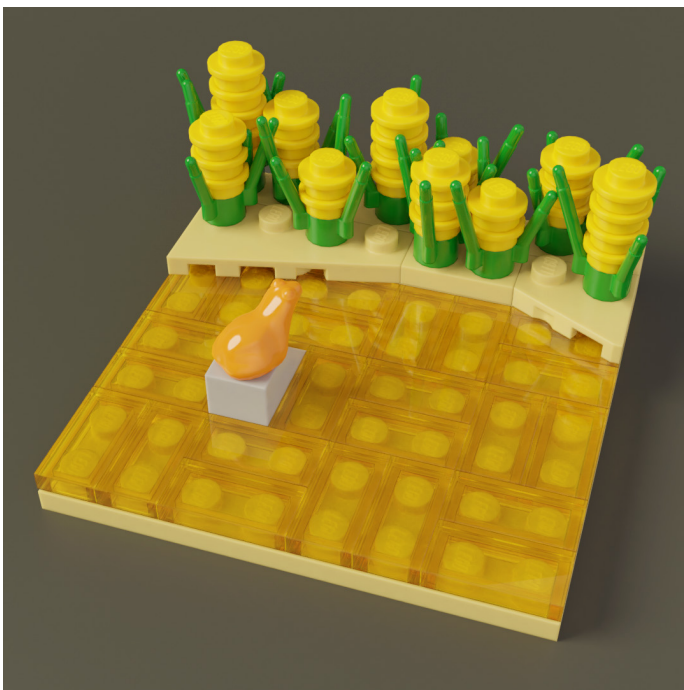
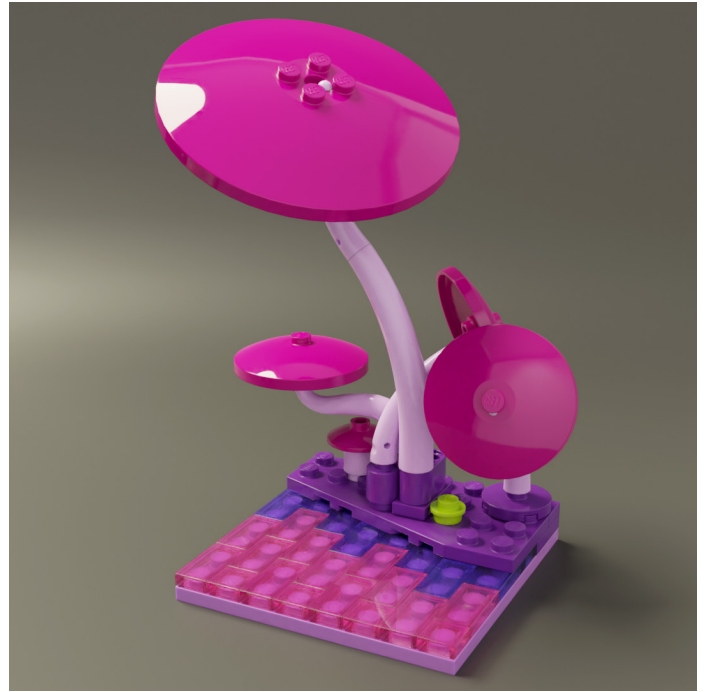
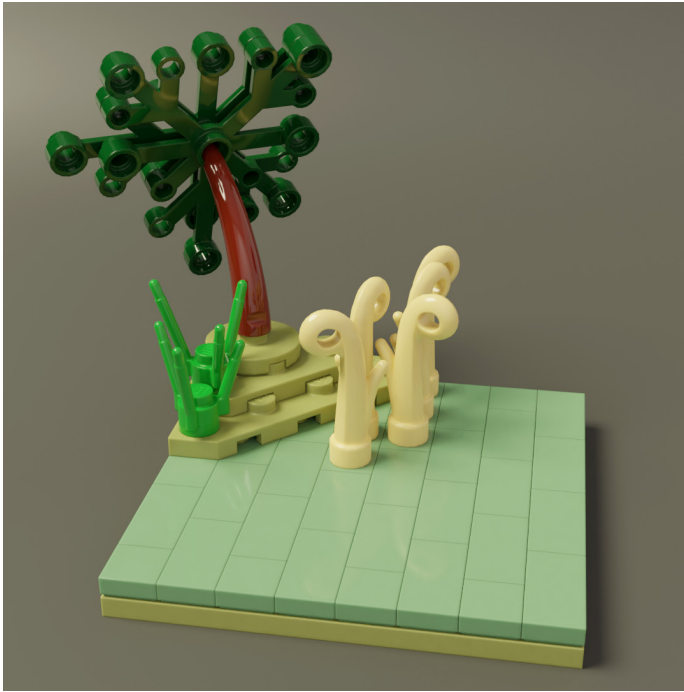
Something similar to taps/faucets would be these showerheads. Aside from the showerhead, the water is just made of studs and round bricks.



For a smaller minifigure scale showerhead, you could use these transparent stalk pieces. Unfortunately this piece in transparent don't exist :(

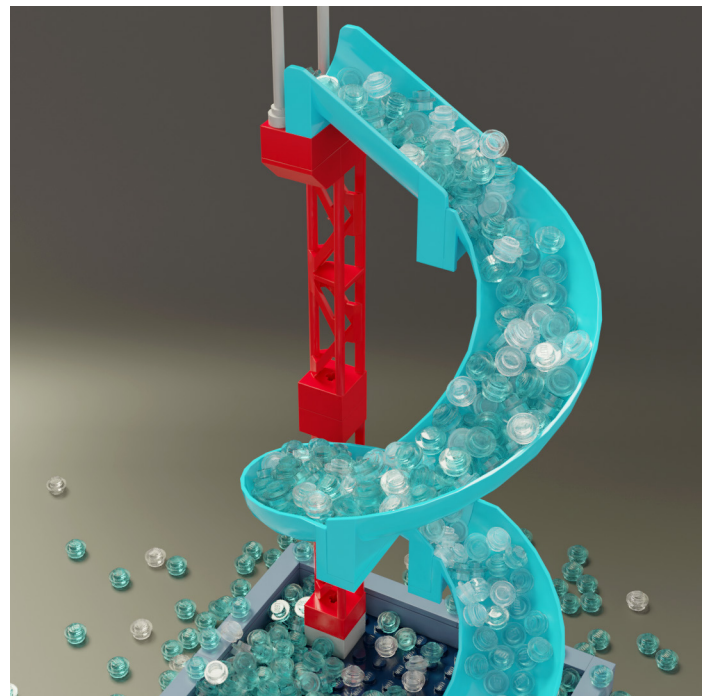


# Miscellaneous



Water does not have to be blue or white. It can be any color you want it to be, opaque or not. As you can see in the examples above, having different colors of water depending on the scene can help solidify the visual theme and most importantly the color scheme.

The water does not always have to be green if the landscape is green. Sometimes you can mix up the colors to create some contrast and “interesting-ness”.



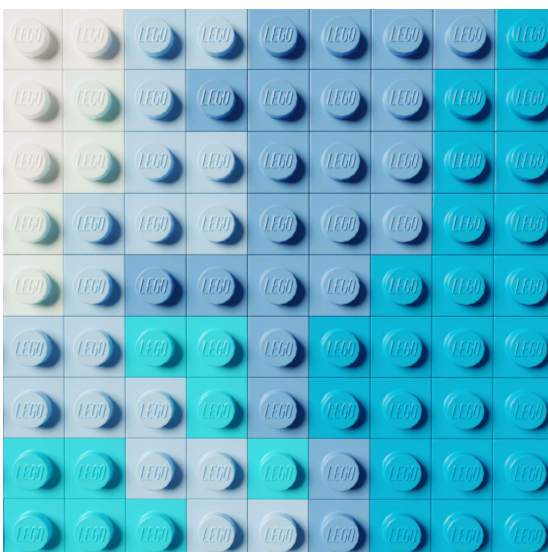
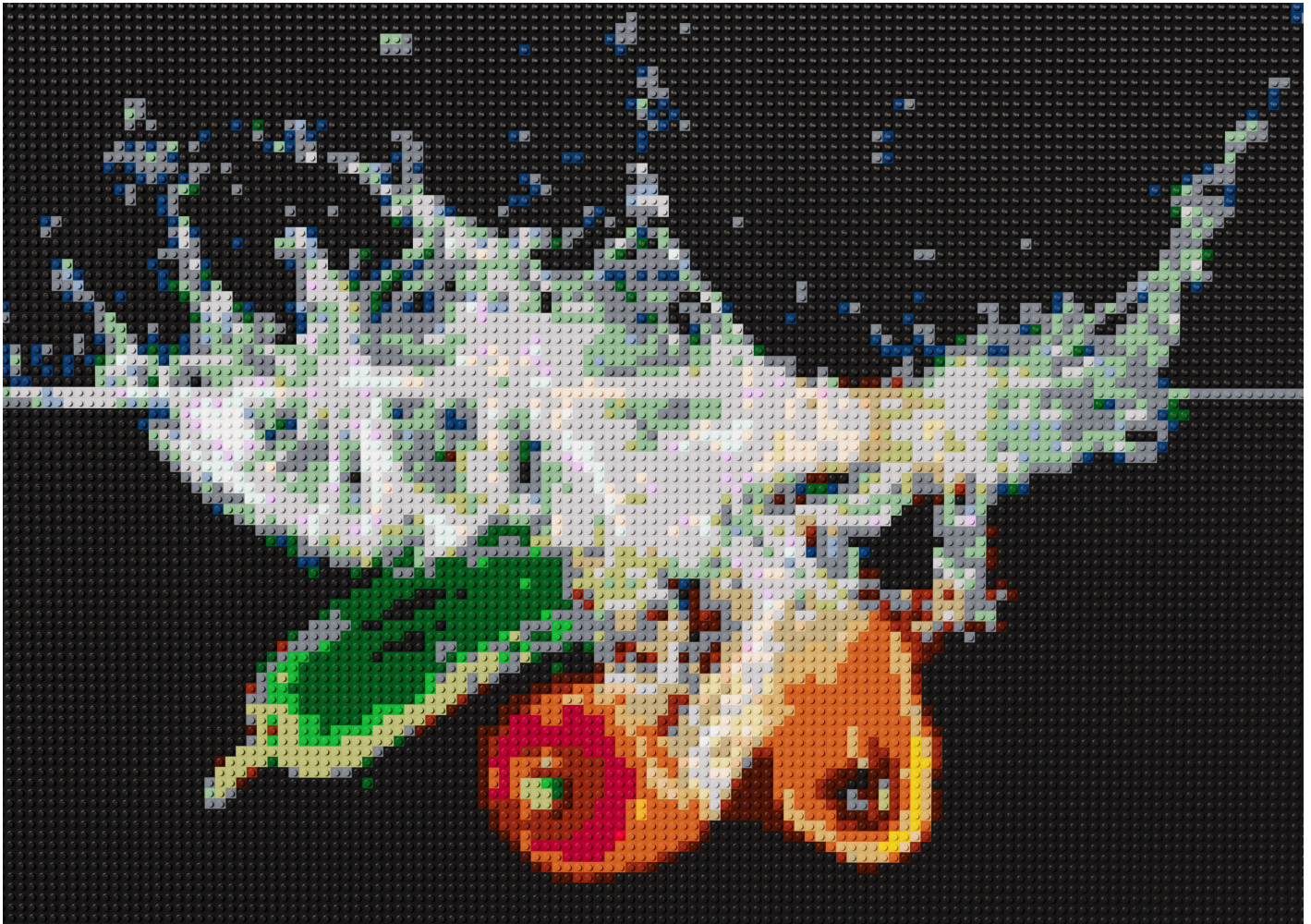
There are tons more ways of building water using the building techniques that we have covered. Experiment and see what works for you. A building technique for a waterfall can be used in so many other ways. For example, the jug pouring orange juice in to the glass in the lower left uses a variation of a building technique from waterfalls.

In LEGO, anything that is water can also be easily translated into lava, paint, oil, honey, or anything that is liquid or somewhat liquid.



# Other Ways of Building Water

## Mosaic



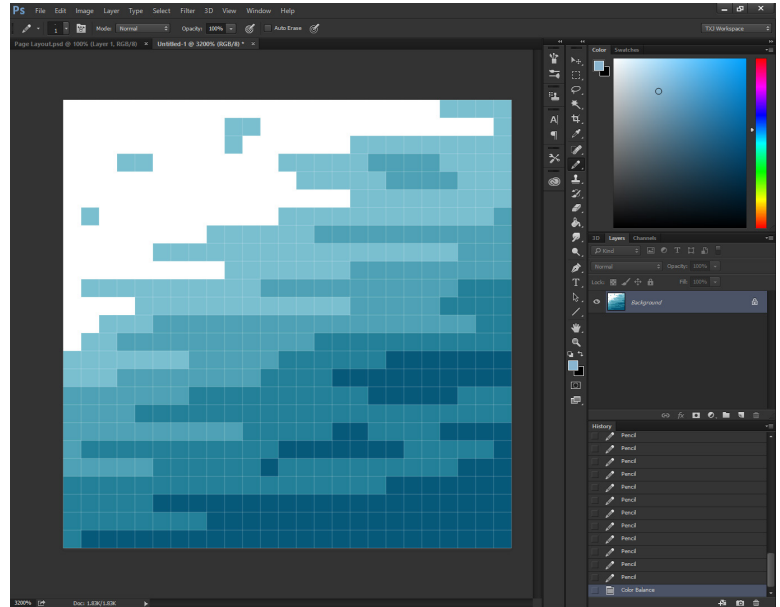
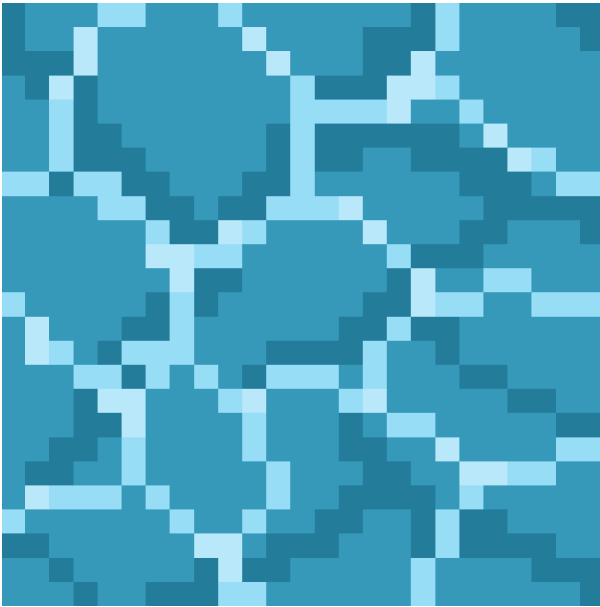
Mosaic is nothing more than a painting made out of LEGO bricks. Hundreds of bricks of different colors placed next to each other to form an image.

You can really make a mosaic of any subject that isn't necessarily water. But building a mosaic of water have some other uses than just being a display piece.

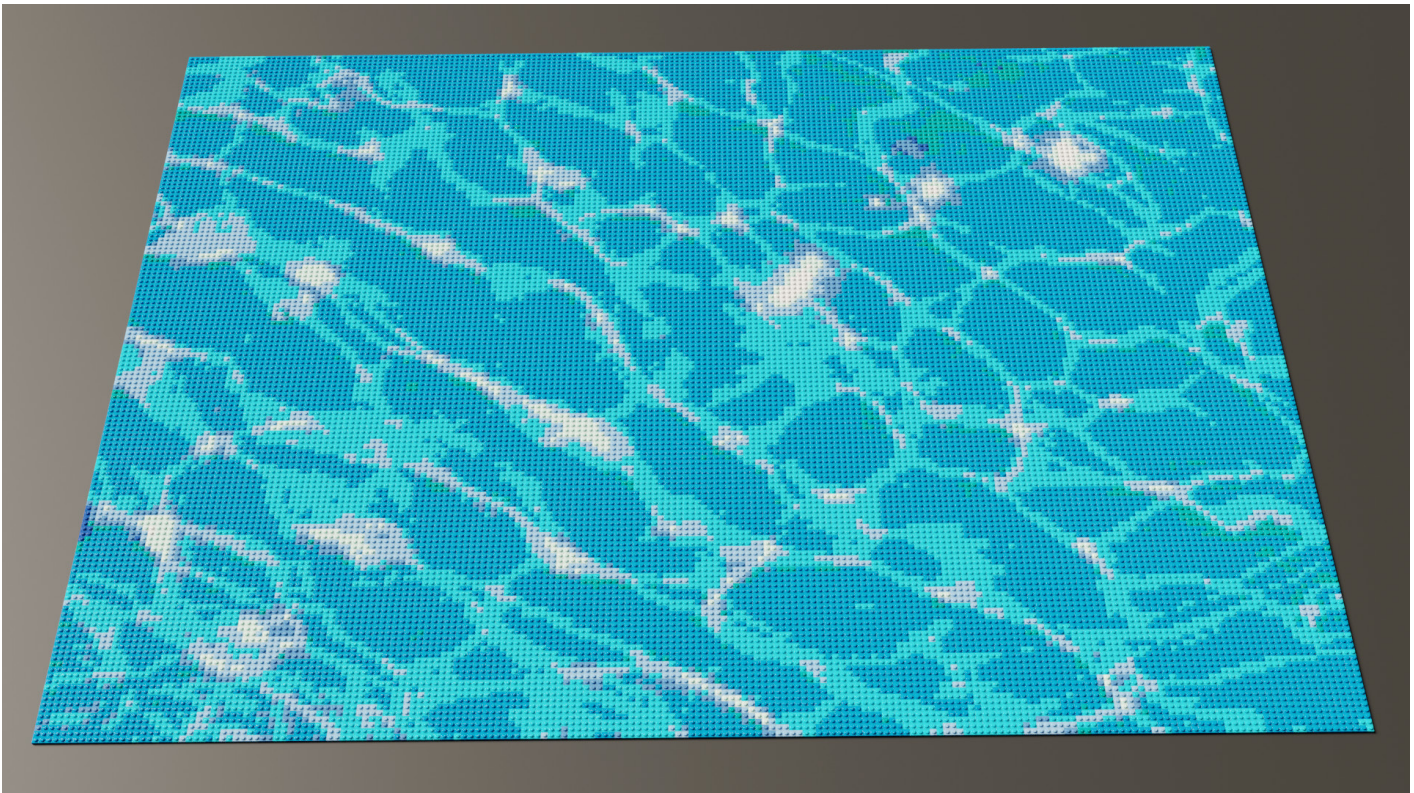
As we know, water have a ton of detail, to capture all that detail in a mosaic, it either needs to be very big, or the detail has to be reduced. Especially with LEGO's limited color palette, a splash of water may just look like a jumbled mess of colors and bricks.

Mosaic itself is a pretty complicated subject and that's a separate book for it!





Mosaic is essentially pixel art too. There are many styles of pixel art to base your water mosaic on, and since it's all pixels, it's easy to follow along to build your own. For cartoony water, there doesn't need to be a lot of detail and it can be easily designed in a graphics software. *Pictured right, Adobe CC 2015*



Using this water texture for the mosaic, you can actually create an interesting water surface that can be used for a landscape. Although, it does need to be really really large for it to look good. For smaller scenes, it is better to use the basic techniques.



## Sculpture

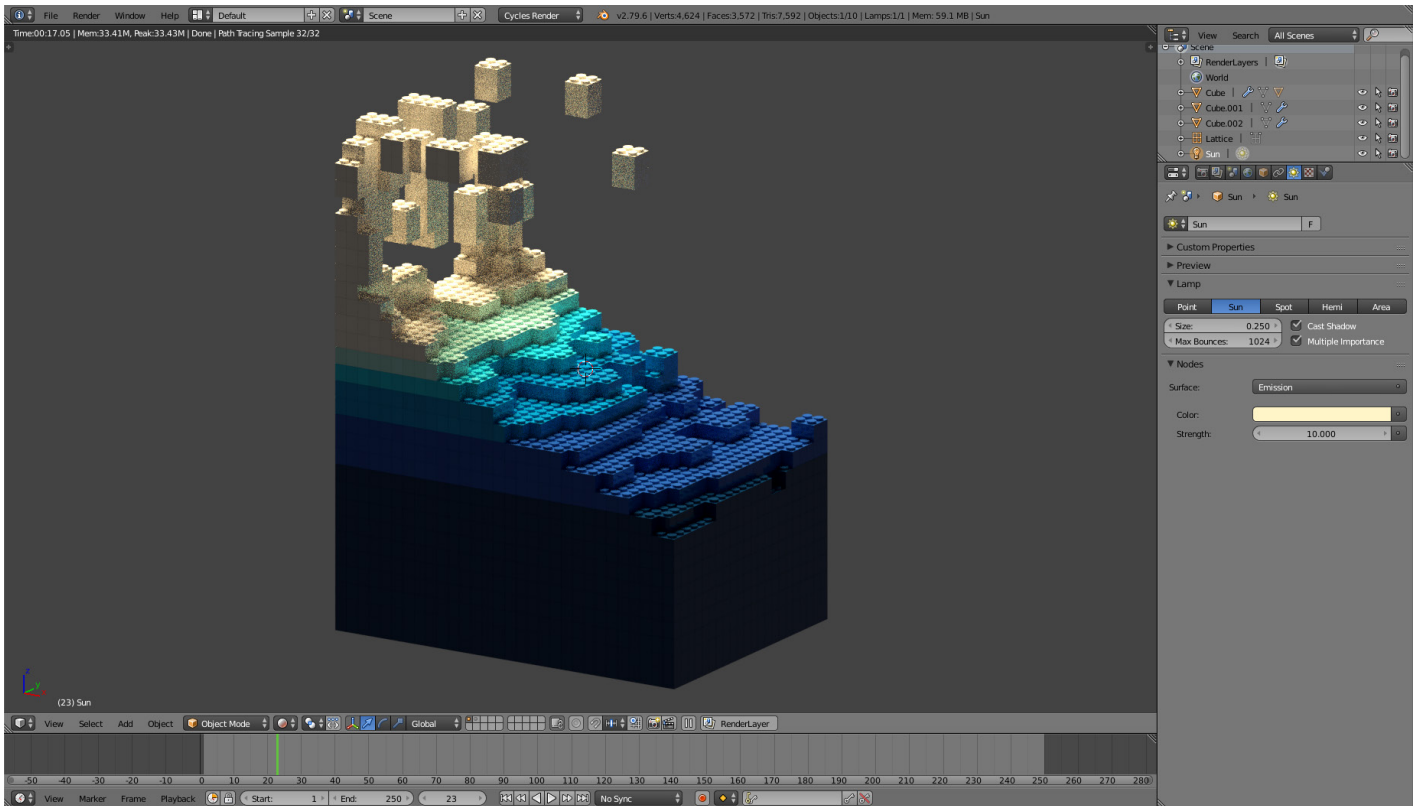


Brick built water sculptures are an example of using thousands of brick to create a very detailed representation of water.

They can be either artistic or realistic. The sculpture shown above is built with the basic blocky types of LEGO bricks, which provides a classic LEGO look, but lacks finer details.

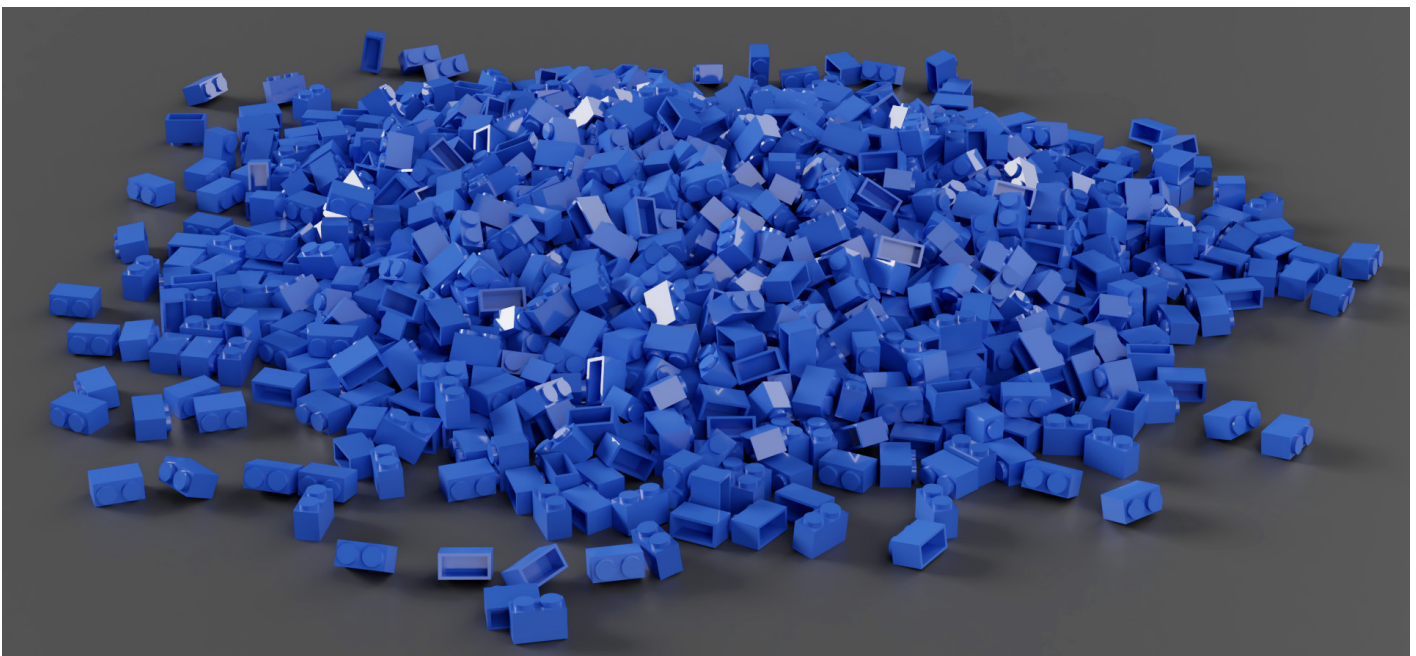
These sculptures can range from a drop of water, a water splash, or even a huge wave, and depending on the amount of detail you want, you can use curved and sloped elements.

The important aspect of the sculptures is to capture the dynamics of water in a realistic manner.



Building a sculpture of water out of your head is nearly impossible for most people. So, we would use 3D CADs to help us out with the process, since these softwares are able to calculate physics and all that

very realistically. But going into the process of creating a sculpture using 3D CADs would be too long and complicated, and there will be a separate book on this topic.



Unless you are designing everything digitally, you're going to need a ton of bricks to make these sculptures...



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