



snow city arts
virtual
learning

VIRTUAL INSTRUCTION VIDEO TRANSCRIPT

Workshop:

LEGO® Tripod Foundations

Learn how to make a camera tripod using LEGO® and image-capturing techniques. You will also be introduced to the photographer Nikki S. Lee.

Teaching Artist:
Allison Spicer

Workshop duration: 25 - 45 minutes



Transcript

Hi there! This is Allie with Snow City Arts. I use the pronouns she and hers, and today I'm going to teach you how to create a **tripod** using LEGOs®.

Some of you may be wondering, "What is a tripod?" I'm so glad you asked. A tripod is used by filmmakers and photographers to keep their cameras stable while they take a photograph or they film.

Before you get started, gather the materials you will need for this project. You will need one LEGO® flat base, at least five inches by five inches. Eight LEGO® standard-sized blocks. These have eight prongs on top, and three open holes in the bottom. You will need one smart device, a phone or a tablet. And one device with connection to the Internet. This can be the same phone or tablet from above, or it can be a TV.

Let's first look at the history of how artists began to use tripods as art-making tools.

The structural concept of a tripod dates back to ancient Greece and ancient China. The most well-known tripod structure is located in the Delphi ruins sanctuary. This is called Tholos.

Sir Francis Ronalds invented the portable tripod in the late 1820s. This was first used in astronomy, land surveying, and laboratories. Golbart Matthews is recognized as the inventor of the portable modern-day camera tripod. He created this in 1850. This is when artists started using a tripod as an art-making tool. By using a tripod, photographers, filmmakers, video artists, animators, and even YouTubers can achieve stable and sharp images.

Let's start building.

The first step is to take four of the standard-size blocks and stack them one on top of the other until you have a vertical column of pieces or a vertical tower. Vertical means up and down.

The second step is to take the remaining four standard-sized LEGO® blocks and stack them one on top of the other until you have created a second vertical column or a vertical tower. Up and down. You should have two freestanding towers at this point, of four blocks each. Set these two columns aside.

Transcript Continued

Now, we need to create a structure or a form that can hold the weight of a smart device while giving it the stability that a professional tripod provides.

Our smart device won't stand on its own because of gravity. Gravity is the force that keeps our feet on the ground and tethers us to our planet. It is the reason why our devices are not floating in the atmosphere.

We have created two columns now to support the weight of our smart device, but we need a way to keep them at a close distance from one another.

This is where the bridge of the base comes in.

Now, grab your LEGO® base.

On your base, you have to find out where the middle is located. From the top edge of your base piece, moving left to right, you will want to count how many pegs there are on the entire width. Once you know how many pegs there are, divide this number by two. This is the middle of your base. If you have an odd number, you will end up with a number that is “point five”. This means a half number. So, the middle of your base is one plus the number before the point five integer.

If you ended up with an even number, that's okay. Just use that number as your center point.

For example, if I count out how many pegs I have on my base

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16...

I have 16 pegs on my base. Now I need to figure out what the middle-point is. Since it's an even number, I just divide 16 by two, and I get eight. So if I count one, two, three, four, five, six, seven, eight over, I know that that's going to be my middle point.

Let's pause here, and you can figure out where your middle point is.

Pause this video and remember: count how many pegs run horizontal first, left to right, then divide this by two, then count from left to right that number to find your center point.

Transcript Continued

Ask for help if you haven't learned division yet. Or you can ask Siri: "The answer is 8!" Or you could use the calculator on your smart device.

All right. Clap once if you're ready to move on. If not, it's okay. You can pause this video and rewind it to figure out your middle point.

Now that we know where our middle peg is located, we are going to count back to the left two pegs, and place one of our columns there, so all eight pegs are connected to the base board. Your first column will take up two pegs vertically, up and down. Skip over one to two full rows of pegs, and place your second column directly below, having all eight pegs connecting horizontally and in parallel to your first column.

The word parallel means "running in the same direction." It will be running horizontally. Horizontally means "side to side." You will know how many pegs you will want to leave between the two columns by measuring your smart device. You want to make sure that your smart device can slip in-between the two fitting upright. For an iPad or iPhone, you will only need one row of open pegs, if your case is not too bulky.

You can now slip in your smart device and test out your new creation. It is important to keep the corner where your camera is located on the top, so no pegs block your camera's frame.

It is also good to know that your rear-facing camera is a better camera, and this is what you should use for high-quality filming. The rear-facing camera should face the opposite side of the base structure.

Now, if you want to take a video of yourself, which is most commonly used by YouTubers, you're actually going to want to use the front of your camera, so you'll need to flip your device around.

What you have created is just the basic structure of a DIY LEGO® tripod. I challenge you to improve upon this design and think about ways that you could even make it better. You can pause this video now if you want to play around with your design.

If not, let's move on.

In this next part, I want to show you a few different filming techniques that you

Transcript Continued

can do with your newly built tripod.

First, let's look at a contemporary photographer's work that wouldn't have been possible without the use of a tripod. Artist **Nikki Lee** is a female Asian American photographer who documents the fluidity of group identities in the United States. She inserts herself into subcultures, playing the role of a member of that particular group.

For example, she played the part of a skateboarder, having never skateboarded before. But she went to the park and hung out with skateboarders to learn about them before she took her self-portrait. A tripod and a self-trigger capture tool is integral in her practice of constructing a scene that she participates as a subject.

Now, place your smart device in your newly built tripod. Try setting up a scene of your own with what you have available to you. Maybe use a stuffed animal as a subject, or ask another person to participate.

Pause this video now to think about what kind of photograph you want to make.

All right. Are you ready?

First, turn your smart device on.

Next, select **filmmaking mode**. Find an area of your room that has the right lighting for your image capture. Do you want to create a dark, scary scene? Or a bright, cheery scene? Lighting is everything in photography and filmmaking.

Think about **angle**. This is the perspective from which you would like your viewer to see your film frame through. Your angle could be a centered shot or capture a diagonal of the room. It could be from up high like "bird's-eye view" or from down below like "worm's-eye view." Choose your angle and place your tripod on a still surface there.

Next, think about your **frame**. What do you want to see in your camera? Do you want to zoom in or out? Some devices will allow you to do this.

You can see what will be in your frame through the **viewfinder**, which is also the screen. For iOS devices, set your lighting and focus by holding your finger

Transcript Continued

on the screen until you see **AE/AF LOCK**. This means auto-exposure and auto-focus is locked and your lighting will not change throughout your filming.

Lastly, try **panning** with your tripod. Keeping your base flat on a surface, try rotating your tripod to the left and to the right. This is a good technique to capture movement of a subject, like someone walking into a room without losing focus. Or, giving your viewer more context of the environment, more information about where your scene is taking place.

Now that you have learned a few techniques of what you can do with your tripod, experiment with your own ideas. Make your own mini-movies or capture still photographs of your own making.

Now that you have built your own tripod, I encourage you to check out other Snow City Arts videos that will teach you techniques of animation, claymation, stop-motion videos, and photography.

Good job today!

Thanks for letting me stop by to make art with you today. Maybe I will see you again soon. Until then, keep creating!

If you are interested in receiving school credit

for the work you have completed in this workshop, or if you would like to have your work **displayed in a Snow City Arts exhibition space or virtual gallery:**

Visit <https://snowcityarts.org/consent-releases/> to learn more.

Contact us at programs@snowcityarts.org if you have questions, would like to offer feedback, or would like to continue working with us virtually.



snow city arts

Snow City Arts inspires and educates children and youth in hospitals through the arts.

snowcityarts.org