

# PROJECT 1 GET STARTED



**DID YOU KNOW THERE ARE BILLIONS OF VIDEOS ON YOUTUBE?** Billions! And that people add 300 hours of video every minute? That's a lot of videos.

YouTube is a great way to share with your friends and family the videos you make. Don't worry if you haven't made a video yet. We're going to help you make your very own YouTube video as you read this book.

# FOLLOW THE VIDEO-MAKING PROCESS

You can divide the video-making process into these five main stages:

- » Development
- » Preproduction
- » Production
- » Post-production
- » Distribution

If you imagine the video-making process as a trip, these five main stages are stops on the way. You can't get where you're going unless you go to each place along the way.

## DEVELOPMENT

*Development* is one of the most important areas of the process — and it can be one of the hardest. It's usually the longest part of video-making because it's important to get the concept and the story right before moving into preproduction.

The development stage means completing these tasks:

- » Coming up with ideas and themes to create a story that has a good beginning, middle, and end
- » Building the story so that it's ready to take into preproduction; that is, writing a script for the actors to work from and, sometimes, a storyboard for the director and crew to work from

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A *storyboard* is a series of images that help you plan which shots to film.

### PREPRODUCTION

The preproduction stage uses the idea, story, script, and storyboard to prepare for the production stage. In preproduction, everything is planned as much as possible.



WARNING

*If you rush or skip preproduction, something may go wrong and it could take you longer to film.*

*Preproduction* takes place when you

- » Choose actors.
- » Find locations.
- » Build sets for each scene.
- » Plan each filming day.
- » Organize rehearsals for the actors.

The work you do on these steps saves you time in the production and post-production stages.

### PRODUCTION

The *production* stage is where the story and characters come to life as you film.

In the production stage, you

- » Run rehearsals for the actors to learn their lines and to develop their characters.
- » Set up camera equipment on location.

- » Film the scenes you planned.
- » Review the filmed footage to make sure you've captured everything and that it looks good enough to edit.

## POST-PRODUCTION

The *post-production* stage is when you piece together the footage you captured during production. This stage is exciting. You get to see the results of all the hard work you put into the previous stages and also get to watch the video come together in the *editing tool* — that piece of software where video clips are imported, arranged into one video, and then exported for your audience to watch.

*Post-production* includes

- » Importing the footage on a computer
- » Editing in software like iMovie, Filmora, or HitFilm
- » Adding music or sound effects or other kinds of enhancements

## DISTRIBUTION

*Distribution* is the final stage in the journey to make a video. At this point, your film has been produced and edited. Now it's ready for the audience to enjoy.

This can be a worrisome time for you because the audience will make comments and give reviews.

Most blockbuster films are first distributed to theaters and then released on DVD, but you'll distribute your video by YouTube.

## GATHER YOUR TOOLS

A professional filmmaker could spend a fortune on tools. However, to get started, you need only a few basic tools, and most of them aren't expensive:

- » **Video camera:** Without a video camera, there is no video. A video camera captures the picture and audio and stores them on a media card, hard drive, flash drive, or tape.



REMEMBER

*A video camera can take different forms, which you can read more about in the next section.*

- » **Microphone:** The microphone captures sound, which can be recorded with the video to a media card, hard drive, flash drive, or tape. The microphone can be built into your camera or not. (And in that case, it's *external*.) Project 2 teaches you more about using a microphone for audio.
- » **Light source:** Your audience needs to see your subjects, so light is quite important. The source can be a natural one (like the sun) or an artificial one (like a lamp). Project 2 helps you with lighting.
- » **Editing tool:** An *editing tool* is a computer program where you import video footage, slice it up, and arrange it, ready for your audience to view. Project 3 is all about editing.
- » **Tripod:** A tripod is a great tool for keeping the camera steady in a *fixed* (single) position. It can be used to smoothly film moving subjects from left to right or up and down. Don't worry if you don't have a tripod — there are many inventive ways to keep your camera steady.

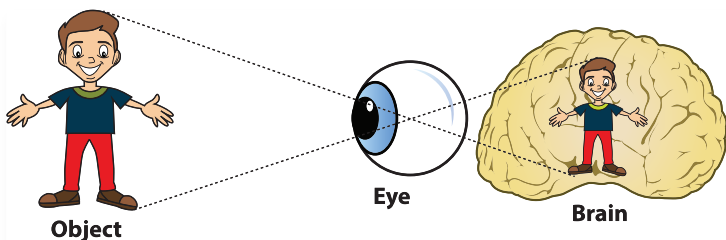
- » **Media card/tape/flash drive/hard drive:** This device is where your camera stores video footage.
- » **Headphones:** You can plug this device into a video camera or an external sound recorder to monitor the *quality* of the audio. How good is it?



## HOW YOUR CAMERA WORKS

Don't worry: We're not going to bore you with details here — but it is useful to know the basics.

A video camera works a lot like your eye. **Your eyes** see things as a series of still images, or *frames*. Your brain then puts them together so fast that it looks like smooth movement — it's clever stuff, isn't it? The camera does a similar thing: It captures movement in a series of frames, or *still* images.

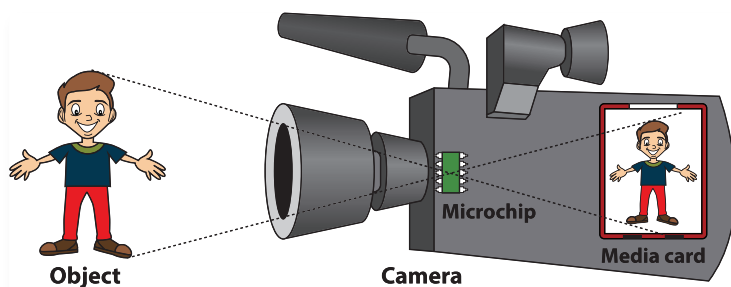


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Also like your eye, the camera records the images using light from the scene. The light enters the lens, and the images go on a **microchip** inside the digital video camera. These images go to your media card or tape.



## CHOOSE YOUR CAMERA

A digital video camera makes filmmaking easier and less expensive. It comes in different sizes, qualities, and prices. For under \$100, you can buy a compact HD camcorder that records great video. Because you're starting out, this is completely reasonable.

High-definition (HD) cameras have better-quality images than the old *standard* definition (SD). HD cameras capture a larger image than SD with more vibrant colors and more detail. These images are measured in pixels. High Definition video has at least 1280 pixels wide by 720 pixels tall. Full HD video has 1920 pixels by 1080 pixels. You may have seen this information when buying a TV.



## CHECK YOUR TEMPERATURE

This may sound odd, but light comes in different colors. A candle has a warm orange look. A clear blue sky has a colder blue look. The color of light is measured in a unit called *Kelvin*. You can adjust this setting on your camera using the white balance controls, or by simply setting your camera to auto white balance. This setting adjusts the color temperature for you to match the light in your scene.

4K and Ultra-High Definition video is taking over with more video cameras and camera phones recording video twice as wide and twice as high as full HD, which is 3840 pixels by 2160 pixels. That's a lot of pixels!

At the other extreme, you can find video cameras that cost over \$50,000. Professionals use those cameras to shoot blockbuster movies — but even those cameras have downsides.

As a filmmaker, I like to use different types of digital video cameras for different reasons. The following sections describe the different types of digital video cameras.



## BACK IN THE OLD DAYS

Traditional film cameras captured footage as a bunch of still images. The images were on light-sensitive tape running through the camera. This reel of tape was expensive to buy, and you couldn't reuse it. It also made it tough to set up and check shots.

Traditional film cameras create what we call a *cinematic* look, which makes the image look softer than you can with digital video. With traditional cameras you can, for example, blur backgrounds and make your subject stand out. It's harder to get this cinematic look with a digital video camera, especially with less expensive camcorders, which often have trouble with the lighter and darker areas of a shot, and whose images tend to be sharper.

## WEBCAMS

A *webcam* plugs directly into your computer. It's affordable, easy to set up, and great for recording someone talking to the computer (like you might do

when filming vlogs, reviews, or instructional videos, for example). Most desktop computers and laptops come with webcams.



If you want to film your YouTube video using a webcam but your computer doesn't have one built in, look online or in stores. They start around \$20.

I use a webcam to record video blogs because it's simple to set up. A webcam makes it easy to edit and upload in a shorter amount of time.

## CAMERA PHONES

A *camera phone* is a cell phone that captures still and moving images. Camera phones are smaller and lighter than most cameras, which makes it easier to capture

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video in smaller spaces. Camera phone manufacturers are constantly improving the features and quality of their devices, including the ability to record 4K footage and better image stabilization. Some feature films are now being shot using camera phones.



Camera phones don't usually offer the best quality for picture or sound, but they're great for capturing video simply and quickly.



TIP

*Because camera phones are perfect for capturing random moments that are harder to capture with larger cameras, I use them to capture video and pictures for behind-the-scenes projects.*



## SOMETIMES ONE IS BETTER THAN TWO

For years, cameras used two lenses — one through which the photo was captured on film and another that passed the image to the *viewfinder* (which is what the photographer looks through). This approach had some problems: Sometimes photographers didn't get the pictures they thought they were getting. The single-lens reflex camera (and later, the digital single-lens reflex camera, or DSLR) changed that: With the single lens, the image you see in the viewfinder is the same as the one you see in pictures.

## CAMCORDERS

A *camcorder* is a handheld video camera designed to record video and audio. Unlike DSLRs and digital cinema cameras (see the later section “DSLR and mirrorless video”), camcorders usually have lenses built in, which makes setting up and filming quicker and easier. Over the years, camcorders have become less expensive, and they offer better video and sound quality than ever.

You can choose from many types of camcorders, starting with basic (around \$100) all the way up to broadcast cameras (over \$50,000).

You can put camcorders in two groups: affordable and professional. I think affordable is the way to go!



## AFFORDABLE CAMCORDERS

The affordable range of camcorders offers some great features and fantastic quality. Most of the cameras in this group offer automatic functions, like these:

- » **Autofocus:** Focuses on the subject instead of on the background
- » **Face detection:** Focuses on the people in the shot
- » **Auto iris:** Adjusts brightness, depending on the light
- » **Auto white balance:** Adjusts the color temperature of the video image

Camcorders in this range are small, light, and easy to work with. They're great for shooting home videos.

## PROFESSIONAL CAMCORDERS

I suppose I could have called this section “Unaffordable camcorders.” Professional filmmakers need more from their cameras than most mere mortals do. Professionals

sometimes need to take manual control and bypass the camcorder's brain altogether. We all know people are smarter than computers.

Who uses these fancy things? Teams recording outside news as well as production companies for the movies you see at the local theater.

Usually, the higher you go in the range of professional camcorders, the bigger the cameras get and the more manual features they have. The bigger camcorders are heavy! Twenty pounds may not sound like a lot, but it gets tough carrying that much weight around and trying to hold it steady for long.

## ACTION CAMERAS

Camera makers are fitting more stuff into less space. This leads to the *action camera*, a small (half the size of a pack of playing cards), light camcorder that you can strap to yourself or to your sports equipment, bike, or car — or even your dog.



With an action camera, you can record video that's usually hard to get. For example, a cyclist can attach an action camera to her helmet to record what she sees as she's cycling. Action cameras can also be attached to free runners, skiers, skydivers, and race car drivers. The footage from action cameras helps the audience feel involved.

Action cameras are a great, inexpensive way to capture high-quality video. You can pay as little as \$50 for one.



TIP

*An action camera doesn't always record the best sound. These cameras are for shots where you don't need or care much about audio.*

## AERIAL CAMERAS

Shots filmed from the sky can look amazing, and they're being used more often in film and TV. You can get aerial video by attaching cameras to drones or quadcopters and get stunning footage that you can't see from the ground.

Before drones and quadcopters were around, the only way to get footage from the sky was to shoot from a camera in a full-size helicopter. That isn't cheap. Aerial cameras give the same effect for a lot less money.

Lots of drones and quadcopters are for sale at camera stores, and most start around \$50.



WARNING

*In some places, you need a license to fly a drone or quadcopter. Make sure you know what the rules are where you live.*

## DSLR AND MIRRORLESS VIDEO

Basically, a *DSLR camera* is one that uses a mirror behind the lens to reflect what's happening through the lens

into the eyepiece. A *mirrorless* camera is similar to a DSLR but without the mirror; it replaces the optical viewfinder with a digital viewfinder or screen. The DSLR and mirrorless cameras are still-photography cameras that use detachable lenses and produce some amazing images. Within the past ten years or so, the makers began including a video function with their DSLR cameras that allows you to capture beautiful video, too.



TIP

*DSLR and mirrorless cameras are more compact than some digital cinema cameras, so they're great if you're traveling or shooting in small spaces.*

DSLR video can look downright *cinematic*, which means it looks more like the quality you'd see in a blockbuster film at the theater.

- » DSLR and mirrorless cameras have bigger sensors, which capture more of the scene — more light and a greater depth of field. *Depth of field* is the area of your

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shot that's in focus. A large depth of field has more of your shot in focus; a shallow depth of field has less of your shot in focus (so the area behind and in front of your subject may look blurry).

- » Most DSLR and mirrorless cameras allow different lenses so that you can get a variety of shots. The different shots are explained in more detail in Project 2.



WARNING

*DSLR and mirrorless cameras usually aren't great for recording long video clips. They can overheat, so they have a limited recording time.*

Recording sound isn't easy, either. The built-in microphone is so-so at best. The camera makes quite a bit of noise while you're recording; the only way to connect an external microphone is to use a mini jack.

I used DSLR cameras for video when they were first released, and I've shot many short films using them. The video was great, but because of the DSLR's limits with sound, I recorded sound using a separate device and then matched the sound to the video later, during the editing process. If you're working on a large project, matching sound like this can take a long time.

### DIGITAL CINEMA CAMERAS

A *digital cinema camera* is used to film larger projects, and it gives a more cinematic look. Like the camcorder, the digital cinema camera has become more affordable and smaller. Fifty years ago, you would've needed a truck to carry around your cinema camera and equipment, but now it can fit into your backpack.



You can buy a digital cinema camera from most large camera stores, and the cameras range from \$1,000 to more than \$60,000. Yeah. That isn't a misprint. That's more than a lot of cars cost.

Even though a digital cinema camera can fit into your backpack, it's usually bigger than most cameras. It's also usually the more expensive option: You buy the body of the camera and then buy attachments, including lenses and video monitors. Some of these attachments cost as much as the camera body.

A cinema camera tends to have more manual settings and can be complicated to set up. Because of this, I mainly use my cinema camera for dramas and projects I do for businesses.