mystery science

Grades K-5
Mini-Lesson + Activity: “What was the first cartoon?”

VIDEO TRANSCRIPT

MINI-LESSON VIDEO 1

Hi, it's Doug. When I was a kid, Saturday mornings were always my favorite. You know why? Because that's when all the best cartoons were on TV. I was a big fan of cartoons like *Ghostbusters* and *ThunderCats*. You probably haven't even heard of those, but before there was the internet, Saturday morning was the time cartoons were on television.

Someone named Azan has a question about cartoons. Let's give Azan a call now.

[Video Call]

- Hi, Doug!
- Hi, Azan!
- I have a question for you. What was the first cartoon?
- That's a great question, and I know the perfect person to answer it.

Her name is Britney Thoreson. She makes cartoons at Disney Animation. Let's give her a call.

[Video Call]

- Hi, Britney.
- Hey Doug. I heard you had a question for me.
- I do, and it's a good one. Azan wants to know: What was the very first cartoon?
- Oh, that's an interesting one, I'd be happy to help.

Like a lot of you, I love cartoons, so I became an animator. An animator is somebody who takes the cartoons that you watch every day and brings them to life. At my job, I get to work on a lot of different animated shows and movies, and a few of them, you might recognize: here, like this one. Oh, and this one's one of my favorites. How about you all, what are some of your favorite cartoons?

MINI-LESSON VIDEO 2

But what about the first cartoon? What was that? Well, before video games and TVs and phones, a lot of people didn't know how to animate. And a lot of people didn't know how to make the pictures move, but still they tried. Some of our ancestors drew pictures of animals on the inside of caves and tried to make it look like they were moving. Later on, people started to use shadows to tell stories. These shadow puppet shows were especially popular in places like China, India, and Iran, but cave drawings and shadow puppet shows weren't really cartoons. I mean, the shadow puppet shows weren't something you draw. And the cave pictures didn't really move, you know? Like the way they do in cartoons today. People just didn't know how to animate their drawings. That's because it hadn't been invented yet. But then this happened. See how the horse seems to be running? This was a new invention called the phenakistoscope, and when it first came out, people were blown away. They wondered: how are these pictures moving? Phenakistoscope means to trick the eye. And that's exactly what this toy is doing. It's spinning so fast that it tricks you into thinking you're only looking at one drawing. And since each drawing is a little different than the next, you think that it's one drawing that's moving. Now, the phenakistoscope was cool, but only one person can watch at a time. So inventors started thinking of new machines that can make animation even better. Check out this one, it's called a

praxinoscope. Since it was bigger, two or three people could watch at a time. Soon, inventors figured out ways to project animation onto a screen. Now, 10, 20, or even 50 people could watch at one time. These moving drawings of dogs jumping through hoops and clowns playing with hats were pretty amazing, but they were also kind of random. And sometimes, well, they weren't that interesting. Animators wanted to make their drawings even more exciting. One animator had an idea. While walking through a museum and looking at dinosaur skeletons, he started to think—dinosaurs are extinct. No one has ever seen a living dinosaur. All we have are their fossils, but animation? Whoa! Now that we know how to bring drawings to life, could we make it seem like we brought a dinosaur back to life? And better yet, what if I could tell a story about that dinosaur? His idea became Gertie the Dinosaur—the world's first cartoon. And the first time anyone saw a dinosaur come to life. Gertie the Dinosaur tells the story of a shy museum dinosaur, and just like today's cartoons, it had a character and a story. Gertie the Dinosaur was made in the same way cartoons are made today, by drawing thousands of pictures and then flipping through them quickly. A lot like the pictures on the early animation devices. Now that Gertie had come to life, a lot of other cartoon characters followed. Like Felix the Cat, and this mouse you may recognize. He's been famous ever since he was first created. Pretty soon, cartoons became longer and longer, and they turned into the animated movies you see today. But here's the thing: The longer the cartoon is, the harder it is to make. I mean, it took about one million drawings to animate The Lion King. But luckily, we have new technology in place to help us do our work more efficiently, like drawing some of the main pictures on a tablet and having a computer move the rest. In fact, a lot of cartoons you see today are made entirely on a computer, which helps me do my job even better. Animation has come a long way, from the animated toys that trick your eyes, to Gertie the Dinosaur, to all the great cartoons that

you watch today. It's amazing to see how things have changed. Even so, one thing pretty much stayed the same: we all love watching characters come to life through animation.

And that's all for this week's question. Thank you so much, Azan, for asking it.

Now, after this video's done playing, my friends and I here at Mystery Science have created a special activity where you'll animate your own drawing. You can do this in a group, or all by yourself. I hope you'll try it. Have fun and stay curious!

ACTIVITY INTRODUCTION VIDEO

In today's activity, you're going to learn how to fool your brain into thinking that a drawing is moving. Look closely at these two stick-figure friends. Does it look like they're jumping up and down? They're not really jumping—your brain is just being fooled. You can do this, too, with just about any drawing. We'll show you how to get started, step by step.

ACTIVITY STEP 1

Get your supplies. You'll need a pencil, paper, and scissors. Tap the arrow when you're ready to start.

ACTIVITY STEP 2

To get started, we need to make strips of paper just like this that are folded in half. This fold will be the first thing we'll make, and we're going to make it right here on the big paper. Turn your paper sideways, carefully fold it in half, and then open it back up.

ACTIVITY STEP 3

Now we need to make narrow strips. We can cut one, two, three, four strips out of this big paper. Fold your paper in half this way, and then in half again, then open it back up. One, two, three, four strips ready to be cut.

ACTIVITY STEP 4

Now take your scissors and cut along one fold. Take your time and cut nice and straight.

ACTIVITY STEP 5

We have an extra one, two, three strips ready to use. But let's go ahead and get started with the one we already cut. You're going to make a drawing down in the red box in the middle of this part of the paper. We're going to draw a stick figure, but you can draw anything you want. Whatever you draw, make the lines of your drawing really thick and dark, just like this.

ACTIVITY STEP 6

Now, fold the top half of the page down. If you look closely, you can see the stick figure through the paper. We're only going to trace part of it. Only trace the legs and body, but instead of putting the arms down like this, we'll draw them up like this. If you drew something different, trace what you want to stay the same, and move the parts that you want to move.

ACTIVITY STEP 7

Look at the arms when we flip the pictures. Does it look like they're actually moving up and down? Try it with your drawings, then go to the next step to learn what's going on.

ACTIVITY STEP 8

This is one way that real cartoons are made. Artists start with a drawing like this and then add other drawings that are changed just a little bit. When the pictures are flipped quickly, our eyes and brains are fooled. We think the person in the drawing is actually turning and looking in the other direction. Even though it's just two drawings, it can be tricky to flip pictures like this, so we'll show you an easier way to do it in the next step.

ACTIVITY STEP 9

Instead of flipping back and forth like this, roll up the top flap of paper. You can roll it around your pencil like this, or try rolling it up without your pencil. Either way works.

ACTIVITY STEP 10

Now, hold the fold down like this. Then put the pencil inside the rolled-up paper and move it back and forth like this. Try moving it at different speeds. See if moving it slower or faster makes it look better or worse.

ACTIVITY STEP 11

Now is your opportunity to be creative. You could draw a ball bouncing like this, or draw a stick figure friend doing something totally different, or take one of the three strips we already made, cut one out, and draw anything you can imagine. If you have your own ideas, go ahead and get started. If you'd like to see a few ideas from us, go to the next step for a few suggestions.

ACTIVITY STEP 12

You could draw a bunny with its ears wiggling from one spot to another, or a balloon down low, and then draw it higher up in the air. Or a bee with its wings flapping back and forth. Or a boat floating from one place on the paper to another. Or a bird with its eyes closed in one picture and open in the next. Maybe you could use all of the drawings you make to tell a story. Draw anything you'd like, and be creative. Have fun, and stay curious!