Name: _____ Date: _____

Twenty-Four Pictures to Make One Second Move

Circle group

A stop-motion film looks like a world that has come alive. But nothing on the set moves by itself. An animator moves a figure a tiny bit and takes a photo. Then the animator moves it again and takes another. When the photos play fast, the eye blends them into smooth movement.

Film runs at about twenty-four frames each second. So one second of animation can need up to twenty-four photos. Some studios show each picture twice. Even so, a short scene may take a whole day. A feature film can take years.

The figures are built with care. Many have a metal skeleton inside, called an armature. It is hidden in soft clay or foam. So the arms and legs can bend and then stay in place. Some heads have swappable faces. The animator swaps one mouth shape for another to make the character talk. Clay figures are very flexible, and artists adjust them between shots.

Animators must also control the room. A bumped table or a moved lamp will show up as a flicker on screen. So they fix the camera and lights in place. Small movements, like a blink, make a character feel alive. It takes patience. But the story is told with real objects.

Questions

1. How is movement made in a stop-motion film?

_____

_____

2. About how many frames run each second in film?

_____

_____

3. What is an armature?

_____

_____

4. How can an animator make a character talk?

_____

_____

5. Why do animators fix the camera and lights in place?

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_____

6. Why might a short scene take a whole day to make?

_____

_____

Words to know

animator: an artist who makes drawings or figures appear to move
frame: one single picture in a film
armature: a bendable skeleton inside a model
flexible: able to bend easily without breaking
flicker: a quick, unsteady change in light

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Twenty-Four Pictures to Make One Second Move

Triangle group

A stop-motion film looks like a world that has come alive, yet nothing on the set ever moves by itself. Every motion is made by an animator who changes a figure a tiny amount, takes a photograph, changes it again and takes another. When the photographs play quickly in order, the eye blends them into smooth movement.

Film usually runs at about twenty-four frames each second, which means a single second of finished animation can need up to twenty-four separate photographs. Some studios save effort by showing each picture twice. Even so, a short scene may take a full day of careful work, and a feature film can take years.

The figures are built with care. Many have a metal skeleton, called an armature, hidden inside soft material such as clay or foam, so that arms and legs can bend and then stay exactly where they are placed. Others have heads with swappable faces, and the animator replaces one mouth shape with another to make the character speak. Clay figures are especially flexible, and artists often use sculpting tools to adjust them between shots.

Animators must also control the room. A bumped table, a shifting lamp or a changing shadow will show up as a flicker on screen, so they fix the camera and lights firmly in place. Small movements, like a blink, give a character life. The method asks for patience, but the reward is a story told with real objects.

Questions

1. How is movement created in a stop-motion film?

_____

_____

2. About how many frames run each second in film?

_____

_____

3. What is an armature?

_____

_____

4. How can an animator make a character speak?

_____

_____

5. Why do animators fix the camera and lights firmly in place?

_____

_____

6. Why might a short scene take a full day to make?

_____

_____

Words to know

animator: an artist who makes drawings or figures appear to move
frame: one single picture in a film
armature: a bendable skeleton inside a model
flexible: able to bend easily without breaking
flicker: a quick, unsteady change in light

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Twenty-Four Pictures to Make One Second Move

Square group

A stop-motion film resembles a world that has suddenly come alive, yet nothing on the set ever moves of its own accord. Every motion is produced by an animator who alters a figure by a minuscule amount, photographs it, adjusts it again and photographs it once more. When the photographs are played rapidly in sequence, the eye blends them into fluid movement.

Film generally runs at roughly twenty-four frames each second, which means that a single second of finished animation can require as many as twenty-four separate photographs. Some studios economize by displaying each picture twice, so that two frames cover the same moment. Even so, a short scene may consume an entire day of meticulous work, and a feature film can take several years to complete.

The figures themselves are constructed with great care. Many contain a metal skeleton, called an armature, concealed inside soft material such as clay or foam, so that the arms and legs can bend and then remain exactly where they have been positioned. Others have heads with interchangeable faces, and the animator replaces one mouth shape with another to make the character speak. Clay figures are particularly flexible, and artists frequently use sculpting tools to refine them between shots.

Animators must also control their surroundings. A bumped table, a shifting lamp or a changing shadow will appear as a flicker on screen, so they fasten the camera and lights firmly in place. Tiny details of motion, such as a blinking eye or a swinging hand, give a character a sense of life. The technique demands enormous patience, but the reward is a story told with real objects that the camera has genuinely seen.

Questions

1. How is movement created in a stop-motion film?

_____

_____

2. Roughly how many frames run each second in film?

_____

_____

3. What is an armature?

_____

_____

4. How can an animator make a character speak?

_____

_____

5. Why do animators fasten the camera and lights firmly in place?

_____

_____

6. Why might a short scene consume an entire day?

_____

_____

Words to know

animator: an artist who makes drawings or figures appear to move
frame: one single picture in a film
armature: a bendable skeleton inside a model
flexible: able to bend easily without breaking
flicker: a quick, unsteady change in light

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Twenty-Four Pictures to Make One Second Move

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Twenty-Four Pictures to Make One Second Move

Easier · 211 words · Flesch-Kincaid grade 4.2

1. The animator moves a figure a little, takes a photo, and repeats, then the photos play fast.
2. About twenty-four.
3. A metal skeleton inside a figure so it can bend and stay in place.
4. By swapping one mouth shape for another between photos.
5. A bump or shift would show up as a flicker on screen.
6. Every tiny movement needs a new adjustment and photo, which is slow work.

Triangle: Twenty-Four Pictures to Make One Second Move

This passage · 245 words · Flesch-Kincaid grade 8.6

1. The animator changes a figure slightly, takes a photograph, and repeats, then the pictures play quickly in order.
2. About twenty-four.
3. A metal skeleton hidden inside a figure so it can bend and stay in place.
4. By swapping one mouth shape for another between photographs.
5. A bump or shift would show up as a flicker on screen.
6. Every tiny movement needs a separate adjustment and photograph, which is slow work.

Square: Twenty-Four Pictures to Make One Second Move

Harder · 282 words · Flesch-Kincaid grade 10.8

1. The animator alters a figure slightly, photographs it, and repeats, then the photographs play rapidly in order.
2. About twenty-four.
3. A metal skeleton hidden inside a figure so that it can bend and stay in position.
4. By replacing one mouth shape with another between photographs.
5. A bump or shift would appear as a flicker on screen.
6. Every tiny movement needs a separate adjustment and photograph, which is slow, meticulous work.