



Pictures in motion: the science of movies

Do you like movies? When you sit back with a bowl of popcorn, do you ever stop to think about how movies are made? You may not realize it, but there's a lot of science involved in filmmaking.

When we watch a movie, the continuous action we see on screen is a clever illusion of movement. A movie is not one continuous image, but thousands of still pictures flashed before your eyes – about 24 pictures per second!

If a movie is a series of still pictures why do we see a moving image on the screen? Your eyes see an image for a fraction of a second and then it disappears. When the next image appears, your eyes are still “seeing” the previous image. This is called persistence of vision. The pictures flash by so fast that we don't see them as individual images. Our eyes merge the pictures together, and we see the illusion of motion.

Make a flip book movie

You can experiment with persistence of vision by making your own flip book.

Choose what you want to animate. Use your imagination!

Using a note pad with gummed edges, draw your first picture on the last page of your pad. It will be easier to view your movie by flipping your pad from back to front.

Turn to the next sheet (the one second from the bottom). You should be able to see your first drawing through the page. This will help you draw your next one. It should be slightly different from the first one.

Continue drawing pictures on each page until your movie is done.

To view your movie, hold the pad on the top edge and flip through it quickly from the last page to the first.

March Break: Reel fun! Movie science

Explore the science and technologies involved in filmmaking. Learn about sound effects, and discover the secrets behind the visual effects in movies. Experiment with different filmmaking techniques, and take part in exciting, hands-on activities that show how movies are made. Lights...Camera...Action!

For more information, visit www.sciencetech.technomuses.ca.

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