Week 1 animation

Welcome to Computer Animation
Wednesday 08/05/2026

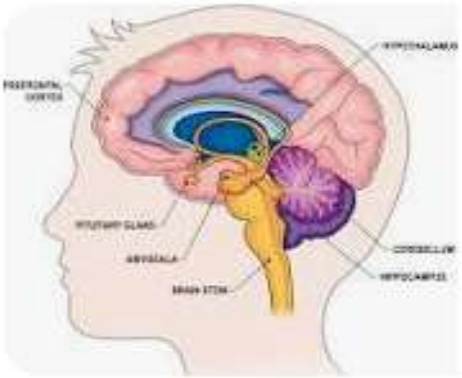
Trinity Home School
T.E.A.C.H.
Wednesdays 1:00pm (Education Building #104)
note: if you viewing the week*.pdf page breaks<forced>
Today's lesson begins with a brief History of Animation, we will see a short video, and end with a simple In-Class Exercise / Quiz!

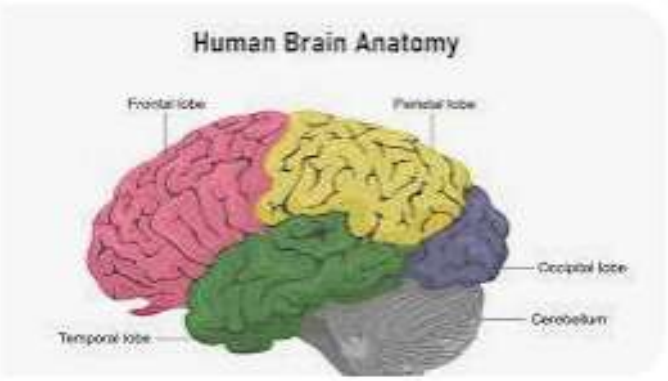
Opening Prayer:
Dear Heavenly Father, we thank you for this New School year! We ask for your Holy Spirit to inspire us. Help us to work hard and learn!
May your protection be upon our family and our school.
Guide us by your Loving grace; and may our individual light shine for your Glory.
In Jesus Name we Pray… Amen.

You are starting a Grand Adventure!

First we will begin with some basic definitions and reasons our brain reacts the way it does,

Then review a history of Animation,
We will discuss some animation strategies, and
Watch a short video about 1 of these simple strategies.





Our human brain is designed to:

1. Promote survival of our existence
2. Store information / experiences
3. Make decisions & solve problems

Hopkins University defines:
The brain is a complex organ that **controls thought, memory, emotion, touch, motor skills, vision, breathing, temperature, hunger and every process that regulates our body**.

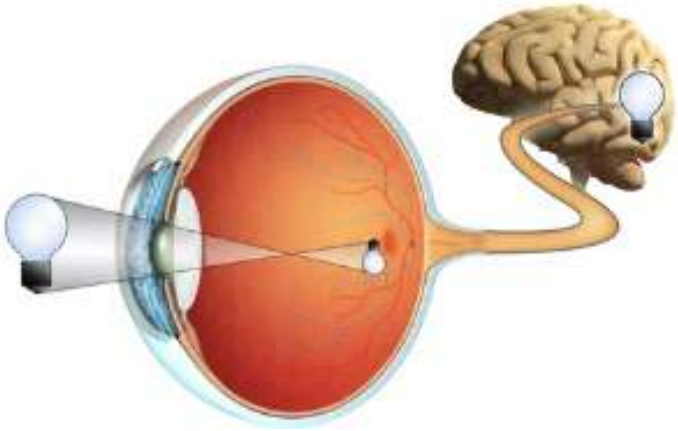
One of those important process is **sight**.

The eye is a sensory organ. It **collects light from the visible world around us and converts it into nerve impulses**. The optic nerve transmits these signals to the brain, which forms an image so thereby providing sight.

How does the human eye detect movement?

How do we figure out what's moving and what's not? At least part of the answer to this question has to do with a close linkage between the motor systems that move our eyes and the sensory systems that process visual information.

When your brain sends a command to your eyes, telling them to move from one place to another, it also sends a copy of that command to your visual cortex. This copy of that motor command is a corollary discharge. By subtracting out the visual motion caused by your eye movements, your visual cortex is then able to figure out what's moving and what's stationary.



This stimulation, or movement is like a **strong magnet**. Your brain and eye are just wired to detect movement…

What is animation to you??

In it's most basic form, Animation is the rapid display of a sequence of images to create an illusion of movement.

That is why animation is cool.

(Here is an answer to a quiz question)
Animation is like "Eye Candy" to our brain.

Our brain see movement and can solve the reason **why** the motion is occurring and what should happen next…

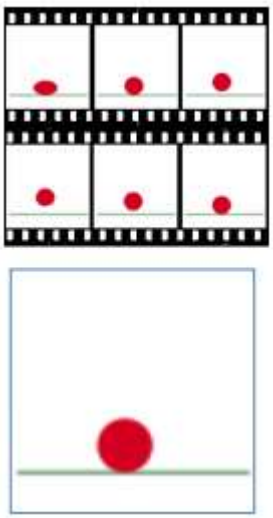
Question:

What do you call one of the images within an animation?

What do you call the first & last image??

Answer: A **frame** is 1 image or a single drawing.

A **Key frame** is the first image also the last image within an animation…
Key Frames are also a starting point of a (segment) or small part of a larger animation.



Each frame is a photograph, drawing, or computer generated image

Each frame differs slightly from the one before it

Viewing the frames in rapid succession implies "motion"

Lets take a look a the history of Animation

Paleolithic (old stone age) cave paintings

- animals depicted with multiple legs in superimposed positions to convey the perception of motion

What is a Zeotrope ?

Zoetrope

- As the cylinder spins, one looks through the slits at the pictures
- One sees a rapid succession of images, producing the illusion of motion
- The earliest known zoetrope was created in China around 180 CE (may have existed in China even 300 or so years before that)

Phenakistoscope

- A spinning disc attached vertically to a handle
- A series of drawings around the disc's center
- A series of equally spaced radial slits
- The user spins the disc and looks through the moving slits at the disc's reflection in a mirror
- Invented by a Belgian physicist Joseph Plateau in 1841

History of Animation

Praxinoscope

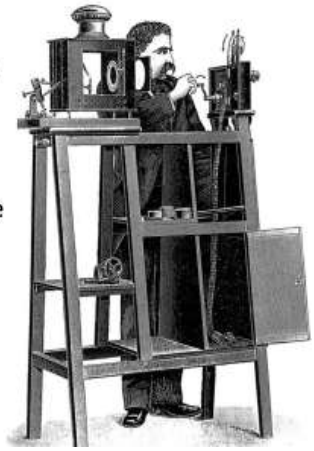
- Improved on the zoetrope by replacing slits with an inner circle of mirrors
- Invented in France in 1877 by Charles-Émile Reynaud

- In 1889, he invented an improved version that allowed one to project the images onto a screen

History of Animation

Cinematograph

- Fed the linear film through with a hand operated crank
- Projected the images onto a large screen
- Invented in 1895 by the Lumiere brothers
- Took their "film projector" around the world, charged admission for movies
- Original films were 17 meters long and lasted 50 seconds



Hollywood

First film studio established in Hollywood in 1911, followed by 15 more later that year

Charlie Chaplin Studios established in 1917

Silent Film Era until 1929

1st Academy Awards in 1929

Golden Age of Hollywood

1927-1963

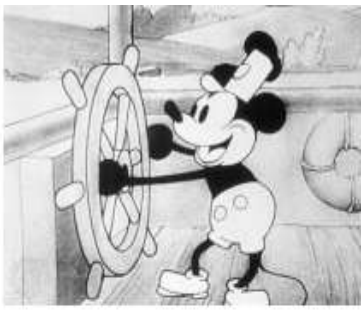
Are animations easy to produce ?

Answer:

Usually not easy at all, on most medium it takes a long time to produce animations. There are some simple strategies to produce animations that are fairly easy; we will look at one of these next week. Walt Disney was one of the first successful cartoon artist who created the Disney Studios. They had a high standard of quality…

How long did it take to make the Disney animated Cartoon Snow White ?

Cartoons



Produced in large numbers in the Golden Age of Hollywood; usually shown before feature films

First animated full length film: Snow White, 1937 (took 4 years to make)

Moved to TV in the 1950's, when TV became popular

– Flintstones: first successful prime time TV cartoon

[1928: Steamboat Willie - The Surprising Origin of Mickey Mouse]

1https://www.youtube.com/watch?v=CJ56IDYq_ns

Next week we will look at another strategy to create animations, fairly quickly. In the coming weeks we will design and develop animations on our Notebook computer…

Questions for Classwork / Homework:

Please re-Read this week1_animation.pdf on your own and take this simple quiz on the:

1. What is our human brain wired to do?
   a.__Survival_____
   b.__Sore information_____
   c._____Make decisions_

2. The Main thing our eye & brain is wired to detect:
   A. Changes in Color.
   B. Movement.
   C. Magnetism.
   D. Increase in Light.

3. Why is animation like "Eye Candy" to our

brain

_____

4. Movement to the eye is like:
   a. something bad to look away.
   b. strong magnet.
   c. a change that is ignored.

5. What is a frame?

6. What is a Key Frame?

7. When in history did humans first precise (understand and draw) motion?

8. What is a Zoetrope?

9. What came first the Phenakistoscope or the praxinoscope?

10. What is a Cinematograph?
    How long were the movies?

11. Are animations easy to produce?

12. Who was the artist and creator of cartoon: Steam Boat Willie?

13. In your own words what is animation?