

Roto What? Get the Scoop on Rotoscope

Jeanne Bjork



Presenter: Jeanne Bjork



Jeanne Bjork- Art Educator/Department Head

- Veteran educator teaching children and adults
- Connect classroom through outreach, travel and community events.
- Envision the future through visual arts & technology
- State Level Leader including The Milwaukee Area Teachers of Art (president, web designer), Wisconsin Art Education Association (WAEA)(web & social media designer)
- State and national presenter WAEA, National Art Education Association (NAEA) and ISTE
- Written and published in State/National Publications
- BA Degree in Art Education/Graphic Communications, MA in Visual Studies
- Writer K12 Art curriculum infused with technology
- Curiosity and playfulness with new media.
- Artist, reader, traveler, knitter, cook, gardener, cyclist

Presentation Overview :

Roto What? Get the Scoop On Rotoscope

- **What is Rotoscope?**
- **How can you use this technique in your classroom?**
- **How can you make what is very time consuming into a manageable, fun unit?**
- Learn about some fabulous resources
- Learn how to incorporate video-based process into classes at many grade levels
- Project-based learning allows for collaboration, team approach
- Many apps can be used including Photoshop, Keynote, Procreate
- Can be done by hand in studio

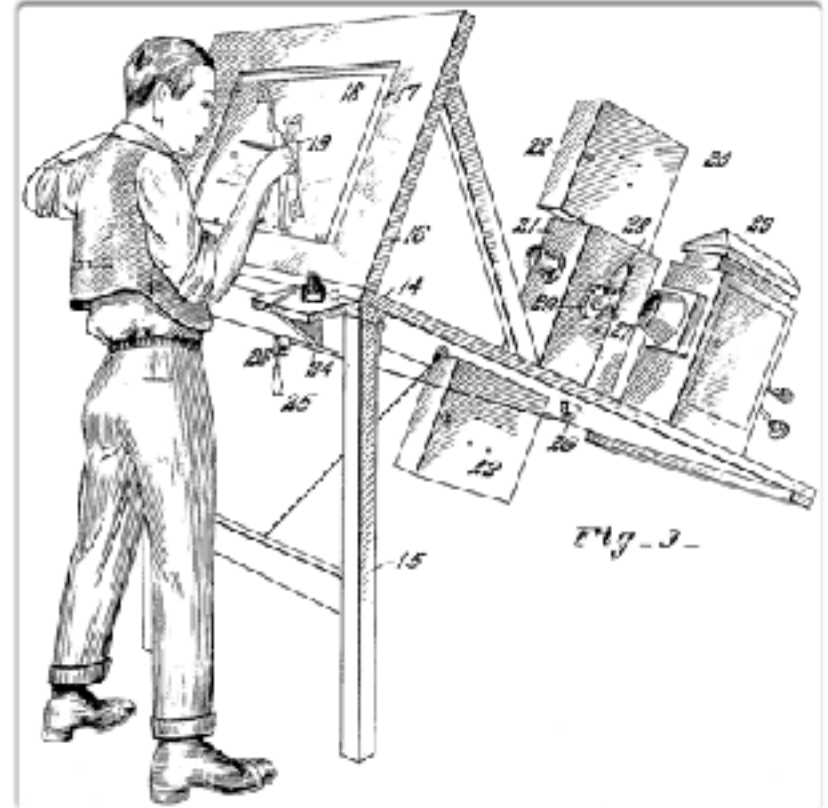


Pewaukee High School Student Art circa 2011

Rotoscope

What is it?

- Historically existed for a long time; Max Fleischer patented a Rotoscope in 1915 to assist in his animation company
- Started as a technique to create more life-like movement within animated and filmed works
- Originally animators traced over live-action film projected onto frosted glass panel
- Actions were drawn frame by frame. Very time consuming!
- 1930s King Kong used stop motion; then in 1976 rotoscope used for more realism to the movements allowing for frame by frame motion capture



Fast Forward to Today

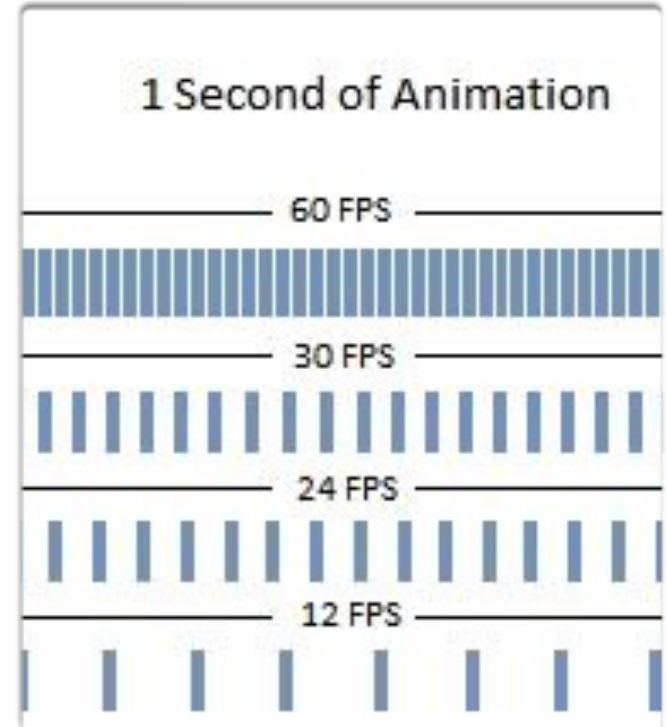
Rotoscope is now done with computers and various apps

Basic Steps

- Shoot video- can use a phone or camera, use landscape/horizontal format
- Bring into an app (Adobe Photoshop, Procreate, Freeware Photopea, Keynote)
- Use layers to draw on top of the video frame by frame
- Play with opacity to see through as you draw
- Throw away the video layers
- Careful with video editing software as it may convert your frame rate
- What you have left is your animation
- Each app has slightly different interface, but export as a movie and you have an animation
- Rotoscope can also be done with hands-on media.

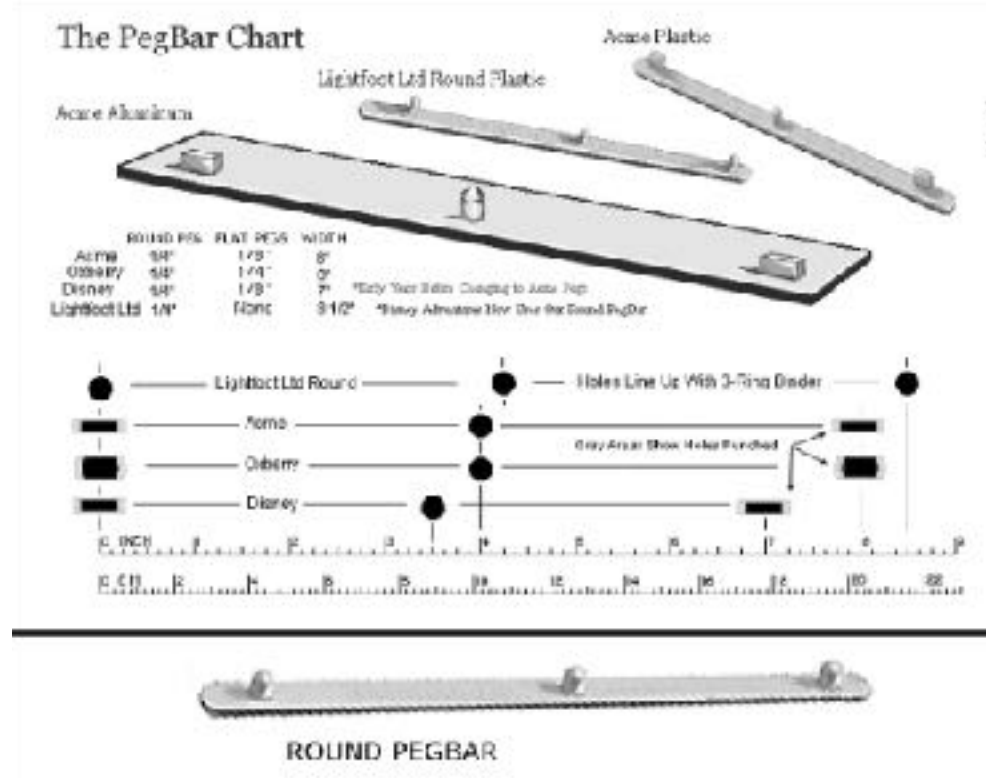
Vocabulary to Know

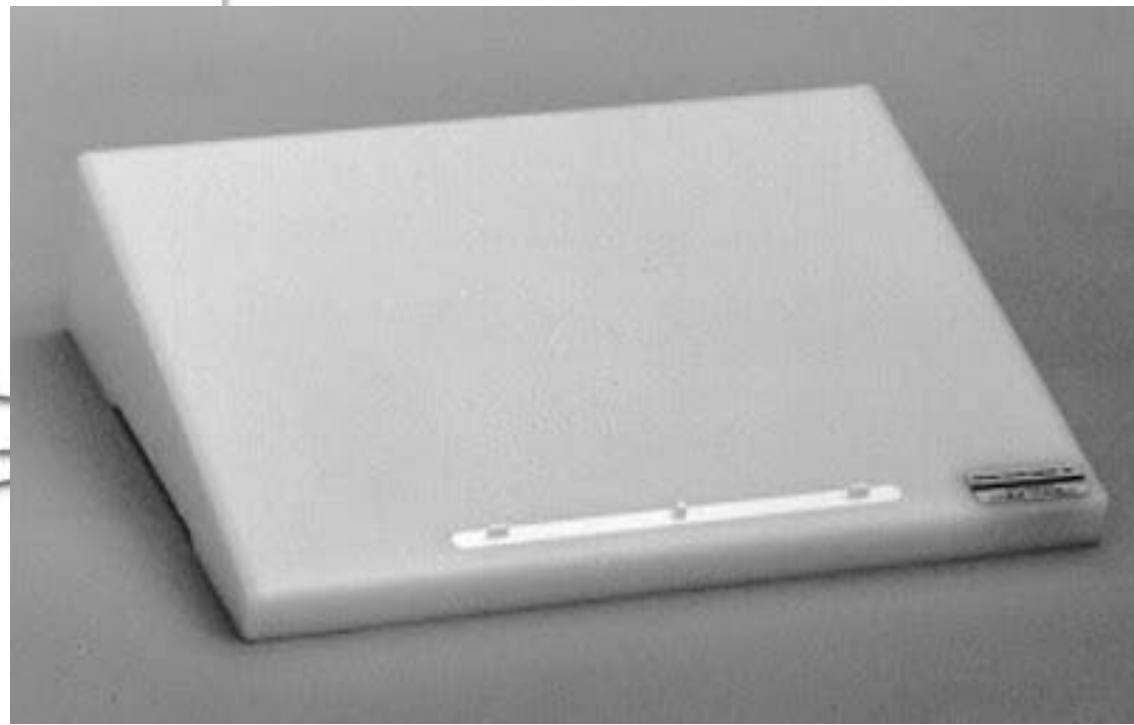
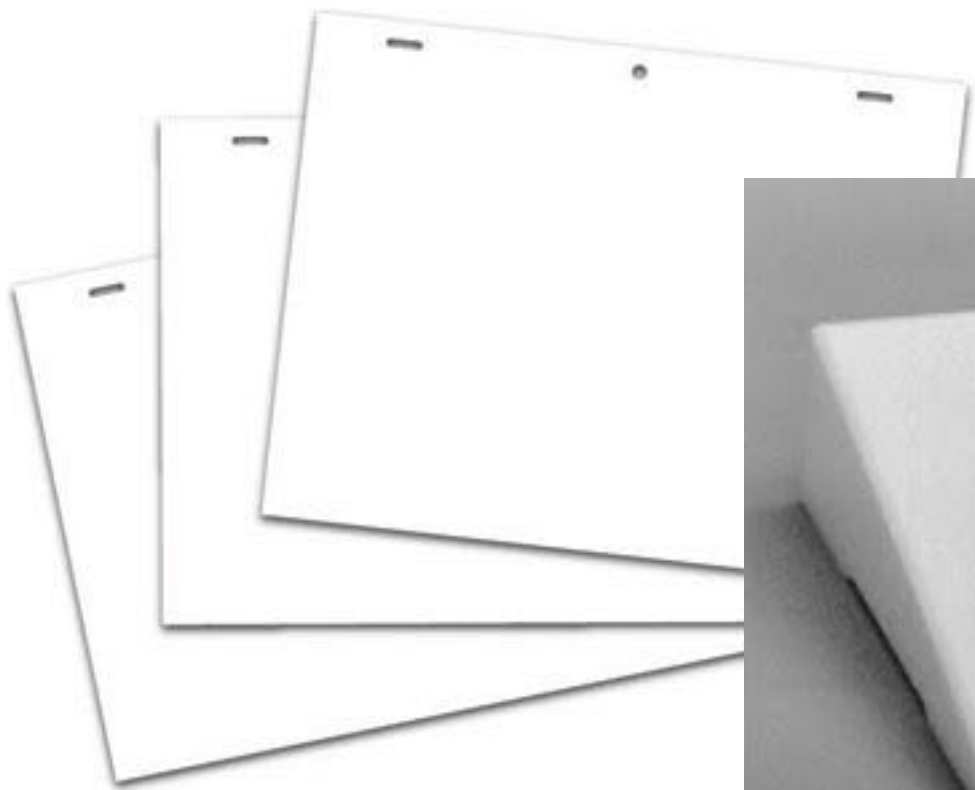
- Frame Rate Per Second-FPS this is important because rotoscope is based on video
- Video is shot at 24-36 FPS
- Stop Motion or Drawn animation is traditionally 10-12 FPS
- Frames- the individual drawing space for each layer of action in the animation
- Time line- allows you to edit the timing sequence of frames. Some apps are set up with time line interface



Vocabulary to Know

- **Registration**- having the frames lined up so the animation lines up and doesn't jump around.
- **Acme Punch and Peg Bar**: Acme punched paper and peg bar light boxes that hold these items.
- Can get through **Lightfoot Ltd.**
- Can purchase just the peg bar and tape to a window or existing light box





How to Get Started:

Skills Taught During Rotoscope Unit: **Collaboration** **Teamwork**

Real Life job roles

- Back ground designers
- Copy Writers
- Storyboard Artist
- Character Development
- Animator
- Musician
- Actor, Voice Actor

Divide the project into 3 parts

- Preproduction- story boards, plot diagrams, work plans for day to day accomplishments.
- Production- Actual creation of the animation, shoot the video, draw the frames, create the backgrounds
- Post Production- edit the timing, add sound effects, music, voice over

How to Get Started: How will you manage the animation?

Team Approach

- Divide up the jobs
- Give students manageable number of frames
- Pick a theme and agree to colors, lighting etc for the theme so the animation looks consistent
- Rotoball Example

Individualized Projects

- Time management is very challenging
- Design a few single frames that can be used over and over (background, settings etc)
- Close your lines so you have shapes you can click on and fill
- Save often
- Throw away video layers as you go so file doesn't get too big
- Animate the character movements, not everything per frame
- Skip every fifth frame when choosing video

Rotoball: Ball Comes in, transforms, leaves



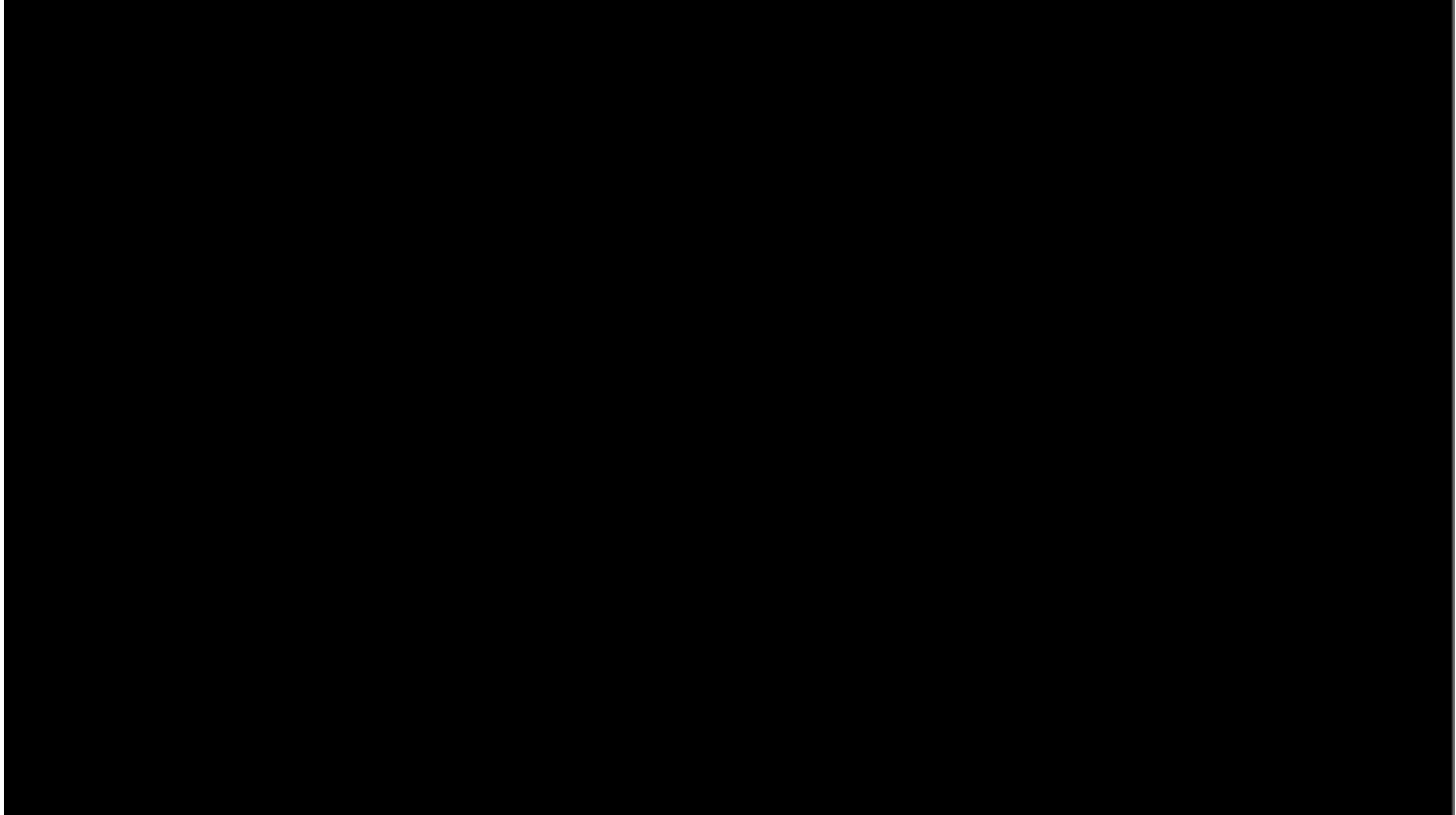
How to Rotoscope in Photoshop

1. Shoot video sequence in front of green screen or blank wall
2. Do small 15 - 30 second shoots to make it easier
3. Remember frame rate per second (FPS) usually use 10-12 for student animations.
4. Bring video into your favorite video editing software and do any edits you need to cut out or trim sections. Save as an .mp4 or .mov
5. Open the video in Photoshop
6. Edit lighting and anything else you want to change on the overall video.

How to Rotoscope in Photoshop

7. File, Export and choose Render Video
8. Now import your video back into Photoshop FILE, IMPORT, VIDEO FRAMES TO LAYERS this creates layers that correspond to the frames
9. Use the timeline palette to set up Frame animation
10. Create a new layer and draw on top of each video layer.
11. Throw away the video layers as you draw and create them. Do this as you work so the file doesn't become too, large.
12. Save this file as a Photoshop PSD as you work to have the layers which correspond to the frames.
13. When finished Export as a Quicktime file (.mov or mp4)

A Few Goodies: Pewaukee High School









A Few Things to Remember...

- Any media can be used with rotoscope animation even clay!
- It starts with video shot from phone, camera or iPad
- It can get complex using the computer or iPad
- It can all be done by hand with drawn, painted techniques, clay etc.
- Sound vs no sound



Animation Is As Elaborate As Your Art

Rendering, sculpting, digital illustration are all part of this process.

- You can render in great detail in drawing app, like Illustrator, Photoshop, Sketchbook Pro, Procreate
- You can be simple in style and technique or complex
- You can edit and use filters in Photoshop to get special effects
- Use your imagination to transform the original video, it's just a starting point
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Still from Loving Vincent

Hands On Drawn Rotoscope Animation

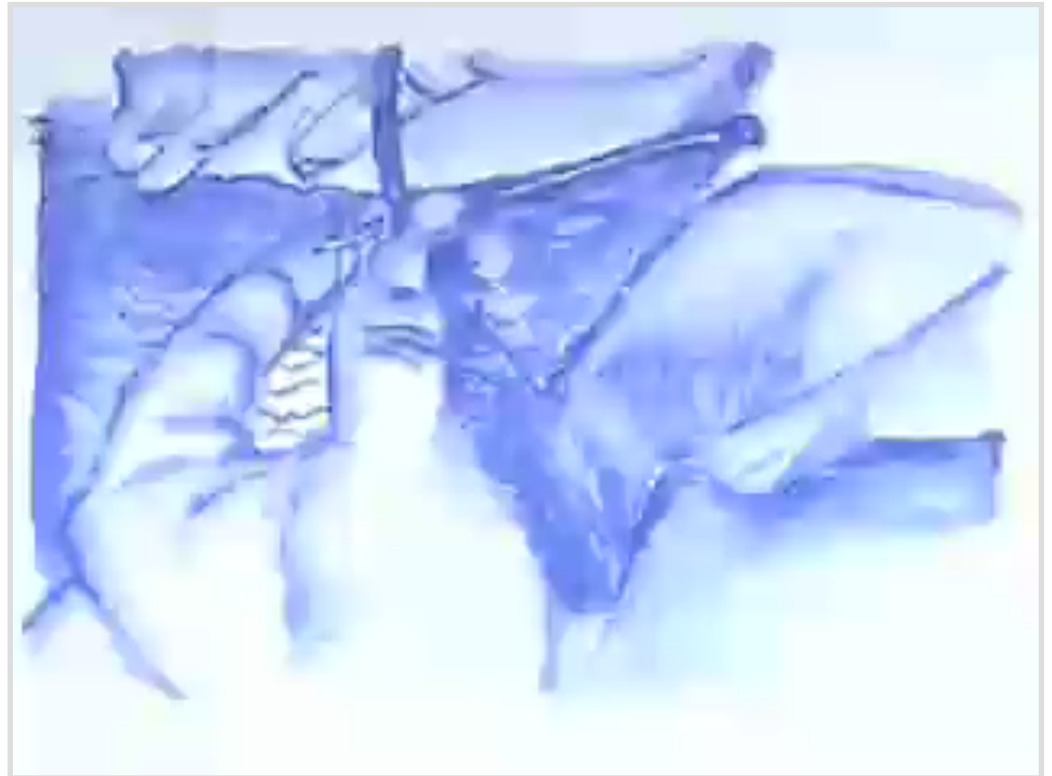
How to print out frames and use to draw, paint or sculpt by hand.

Alternate technique-Image Sequence

- Open video in Photoshop
- Make edits using the timeline
- Export- choose render video choose as an image sequence, set fps to 10
- Save image sequence in one folder named sequence
- Open Adobe Acrobat Pro click File-Create PDF-Merge Files into A Single PDF
- Choose the individual jpg files (click on first, hold shift and click last to multi select all of the files at once. Drag into the program and choose Combine Files
- Now you can print this single pdf with multiple pages, doesn't have to be high quality
- Use a light table or clip to the window to trace on top of the frames with media of your choice
- Draw, paint, sculpt, mosaic etc to create the frames
- Have students work collaboratively by distributing the pages to all.

Hand Drawn Rotoscope Animation

Using Image Sequence Technique



William Kentridge, Drawing for film Stereoscope (Felix Crying) (left)
Jeanne Bjork-Original Watercolor Crayons Knitting Rotoscope (right)

Jeanne Bjork

Pewaukee High School

Roto What? Get the Scoop On Rotoscope

- Twitter: @bellafiore3
- Instagram Art Club: @phsartclub
- Website: <https://phsvisualartdept.weebly.com/>
- Webpage with resources: <https://phsvisualartdept.weebly.com/roto-what-get-the-scoop-on-rotoscope.html>
- Email: bjorjea@pewaukeeschools.org



Jeanne Bjork-Self Portrait with Enlight app