



## Contest Description

Edmonton Expo Centre, Edmonton

May 8 & May 9, 2024

<b>EVENT:</b> 3D Character Computer Animation (Teams of Two)	<b>LEVEL:</b> Secondary
<b>EQUIPMENT DROP OFF, SET-UP AND TESTING</b> MAY 7: 4:00PM – 5:30PM	<b>LOCATION:</b> Hall B Edmonton Expo Centre, Edmonton
<b>COMPETITION START &amp; END TIMES:</b> MAY 8: 8:00 AM – 4:30 PM MAY 9: 8:00 AM – 1:00PM (Detailed schedule below)	<b>REGIONALIZED:</b> NO
<b>DURATION:</b> 13 hrs. (2 days)	<b>TRADE #:</b> 87

*Please Note: This document is subject to change as competition information is updated. Competitors are responsible for staying up to date with the most recent information. Check the footer for last updated date. Changes will be highlighted in yellow.*

**BYOD (Bring Your Own Device):** Competitors are required to bring their own device and software for the competition.

- Competitors are required to bring their own device and software that meets or exceeds the stated requirements for their competition. Each competitor can choose their own device and software so their workflow and process is what they are familiar with.

It is strongly encouraged that teacher mentors review the 'workflow' with their students prior to the contest. Please refer to Item #9 under 'Additional Competition Information and Expectations'

- If competitors are bringing a computer or laptop from their school (instead of their personal computer), please ensure that the computer is unlocked allowing for USB sticks, documents and possibly software to be saved/installed to the hard drive and IT support can be properly provided onsite. This may require administrator privileges to access the CMOS settings. All USB sticks provided for competition use will be cleared and inspected prior to being used.





One known issue is that students borrow laptops or workstations that have always been accessed using the school network. When these machines are taken away from the school network, the students frequently don't have access to the same user 'profile', and so sometimes students can't log on, sometimes software licenses are missing, and sometimes students are unable to make changes to the machine (such as adding drivers for their tablets or licenses for their software) because their 'local' login doesn't confer privileges. An easy way around this is to test the device--and all peripherals--using the login the student will use, away and apart from the school network before leaving for the competition.

### GENERAL DESCRIPTION

Character Animation deals with the creation and animation of characters and models used in storytelling. They may take the shape of any object(s) in response to the theme provided. The theme of the project will be provided to the competitors at the orientation session on Day One of the competition. There are no limitations as to the nature of the characters but is *strongly* suggested that 3D characters be limited in their complexity. While a character's ability to express emotion and instill empathy is the mark of good character development, *very* simple characters can express emotion, and much time has been wasted in the past on character modelling and articulated movement that has resulted in incomplete stories or animations being submitted. Please read the revised rules and rubric for more clarification. Upon completion of the animation, teams will present their storyboard, model sheets and animation for judging.

### Purpose of the Challenge:

To evaluate each team's ability, skill and knowledge of animation as they explore employment options in the animation field.

### Skills and Knowledge to be Tested:

Given a project, participants will be challenged to detail and plan the development of a completed story. The competition will focus on the participants' ability to tell that story. By scripting and storyboarding, the competitors outline their idea on paper. Competitors will then bring their story to life by creating, animating and compositing the characters and layouts outlined in their storyboard. This represents the animation process.

### Project:

In order to reflect the process used in the animation industry, the project will be structured in duration and required form. Examples of forms might include a gaming animation, movie trailers, shorts, instruction, advertising, business, re-enactments, or simulations. The competition is completed in teams of two. The final storyboards and project files must be submitted and remain with Skills Canada Alberta, but students are allowed to take their completed project files and animations at the end of the event.





**Day of Competition** - Competitors will be given 13.5 hrs to create animatics and animation, that include a min. one character. Make sure your story has a clear setup, conflict, and resolution. The **resolution** must have a character **stand to sit or sit to stand**.

**Wild Card** - During the orientation competitors will be given an additional wild card that must be included in the setup, conflict and resolution of their story. The additional wild card must be a necessary part of the story plot. The single wild card will be selected from one of the following: **UFO, YoYo, Fish**

### **Additional Competition Information/Expectations:**

1. 3D teams will be provided with a theme at the start of the competition. Please note that this theme will be different from the 2D theme for 2023. Because the time required to model and animate complex 3D characters tends to eat into time that would otherwise be spent on effective storytelling, **3D teams will be given a theme that requires the use of simple characters only**. This will allow teams to create more fully-developed animations, as opposed to more fully-developed characters.
2. For examples, think of 'Lumiere' from Beauty and the Beast, or any of the typical 'Minecraft' characters.
3. **Remember, 3D characters must not have overly complicated structures. Also remember that you earn more marks for your story, aesthetics, and the quality of your camera work and animation than you do for the design of your character. If you waste too much time on designing or articulating a complicated character, your overall animation will suffer.**
4. Teams will produce a storyboard and character model sheets on paper that set out their proposed animation that follows the project form and theme provided.
5. The first hour of the competition will be focused on storyboard work, exclusively. After the first hour of competition students will be allowed access to the computer workstations.
6. There must be an obvious beginning and end to the animation. This could be through the use of the first and last frames being black, or through titling.
7. **At least one object in the animation has to have an original mapped surface. Competitors will indicate on their storyboard which object is mapped.**
8. Competitors should note that model sheets **MUST** include front, profile (side), and  $\frac{3}{4}$  (perspective) views of the character.
9. Storyboard and character sheets will be collected at 12:00 p.m. on the first day of competition. Storyboards will be returned to each team after they have been copied by the Provincial Technical Committee (PTC). Upon return of the sheets, minor modifications will be permitted.
10. Competitors are expected to create convincing environments (colour, texture, and lighting) and supporting models.
11. **Default lighting CANNOT be used. Teams are expected to create moods using lighting techniques.**
12. Competitors should demonstrate their knowledge of the 12 principles of animation in their project. In this 3D competition, **the effective use of basic animation principles of animation will be crucial to creating engaging characters based on the simple character objects required.**

13. Nowhere within the presentation should the name of the students, or their school appear.
14. Teams will be given advice and instruction on workflow so as to prevent issues or wasted time later in the production process. For 3D, this advice will involve render settings and suggestions for export so that the animation sequence can be rendered in a time-efficient way, so as to ensure that additional compositing can be completed. Please note that this will be advice only, but *teams must be able to export a playable video within the time allowed so that judging can commence at 1:00 p.m. on Day 2.*
15. Competitors will be able to record their own sounds using a microphone (competitors must supply own microphone). Teams may also bring sound effects or music to the competition; portable memory devices may be reviewed by PTC members at the event to ensure that memory devices contain only the intended music and sound effects. Music and sound must be used with permission. No popular music will be permitted.
16. The teams will work independently. Instructors and/or observers will give no assistance and are not allowed in the competition area except with the permission of the PTC Team.
17. Judges may decide to take a walk-through on the first day of competition to see what teams are creating. They may also look at project files or storyboards on Wednesday afternoon. Judges, where possible, will prepare brief reflective comments that may be shared with teams via email after the competition. A 'showing' of the completed videos will be held at the completion of judging, prior to the main Skills Awards Ceremony.
18. While this is an extremely safe working environment, there are environmental stresses. Students should bring layered clothing to allow for heat or cold, earbuds or headphones that allow for quiet or for the playing of music, and anything else they may feel will help them to sit for two days at a computer, in a folding chair, in a 'large hall' environment.

## SCHEDULE

### Day 1

<b>8:00 AM – 8:10 AM</b>	Project details provided
<b>8:10 AM – 9:00 AM</b>	Storyboarding and Model Sheets
<b>9:00 AM – 10:00 AM</b>	Storyboards can continue to be worked on, but production can start. Storyboards must be handed in by 10:00 AM
<b>10:00 AM – 4:30 PM</b>	Production Time

Day 2

8:00 AM – 1:00 PM	Production Time
1:00 PM	Competition ends and students begin to submit their completed animations to allow judging to begin
4:00 PM	Public viewing of completed animations

There will be a 60-minute lunch break each day from Noon until 1:00 p.m. Competitors can choose how much of this time is taken for lunch.

**EQUIPMENT & MATERIALS**

**Equipment and Materials supplied by the Committee:**

- Table and Chair

**Equipment and Materials Competitors Must Supply:**

- *Competitors are required to bring their own device and software for the competition.* Each competitor can choose their own device and software so their workflow and process are what they are familiar with.
- If competitors are bringing a computer or laptop from their school (instead of their personal computer), please ensure that the computer is unlocked so documents and possibly software can be saved/installed to the hard drive and technology support can be provided onsite. This may require access to CMOS settings.
- Students may bring one computer per team member, and one spare machine per team of two. This second machine can be used for rendering purposes. Only three machines are allowed per team.
- Competitors must provide their own power bar and extension cords.

**Optimum Hardware Requirements:**

- Intel Graphics Workstation i7 Quad Core Processors
- 1 TB HD
- 16Gb RAM
- Dedicated video card (suggested 2GB) as approved by Autodesk
- Flat Panel Display 1920 X 1080
- Sound card
- Operating System –Windows 7 or 10 64 Bit
- WiFi enabled computer system



#### Suggested software:

- 3D Software: 3D Studio Max, Maya, Blender
- 2D Software: Adobe CC Animate, ToonBoom Harmony, ToonBoom
- Storyboard Pro

#### Video and Graphic Software:

- Adobe Photoshop, Adobe After Effects, and Adobe Premiere Pro

#### Viewing Software:

- VLC

#### Additional Equipment and material suggested:

- Tablet and driver (Driver compatible with your system)
- Headphones
- Pencils and erasers

Teams are required to contact the technical chair by **April 28, 2024**, at [hayescommakevin@gmail.com](mailto:hayescommakevin@gmail.com) to advise the Committee what software they will be using if it is not listed above. Competitors should be prepared to use the software provided by the committee if installing their desired software is unsuccessful.

#### Bring Your Own Device (BYOD) Information

**IMPORTANT:** Competitors are required to bring their own device and software that meets or exceeds the stated requirements for their competition. Each competitor can choose their own device and software so their workflow and process is what they are familiar with. If competitors are bringing a computer or laptop from their school (instead of their personal computer), please ensure that the computer is unlocked allowing for USB sticks, documents and possibly software to be saved/installed to the hard drive and IT support can be properly provided onsite. This may require administrator privileges to access the CMOS settings. All USB sticks provided for competition use will be cleared and inspected prior to being used.

**Note, computers must remain inside the competition area for the duration of the competition from the time the competition begins on Day 1 to when the competition ends on Day 2 (including overnight). Competitors may supply their own locking cables if they wish.**

**Equipment Set-Up and Testing for all event areas that are Bring Your Own Device will be held on Tuesday May 7, 2024, at 4:00pm (before opening ceremonies/registration).**





### Equipment Set-up and Testing (for BYOD events)

Before the Opening Ceremonies and registration, students who are competing in technology-based events that are a BYOD event will be given an opportunity to set up and test their equipment to ensure their equipment is fully functional and networked (where required) prior to the start of the competition. Only accredited students and educators will be permitted into the competition site for equipment drop off and testing. Students who miss the equipment and setup testing opportunity will need to set up their equipment AFTER the mandatory COMPETITOR ORIENTATION time on the day of competition. Any time that is required to set up and test their equipment on the competition day will be part of their overall competition time. The competition time for these competitors will NOT be extended.

### Clothing Requirement

Appropriate business attire (casual business attire) must be worn to compete. All clothing must be neat and clean and free of rips and tears. Casual wear such as shorts will not be permitted. **No** visible school name or logo on any clothing may be worn during the competition.

### SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

### JUDGING CRITERIA

#### Point Breakdown: Total /64

The final animations from each team will be viewed and assessed individually by the judges. Tabulation sheets will be given to the members of the PTC for verification of scores. In the event of a tie judges will be asked to confer and come to a consensus on winners. Judges should direct any questions to members of the PTC only.



3D Animation Rubric				
Storytelling and Planning (20 Marks)				
	1	2	3	4
<p><b>Storyboard and model sheet:</b> <u>Clarity and Completeness</u></p> <ul style="list-style-type: none"> <li>• storyboard covers all elements to be communicated to the audience: character, setting, motion, sequencing, camera shots, transitions, dialogue, and sound</li> </ul>	The storyboard is <u>incomplete</u> ; you have trouble understanding the story and how it's being told	A <u>partial</u> storyboard was provided: you understand the story but not how it's to be told	The storyboard is <u>sufficient</u> , you understand the story and how other elements work together to tell it well	The storyboard is <u>in-depth</u> : most people could follow it to produce a quality animation that follows the author's vision
<p><b>Storyboard and model sheet:</b> <u>Relation to final animation</u></p> <ul style="list-style-type: none"> <li>• the final animation reflects the planned storyline</li> </ul>	There is only a vague <u>connection</u> between the planning and final animation	There is a <u>credible relationship</u> between the planning and the animation	The animation demonstrates a <u>good connection</u> to the planning	The final animation has a <u>clear connection</u> to the planning
<p><b>Story:</b></p> <ul style="list-style-type: none"> <li>• <u>elements</u> (character, setting, motion, sequencing, camera shots, transitions, dialogue, and sound) <u>complement the storyline</u></li> </ul>	There is <u>little evidence</u> that elements were chosen to complement the story	Some elements <u>did relate</u> to the story	<u>Most elements complemented</u> the story	The elements chosen were <u>insightful and memorable</u> complements to the story
<p><b>Story:</b></p> <ul style="list-style-type: none"> <li>• made <u>use of the theme</u></li> </ul>	The story is a <u>minimal nod</u> to the theme	The story is a <u>general</u> reflection of the theme	The story is a <u>clear statement</u> of the theme	The story is an <u>insightful</u> application of the theme
<p><b>Story:</b></p> <ul style="list-style-type: none"> <li>• <u>structure and engagement</u></li> </ul>	<u>Little structure or emotional appeal</u> to the story	The story has <u>interesting moments</u> or action	The story <u>builds and holds our interest</u>	<u>We take an emotional journey</u> with this story from beginning to climax to final resolution





Story Telling Total				
Character Design (8 Marks)				
	1	2	3	4
<p><b>Character quality:</b></p> <ul style="list-style-type: none"> <li>a judgment of the best individual character in terms of <u>simplicity of structure, proportion, and appeal</u></li> </ul>	The character is <u>'unlikely'</u> , or is overly complex	The character is believable and <u>not overly complex</u>	The character has <u>obvious appeal or personality</u> and is <u>not overly complex</u>	The character design is an <u>insightful and engaging blend of simplicity and appeal</u>
<p><b>Characters</b></p> <ul style="list-style-type: none"> <li><u>look and style</u></li> </ul>	Appear to be of little or <u>no relevance</u> to the story	Are <u>related</u> to the story	Are <u>useful additions</u> to the story	Add to the story in <u>specific and meaningful ways</u>
Character Design Total				
Aesthetics (20 Marks)				
	1	2	3	4
<p><b>Colour:</b></p> <ul style="list-style-type: none"> <li><u>effective use of</u></li> </ul>	Colour use is <u>random or distracting</u>	Colour use is <u>basic or unobtrusive</u>	Colours and colour theme <u>complement</u> the animation	<u>Effective and purposeful colour use</u> adds to the story
<p><b>Original lighting and shapes:</b></p> <ul style="list-style-type: none"> <li>help <u>create desired mood</u></li> </ul>	Lighting and shapes <u>have no relation</u> to the mood, or default lighting and shapes are used	Lighting and shapes are a <u>minor contribution</u> to the mood	Lighting and shapes <u>facilitate the mood in a real way</u>	Lighting and shapes are <u>significant pieces of an immersive feeling</u>
<p><b>Object mapping</b></p>	<u>No attempt</u> at original mapping	A <u>modified map</u> is used on at least one object	An <u>original map</u> is used on at least one object	An <u>original map</u> is used that <u>significantly adds to the story</u>
<p><b>Sound:</b></p> <ul style="list-style-type: none"> <li><u>effective use of</u></li> </ul>	Sound use is <u>random</u> or a <u>distracting</u>	Sound use is <u>basic or unobtrusive</u>	Sounds <u>complement</u> the animation	<u>Effective and purposeful sound use</u> adds to the story

<b>Design:</b> <ul style="list-style-type: none"> <li>• <u>unity</u> between the characters, environment and props</li> </ul>	There is <u>little or no unity</u>	Unity is <u>somewhat lacking</u>	There is <u>sufficient unity</u> to communicate a style	There is <u>complete unity</u> and a <u>strong style</u>
<b>Aesthetics Total</b>				
<b>Animation (16 Marks)</b>				
	1	2	3	4
<b>Camera use:</b> <ul style="list-style-type: none"> <li>• <u>intentional and effective use</u> of camera shots, angles, or movements</li> </ul>	Camera shots, angles, or movements are <u>absent or unintentional</u>	Shots, angles, or movements are <u>obviously planned and work</u>	Shots, angles, or movements <u>add impact</u> to various parts of the animation	Shots, angles, or movements <u>are a strong visual storytelling component</u> throughout this animation
<b>Animation principles:</b> <ul style="list-style-type: none"> <li>• <u>effective use of</u></li> </ul>	Basic animation principles are <u>absent</u>	<u>Some use of</u> basic principles	The use of animation principles is <u>obvious</u>	Animation principles <u>add significantly to the story</u>
<b>Movement:</b> <ul style="list-style-type: none"> <li>• of <u>characters or objects</u></li> </ul>	Is <u>stilted or jerky</u>	Is <u>basic and workmanlike</u> in most places	Is <u>consistently good</u> throughout	Is <u>fluid and convincing</u>
<b>Acting:</b> <ul style="list-style-type: none"> <li>• characters' <u>expressions or posing</u> are engaging <i>without being overly complicated</i></li> </ul>	The characters lack <u>any expression</u> or expressive movement	<u>Expression or movement begins to liven</u> characters	The <u>characters are convincing</u> in their expression or movement	The <u>characters are s captivating blend</u> of simple expressions and movement
<b>Animation Total</b>				
<b>TOTAL SCORE</b>				



## ADDITIONAL INFORMATION

### Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

### Competitor Registration

Registration for Provincial Skills Canada Competition (PSCC) will open online on January 17, 2024 @ 8:30 AM. Please refer to this competitions event page for additional registration and competition information: <https://skillsalberta.com/competition/>

### Test Project change at the Competition

Where the Test Project has been circulated to competitors in advance, PTC can change a maximum of 30% of the work content.

### Lunch

Lunch for accredited competitors will be provided by Skills Canada Alberta.

**Parking & Venue Maps:** <http://edmontonexpocentre.com/attend/parking/>

Parking is FREE for all attendees.

### Opening Ceremonies / Competitor Registration

Opening Ceremonies for the PSCC will take place on Tuesday May 7, 2024, at 6:00 pm in Hall D of the Edmonton EXPO Centre. Admission is free, and everyone is welcome to attend. It is important to note that competitor registration will open immediately following the Opening Ceremonies.

### Awards Ceremony

The Awards Ceremony will take place on Thursday May 9, 2024, at 6:30 pm in Hall D of the Edmonton EXPO Centre. Admission is free and everyone is welcome to attend. The Awards Ceremony will be shown live at <http://skillsalberta.com/>

### Team Alberta Information

Team Alberta will be selected at the PSCC Awards Ceremony. Gold medalists will then be eligible to participate at the Skills Canada National Competition (SCNC) on May 27- June 1, 2024, in Quebec City, QC. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at <http://www.skillscanada.com/>.

During the PSCC Awards Ceremony on Thursday May 9, 2024, gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC. Students must be present at the Awards Ceremony to claim their position on Team Alberta. If the Gold medalist is not able to attend SCNC, the next top ranking individual will be asked to participate. If a student is not able to attend the Awards Ceremony a letter confirming the student's interest in Team Alberta





participation must be emailed to [javierad@skillsalberta.com](mailto:javierad@skillsalberta.com) prior to the start of competition on May 8, 2024.

Please prepare your students in advance to accept a position on Team Alberta and outline how your school will support their participation. Furthermore, it is very important that all fieldtrip/travel information for potential Team AB members is organized and completed prior to the selection of Team AB.

### Questions?

Please contact Whitney Koop at [whitneyk@skillsalberta.com](mailto:whitneyk@skillsalberta.com) if you have any questions regarding the Contest Description.


### COMMITTEE MEMBERS

Chair - Kevin Hayes, 2D Animation  
Emily Radvanszky










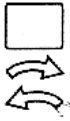


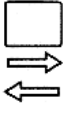



APPENDICES

STORYBOARD SAMPLE

TEAM <input style="width: 50px;" type="text"/>	WRITTEN BY : <input style="width: 50px;" type="text"/>	TITLE : <input style="width: 50px;" type="text"/>			ACTION	SOUND	NOTES	page
					ACTION	SOUND	NOTES	
					ACTION	SOUND	NOTES	

STORYBOARD SYMBOLS

Camera Movements		Character Movements	
 Racking	 Tilt Up	 Turning Right Turning Left	
 Zoom Out	 Tilt Down	 Moving Right Moving Left	
 Zoom In	 Pedestal Down	 Moving Down Moving Up	
 Pan Right Pan Left	 Pedestal Up		
 Dolly In	 Track Right Track Left		
 Dolly Out			

MODEL SHEETS

Perspective (3/4 Front)	Front
Side	Back

## 12 PRINCIPLES OF ANIMATION

**THE 12 BASIC PRINCIPLES OF ANIMATION:** Paraphrased from the "Illusion Of Life" by Frank Thomas & Ollie Johnston (pp.47-69). Look these up and read the original version for a complete understanding.

### 1. SQUASH AND STRETCH

This action gives the illusion of weight and volume to a character as it moves. Also squash and stretch is useful in animating dialogue and doing facial expressions. How extreme the use of squash and stretch is, depends on what is required in animating the scene. Usually it's broader in a short style of picture and subtler in a feature. It is used in all forms of character animation from a bouncing ball to the body weight of a person walking. This is the most important element you will be required to master and will be used often.

### 2. ANTICIPATION

This movement prepares the audience for a major action the character is about to perform, such as, starting to run, jump or change expression. A dancer does not just leap off the floor. A backwards motion occurs before the forward action is executed. The backward motion is the anticipation. A comic effect can be done by not using anticipation after a series of gags that used anticipation. Almost all real action has major or minor anticipation such as a pitcher's wind-up or a golfers' back swing. Feature animation is often less broad than short animation unless a scene requires it to develop a characters personality.

### 3. STAGING

A pose or action should clearly communicate to the audience the attitude, mood, reaction or idea of the character as it relates to the story and continuity of the story line. The effective use of long, medium, or close up shots, as well as camera angles also helps in telling the story. There is a limited amount of time in a film, so each sequence, scene and frame of film must relate to the overall story. Do not confuse the audience with too many actions at once. Use one action clearly stated to get the idea across, unless you are animating a scene that is to depict clutter and confusion. Staging directs the audience's attention to the story or idea being told. Care must be taken in background design so it isn't obscuring the animation or competing with it due to excess detail behind the animation. Background and animation should work together as a pictorial unit in a scene.

### 4. STRAIGHT AHEAD AND POSE TO POSE ANIMATION

Straight ahead animation starts at the first drawing and works drawing to drawing to the end of a scene. You can lose size, volume, and proportions with this method, but it does have spontaneity and freshness. Fast, wild action scenes are done this way. Pose to Pose is more planned out and charted with key drawings done at intervals throughout the scene. Size, volumes, and proportions are controlled better this way, as is the action. The lead animator will turn charting and keys over to his assistant. An assistant can be better used with this method so that the animator doesn't





have to draw every drawing in a scene. An animator can do more scenes this way and concentrate on the planning of the animation. Many scenes use a bit of both methods of animation.

## 5. FOLLOW THROUGH AND OVERLAPPING ACTION

When the main body of the character stops all other parts continue to catch up to the main mass of the character, such as arms, long hair, clothing, coat tails or a dress, floppy ears or a long tail (these follow the path of action). Nothing stops all at once. This is follow through. Overlapping action is when the character changes direction while his clothes or hair continues forward. The character is going in a new direction, to be followed, a number of frames later, by his clothes in the new direction. "DRAG," in animation, for example, would be when Goofy starts to run, but his head, ears, upper body, and clothes do not keep up with his legs. In features, this type of action is done more subtly. Example: When Snow White starts to dance, her dress does not begin to move with her immediately but catches up a few frames later. Long hair and animal tail will also be handled in the same manner. Timing becomes critical to the effectiveness of drag and the overlapping action.

## 6. SLOW-OUT AND SLOW-IN

As action starts, we have more drawings near the starting pose, one or two in the middle, and more drawings near the next pose. Fewer drawings make the action faster and more drawings make the action slower. Slow-ins and slow-outs soften the action, making it more life-like. For a gag action, we may omit some slow-out or slow-ins for shock appeal or the surprise element. This will give more snap to the scene.

## 7. ARCS

All actions, with few exceptions (such as the animation of a mechanical device), follow an arc or a slightly circular path. This is especially true of the human figure and the action of animals. Arcs give animation a more natural action and better flow. Think of natural movements in the terms of a pendulum swinging. All arm movement, head turns and even eye movements are executed on an arc.

## 8. SECONDARY ACTION

This action adds to and enriches the main action and adds more dimension to the character animation, supplementing and/or re-enforcing the main action. Example: A character is angrily walking toward another character. The walk is forceful, aggressive, and forward leaning. The leg action is just short of a stomping walk. The secondary action is a few strong gestures of the arms working with the walk. Also, the possibility of dialogue being delivered at the same time with tilts and turns of the head to accentuate the walk and dialogue, but not so much as to distract from the walk action. All of these actions should work together in support of one another. Think of the walk as the primary action and arm swings, head bounce and all other actions of the body as secondary or supporting action.

## 9. TIMING

Expertise in timing comes best with experience and personal experimentation, using the trial and error method in refining technique. The basics are: more drawings between poses slow and smooth the action. Fewer drawings make the action faster and crisper. A variety of slow and fast timing within a scene adds texture and interest to the movement. Most animation is done on twos (one drawing photographed on two frames of film) or on ones (one drawing photographed on each frame of film). Twos are used most of the time, and ones are used during camera moves such as trucks, pans and occasionally for subtle and quick dialogue animation. Also, there is timing in the acting of a character to establish mood, emotion, and reaction to another character or to a situation. Studying movement of actors and performers on stage and in films is useful when animating human or animal characters. This frame by frame examination of film footage will aid you in understanding timing for animation. This is a great way to learn from the others.

## 10. EXAGGERATION

Exaggeration is not extreme distortion of a drawing or extremely broad, violent action all the time. It's like a caricature of facial features, expressions, poses, attitudes and actions. Action traced from live action film can be accurate, but stiff and mechanical. In feature animation, a character must move more broadly to look natural. The same is true of facial expressions, but the action should not be as broad as in a short cartoon style. Exaggeration in a walk or an eye movement or even a head turn will give your film more appeal. Use good taste and common sense to keep from becoming too theatrical and excessively animated.

## 11. SOLID DRAWING

The basic principles of drawing form, weight, volume solidity and the illusion of three dimension apply to animation as it does to academic drawing. The way you draw cartoons, you draw in the classical sense, using pencil sketches and drawings for reproduction of life. You transform these into color and movement giving the characters the illusion of three-and four-dimensional life. Three dimensional is movement in space. The fourth dimension is movement in time.

## 12. APPEAL

A live performer has charisma. An animated character has appeal. Appealing animation does not mean just being cute and cuddly. All characters have to have appeal whether they are heroic, villainous, comic or cute. Appeal, as you will use it, includes an easy to read design, clear drawing, and personality development that will capture and involve the audience's interest. Early cartoons were basically a series of gags strung together on a main theme. Over the years, the artists have learned that to produce a feature there was a need for story continuity, character development and a higher quality of artwork throughout the entire production. Like all forms of story telling, the feature has to appeal to the mind as well as to the eye.

**LIKE THIS! – not like this...** (animation tips and tricks)

<https://vimeo.com/41558459>