

The Twelve Principles of Animation

First developed in the Disney Studios in the '30s, these twelve principles are still used by animators today.

1- Squash and Stretch- As a mass, such as a ball, is thrown, it stretches in the direction of the motion. When it hits against an object, such as a wall, it deforms (squashes). Squash and stretch applies to any mass, and it's use will increase the illusion of mass and weight in a drawn shape.

2- Anticipation- This is a simple idea. When you have an action

1- Tell your audience you're going to do it,

2- Do it,

3- Tell them you did it.

Think of a golfer about to hit a ball. He checks his stance, practices the swing (#1), then he rears back and hits the ball (#2), then he continues through his swing, follows through (#3), to complete the action.

3- Staging- Set the stage for the best way to show off an action. Think of a person on a stage giving a speech, with a sign language interpreter to his side. Do you put the interpreter in front or back of the speaker? Is he facing the audience when he signs, or is his back to the viewer? His placement to get the best effect is called staging.

4-Straight Ahead vs. Pose to Pose Action- In the straight ahead method of animation you make up the action as you go along. In pose to pose you draw key positions for the character to meet at critical points. Straight ahead method will give you the most spontaneous work, pose to pose will be tighter and more choreographed. It's best to use a little of both to get the best style of animation.

5- Follow Through and Overlapping Action- Follow through is a lot like the third stage of Anticipation. You are extending movement after the action has started or finished. Overlapping action means that something else in the scene is moving or starting to move before the main action is finished. The idea is not to have any dead frames where there is no action at all; something is always going on.

6-Slow in, Slow out- Also call "easing in and out". Action does not move at a constant rate of speed. In a race, you start off running slower, you speed up, and when you tire, you slow down. When a ball is shot from a cannon it comes out very fast, as it reaches the top of it's arc it slows down almost to a stop, then speeds up again on the descent. Animators study action to when, where, and how much to ease in and out of an action.

7- Arcs- The principle of arcs means that almost everything moves in an arc, as opposed to a straight line.

8-Secondary Actions- A more interesting stage will be created by adding secondary actions to your animation. Think of a man walking down a street. His dialog and his walk are the most important part of the scene, but a random dog walking across the street and stopping to sniff a fire hydrant will add interest, and if done right, lift the scene from boring to funny. Secondary action in a scene should always add to the scene, not distract from the main focus.

9- Timing- The amount of frames, and therefore time, that you use to convey an action is timing. Timing is an art. One second too slow or too fast and you lose a punchline, or go from interesting to boring. In general, fast is funnier. Contrast slow moments with fast, and create rhythm of action and dialog of fast, slow, faster, slow, still faster, slow, until you build up to a punch line or scene's climax.

10-Exaggeration - Don't be subtle. Even in dramatic, or realistic cartooning, exaggeration will heighten a story.

11-Solid Drawing- Even though your cartoons are not representational fine art, they must still be believable in their little world. You still need to know perspective, use of color and value, focal point and composition (all basic artistic principles) to create a world that your viewer understands and wants to get lost in.

12-Appeal- You can make the best animated figures in the world, but if the character doesn't appeal to your audience then it's not worth the electrons it takes to store it. Look at the great animated failures out there. like TRON (1980's), The Polar Express (2004), Max Fleisher's long fable movies (1930's). These were cutting edge animation for their time, but they either didn't have a good story, or didn't have characters the audience wanted to see.

Adapted from several animation books-
The Twinkle Guide to Flash Animation, John Kuramoto
Animation, from Script to Screen, Shamus Culhane
The Animators Survival Kit, Richard Williams.

--Alice Taylor, 2004