



Republic of the Philippines
Department of Education
REGION III
SCHOOLS DIVISION OFFICE OF NUEVA ECija

LEARNING ACTIVITY
SHEET SPECIAL PROGRAM IN
ICT 8 FREEHAND DESIGN 8
Second Quarter, Week 4

Name of Learner: _____ Date: _____
Grade Level /Section: _____

LEARNING ACTIVITY SHEET
PRINCIPLES AND CONCEPT OF ANIMATION

Background Information for Learners

Disney animators Ollie Johnson and Frank Thomas first introduce the 12 principles of animation in their book, *The Illusion of Life: Disney Animation* which was first released in 1981. They study the work of Disney animators from 1930s onwards, and minimize their method down to 12 basic principles. These principles form the foundation of all animation work and are significant for a number of different fields.

12 Basic Principles of Animation

1. Squash and stretch

The most important principle is "*squash and stretch*", the purpose of which is to give a sense of weight and flexibility to drawn objects. It can be applied to simple objects, like a bouncing ball, or more complex constructions, like the musculature of a human face.

2. Anticipation

An action occurs in three parts: 1. *the preparation for the action - this is anticipation* 2. *the action* 3. *the termination of the action*

Anticipation can be the anatomical preparation for the action, e.g., retracting a foot before kicking a ball. It can also be a device to attract the viewer's attention to the proper screen area and to prepare them for the action, e.g., raising the arms and staring at something before picking it up, or staring offscreen at something and then reacting to it before the action moves onscreen.

3. Staging

This principle is akin to staging as it is known in theatre and film. Its purpose is to direct the audience's attention, and make it clear what is of greatest importance in a scene; what is happening, and what is about to happen.

4. Straight Ahead Action and Pose-to-Pose Action

Straight Ahead Action in hand drawn animation is when the animator starts at the first drawing in a scene and then draws all of the subsequent frames until he reaches the end of the scene.

Pose-to-Pose Action is when the animator carefully plans out the animation, draws a sequence of poses, i.e., the initial, some in-between, and the final poses and then draws all the in-between frames.

5. Follow through and overlapping action

These closely related techniques help render movement more realistic, and give the impression that characters follow the laws of physics.

- "**Follow through**" means that separate parts of a body will continue moving after the character has stopped.
- "**Overlapping action**" is the tendency for parts of the body to move at different rates (an arm will move on different timing of the head and so on).
- A third technique is "**drag**", where a character starts to move and parts of him take a few frames to catch up.

6. Slow In and Out

This refers to the spacing of the inbetween frames at maximum positions. It is the second and third order continuity of motion of the object. Rather than having a uniform velocity for an object, it is more appealing, and sometimes more realistic, to have the velocity vary at the extremes.

7. Arcs

Most human and animal actions occur along an arched trajectory, and animation should reproduce these movements for greater realism.

8. Secondary action

This is an action that directly results from another action. It can be used to increase the complexity and interest in a scene. It should always be subordinate to and not compete with the primary action in the scene. An example might be the facial expression on a character. The body would be expressing the primary action while the expression adds to it.

9. Timing and Motion

The speed of an action, i.e., timing, gives meaning to movement, both physical and emotional meaning. The animator must spend the appropriate amount of time on the anticipation of an action, on the action, and on the reaction to the action. If too much time is spent, then the viewer may lose attention, if too little, then the viewer may not notice or understand the action.

10. Exaggeration

Exaggeration is an effect especially useful for animation, as perfect imitation of reality can look static and dull in cartoons. The level of exaggeration depends on whether one seeks realism or a particular style, like a caricature or the style of an artist.

11. Solid drawing

The principle of solid — or good — drawing, really means that the same principles apply to an animator as to an academic artist. The drawer has to understand the basics of anatomy, composition, weight, balance, light and shadow etc.

12. Appeal

Appeal in a cartoon character corresponds to what would be called charisma in an actor. A character who is appealing is not necessarily sympathetic —villains or monsters can also be appealing — the important thing is that the viewer feels the character is real and interesting.

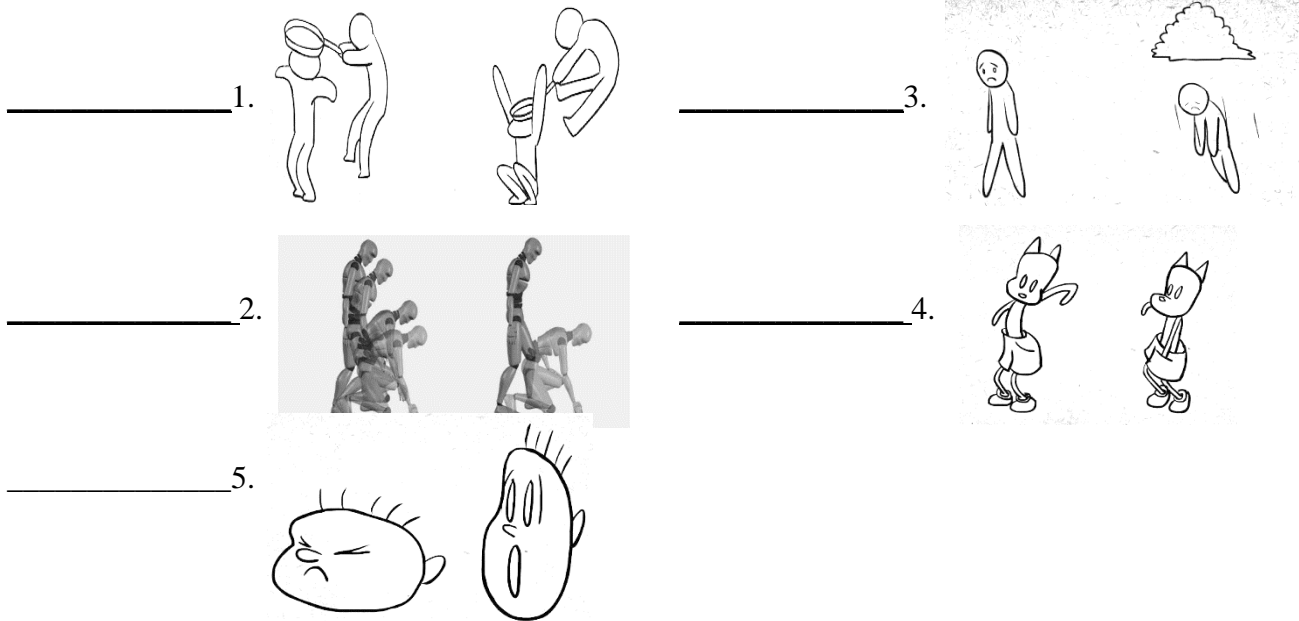
Link for the video: <https://www.youtube.com/watch?v=uDqjldI4bF4>

Learning Competency with code (Week 4)

A. Identify the 12 principles and concepts of animation.

Exercises/Activities

ACTIVITY 1: Activity 1: Identify the principle of animation used in the following example. Write our answer on the space provided before each number.



ACTIVITY 2: Activity 2: Match each principle listed in column A with the correct definition/description from column B.

Match each principle listed in column A with the correct definition/description from column B.

Column A

- ____ 1. Anticipation
- ____ 2. Appeal
- ____ 3. Arcs
- ____ 4. Exaggeration
- ____ 5. Follow Through and Overlap
- ____ 6. Secondary Actions
- ____ 7. Slow In and Slow Out
- ____ 8. Solid Drawing
- ____ 9. Squash and Stretch
- ____ 10. Staging

Column B

- a. Also known as ease in and ease out.
- b. Amount of frames between poses.
- c. Animated characters need to have a unique personality and have a wide range of emotions.
- d. Animation can occur before an action.
- e. Drawing the frames in sequence versus creating strong posed (keyframes) first and adding the in- between frames later.
- f. Living flesh distorts during motion. Exaggerated deformations will emphasize motion and impact.
- g. Minor actions that occur due to a major action.
- h. The action that follows the main action; actions do not stop at the same time.
- i. The basis for almost all natural motion; created using a spline curve.
- j. The clear presentation of an idea.
- k. To get maximum feeling from the audience, animated characters must be drawn or modeled precisely.
- l. Used to increase the readability of emotions and actions.

Reflection

Imagine watching an animated movie that did not use the 12 principles, what would it look like?
Share your ideas!

References for Learners

<https://www.scribd.com/doc/58677643/Module-1-2D-Animation>

<https://www.youtube.com/watch?v=uDqjIdI4bF4>

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Note: Practice Personal Hygiene Protocols at all times.