



Participant Handbook

Sector
Media and Entertainment

Sub-Sector
Animation, Gaming

Occupation
Animator

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Animator

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Media and Entertainment

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About this book

This Participant Handbook is designed to enable training for the specific qualification Pack (QP). The National Occupational Standard (NOS) has been explained under Unit/s. The Key outcome for the NOSs indicates the starting point of the Unit for that respective NOS.

- Understand Animation Requirements
- Produce 3D Animation.
- Conceptualise Creative Ideas for Production
- Produce Stop Motion Animation. Plan Tools and Workflow.
- Maintain workplace health and safety.
- Produce 2D Animation.



1. Introduction and Orientation

Unit 1.1 - Introduction to Media and Entertainment Sector

Unit 1.2 - Key Words



Key Learning Outcomes

Upon culmination of this module, user would be able to:

1. Understanding script/brief/storyboard
2. Developing Models by Virtual assistance
3. Checking the functioning of Models
4. Abiding by statutory safety compliances

2. Animation Requirement



Unit 2.1 - Fundamental and Principles of Animation and Modeling

Unit 2.2 - Life Drawings: Human Anatomy Fundamentals

Unit 2.3 - Animation Production Process



Key Learning Outcomes

The module will enable understanding as below

1. Descriptive guidelines to animation
2. Familiarise with modelling.
3. Character sketching and Drawing of human anatomy.
4. Production concepts and their applicability to each project.
5. The various techniques available for animating objects.
6. Understanding various elements that influence the final art work.
7. Enact and emote.
8. Learn to create hook up poses and animation.

Squash and Stretch

The tool that will require mastering as provides volume and weight to character. It helps define facial expressions and emotions. The level of use is determined by the style of picture or feature. A shorter picture requires broad stretch whereas an expression requires subtler one. This is used in all animation frames and designs from speaking, to walking to a simple box moving.

Note:

- Volume of character does not change
- Using as per different characters, materials and models
- Change as required but not change style
- Fast action can be smoothed with Expanding/stretching tool

Usage:

Understanding scale tool to determine up or down dimensions

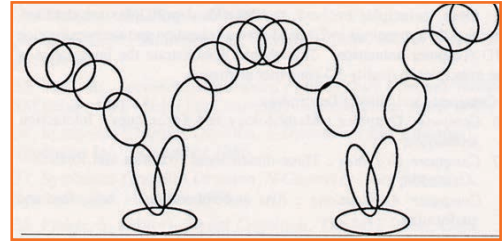


Fig.2.1.1: Squash and Stretch

Anticipation

If an action is to be at all dynamic in its movement and poses, the process of anticipation is important. The law of anticipation says that if an object is going to move forward, it must first move backward a little. Or, before moving to the right, it needs to anticipate this by starting to move to the left a little. Similarly, if a character is to jump upwards, it must first squash down a little.

As the character goes to pull down on the rope, he lifts it up a little first to anticipate the major downward Action. Anticipation always gives an important counter point to the main action. It teases the audience into believing that a character or object is moving in one direction when, in fact, it ultimately moves off in the other. This trick, therefore, adds further punch to the ultimate intended direction of the movement.

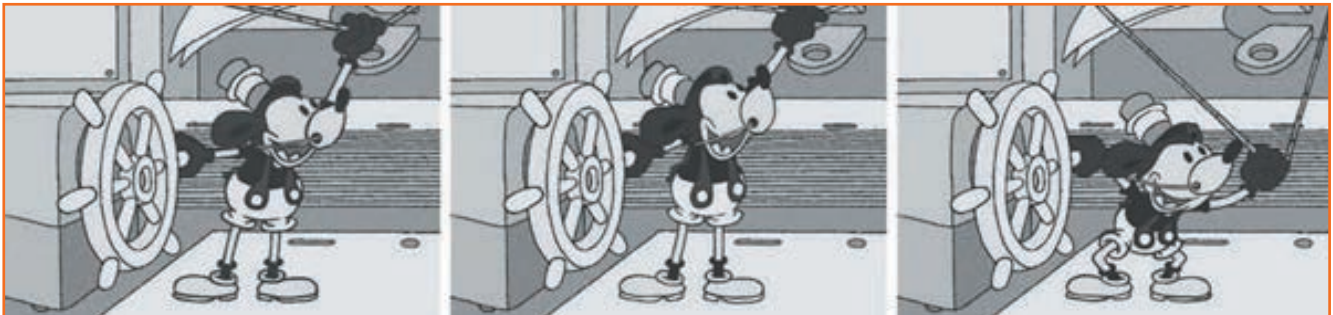


Fig.2.1.2: Anticipation Examples

Timing of anticipation is important too. The best anticipation is sometimes incredibly quick, at other times incredibly slow. How many times have you seen a cartoon character wind up really slowly, almost imperceptibly, then suddenly speed across the screen in the opposite direction? Sometimes we don't even see the run, just the blur or speed lines, or a cloud of dust, that get sucked along behind.

Consider a character pushing himself away from his desk, as shown below. The windup to the action would be him slowing-in to the end anticipation moment, where his body moves forward and his leg bends like a tightly wound spring. Then, suddenly, he pushes back and away from the desk, pushing hard on his leg, slowing-out as he does so. The effect is all the more powerful and convincing simply because of his slowing squeeze into that anticipation position, then his accelerating faster and faster as he pushes away from the desk. Ultimately, it is the timing and the anticipation that makes this all work so well.

Here, the character's head and body has just stopped moving but the hair continues to swing and settle using a fluid, overlapping movement that will keep the scene alive and believable.



Fig.2.1.8

Overlapping action also occurs on clothing. Again, it is entirely unrealistic that a character's clothes will move in exact accord with their body. For an extreme example, consider a running character with a long flowing coat, as shown below. While the character is in motion, the coat will flare out behind him. However, when the character stops, the coat will tend to keep on moving in the direction of the run, wrap itself around the here, note the stretching of the cloak as the character moves forward and down the steps. Then it bunches up as the character loses his forward momentum and prepares to take the next step.

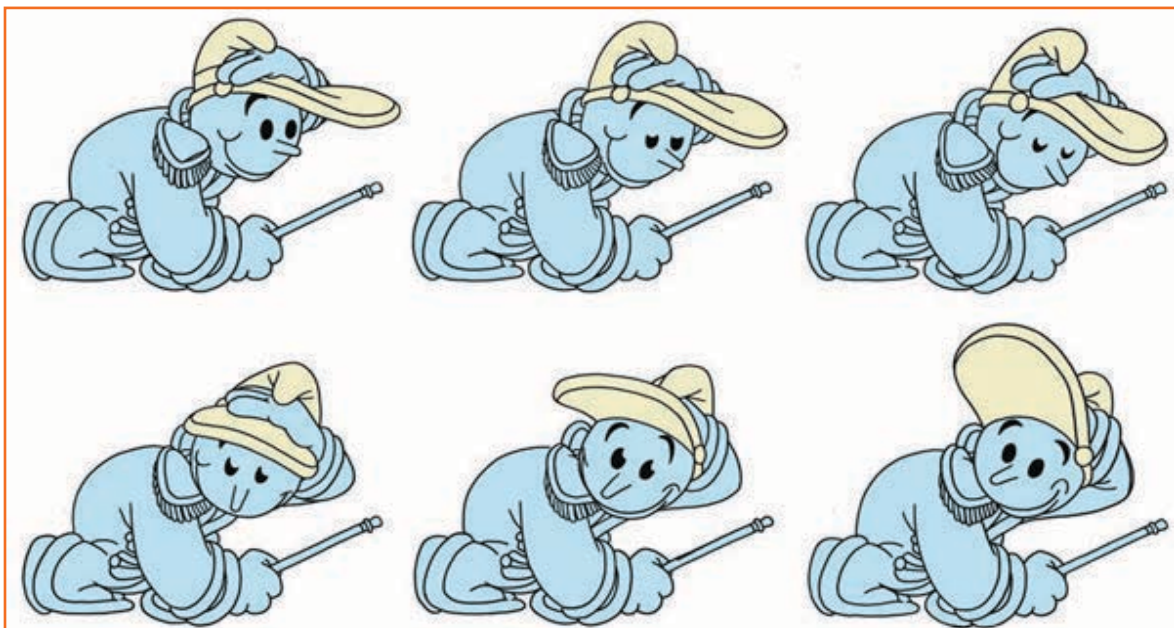


Fig.2.1.9

3. Conceptualise Creative Ideas for Production



Unit 3.1 - Create Hookup Poses and Animation

Unit 3.2 - Use Camera Angles to Emphasize Performance



Key Learning Outcomes

Upon culmination of the module, reader will be able to:

1. Find inspiration in form of character references that would aid design.
2. Generate inventive ideas and thoughts for creation using visualization and utilizing references from the concept art work arranged by the creators, drawing from creative ability, acting and performing.
3. Give priority to target audience, schedule and show requirements.



4. Animation Workflow and Tools

Unit 4.1 - Animation Workflow

Unit 4.2 - Tools Used for Animation



Key Learning Outcomes

Upon culmination of the module, reader will be able to:

1. Be aware of various software production tools available in market today. Suggest the most optimum tool for the production.
2. Assess timelines for production with respect to the production agenda.

Especially (both live action and animated) thrive on the options provided by digital compositing. Indeed, most Hollywood films these days couldn't even be made without digital compositing techniques!

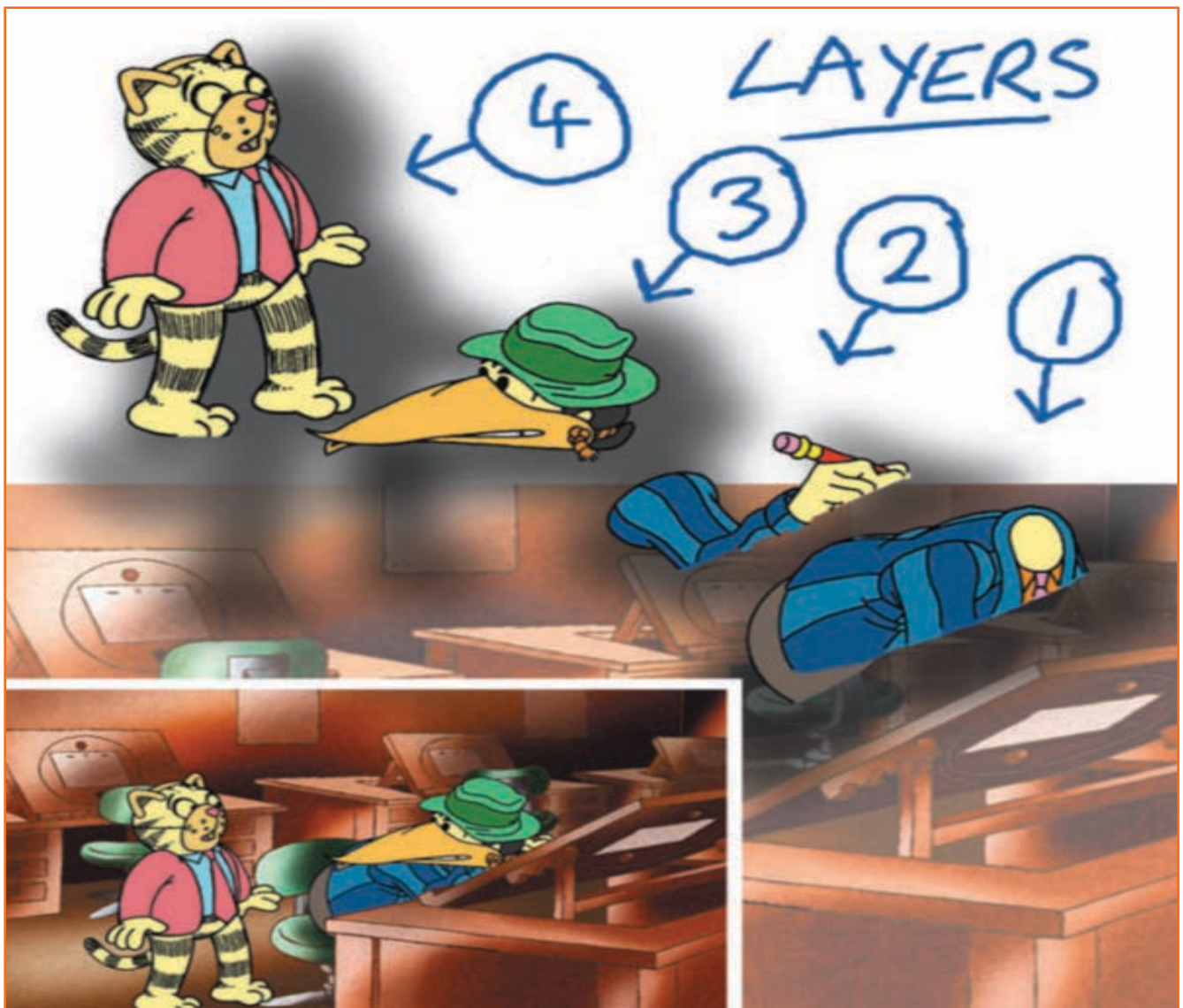


Fig.4.1.7: Separating the moving and static elements reduces the amount of redrawing for each frame.

4.1.10 Editing (2D and 3D)

Live-action editing is a much more creative process, in the sense that the director and editor take innumerable shot options for each scene in the film and use a process of trial and error and selective elimination of the least desirable options to create a satisfactory edit which interprets the film material best. Animation has made all those decisions before a single scene of the film has been animated and therefore, unless there was a gross miscalculation with the original storyboard or animatic up front, or unless an entire sequence has had to be redesigned, the finished animated scenes will pretty much be dropped into the existing animatic as they become available, until the entire animatic is replaced with the finished, colored, and composited animation footage.



5. Produce 2D Animation

Unit 5.1 - Working on Photoshop

Unit 5.2 - Working on Flash



Key Learning Outcomes

Upon culmination of the module, the animator will be able to:

1. Go about the storyboard for composition. Position the character with respect to the background and camera to make the desired animation.
2. Draw the key frame drawings to get a reference point for strong poses and incorporate audio or music assets.
3. Understand the concept of Hook-up or transition from one scene to another.
4. Work with layers to get good perspective views.
5. Effectively work with the team and other departments (assets, lighting and effects).
6. Review the animation looking at the creative and design specifications along with the brief.
7. Meet quality standards (reducing iterations) so that they are delivered within time.
8. Use the principles of design, film-making and 2D animation to create sequences and scenes.

6. Produce 3D Animation



- Unit 6.1 - Produce 3D Animation
- Unit 6.2 - Creating, Manipulating and Viewing Objects
- Unit 6.3 - Viewing the Maya 3D Scene
- Unit 6.4 - Polygonal Modeling
- Unit 6.5 - NURBS Modeling
- Unit 6.6 - Animation
- Unit 6.7 - Polygon Texturing
- Unit 6.8 - Rendering



Key Learning Outcomes

Upon culmination of this module, you will be able to:

1. Make films by applying principles of 3D animation and design.
2. Work on motion or performance capture studio.
3. Prototype pre-visualisation making for review.
4. Critically review animation produced.
5. Apply 3D animation techniques like realistic 3D animation (key frame animation plus motion capture).

UNIT 6.2: Creating, Manipulating and Viewing Objects

Unit Objectives

Upon culmination of the unit, reader will be able to:

1. Create 3Dimensional primitive objects.
2. Select objects for editing purposes.
3. Rotate and move objects using mouse

6.2.1 Creating a New Scene

Creating a new scene:

if it is Maya already running:

new scene automatically created.

else

select File > New Scene.



Fig.6.2.1: Project

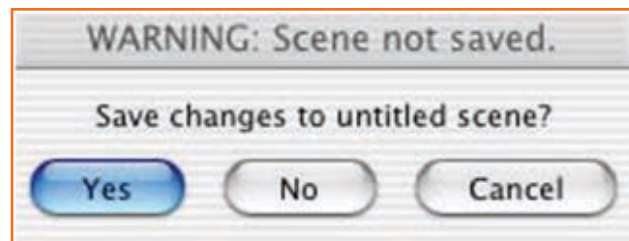


Fig.6.2.2: Saving Scene

Click No. Maya creates a new scene and delete everything that was in the previous scene.

6.2.2 Primitive Objects

For primitive objects, Maya provides various types and shapes which are, spheres, cylinders, and planes.

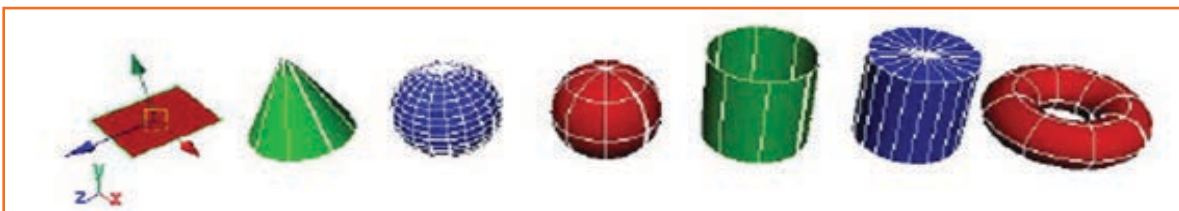


Fig.6.2.3: Primitive Objects

7. Stop Motion Animation

Unit 7.1 - Stop Motion Using Stop Motion Pro



Key Learning Outcomes

By the culmination of this module, you will be able to:

1. Animate stop motion characters
2. Contribute creative ideas during the animation process.
3. Apply stop motion animation techniques.
4. Stop Motion Using Stop Motion Pro, Apply stop motion animation techniques using Stop motion Pro Software.

8. Maintain Workplace Health and Safety

Unit 8.1 - Maintain Workplace Health and Safety



MES/N 0104

Key Learning Outcomes

At the end of this module, you will be able to:

1. Understand and comply with the organization's current health, safety and security policies and procedures.
2. Understand the safe working practices pertaining to own occupation.
3. Understand, the norms and policies of the government related to health and safety, which also includes some emergency procedures for accidents, fires and illness or others may involve evacuation of the premises
4. Identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency.
5. One should be fully aware about the security measures such as fire alarms, safety exit, medical and first aid availability.
6. Identification of aspects for potential risk at workplace is must for owns and others health and safety.
7. One should ensure health and safety of others and himself at workplace through precautionary measures.
8. Identification of opportunities related to health, security and safety should be done and recommended to the designated person.
9. Identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority.

9. Communication Skills and Professional Skills



Unit 9.1 - Communication Skills

Unit 9.2 - Professional Skills



Key Learning Outcomes

Towards the end you will be able to:

1. Read and understand the script and character descriptions.
2. Read the work plan and production schedule to ensure that progress is in line.
3. Collaborate effectively and communicate clearly with the one who are working with the previous or next scenes/shots.
4. Understand the modifications required from the Director, Animation supervisor and Producer.
5. Discuss the challenges faced during production and discuss ways to address such challenges in future projects.
6. Make decisions in order to be able to work collectively and independently, where required.
7. Comprehend shot break up and plan time & effort which may be required for every element of hot.
8. How to plan the tasks and prioritise various activities & individual timelines and delivering on schedule.
9. Work efficiently a team member and help the team achieve overall timelines.
10. Prioritise work-products and tasks based on requirements

10. Employability & Entrepreneurship Skills



Unit 10.1 - Personal Strengths & Value Systems

Unit 10.2 - Digital Literacy: A Recap

Unit 10.3 - Money Matters

Unit 10.4 - Preparing for Employment & Self Employment

Unit 10.5 - Understanding Entrepreneurship

Unit 10.6 - Preparing to be an Entrepreneur





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