CUFANM503A Design animation and digital visual effects – Reading 1.

Title: CUFANM503A Design animation and digital visual effects

Unit Description: This unit describes the skills and knowledge required to design animation and digital visual effects for screen productions.

Critical Aspects of Evidence:
- practical demonstration of skills through the design of animation and digital visual effects for at least two projects
- Generate 2 design specifications for an animation and digital visual effects that:
  - are well documented and clearly presented
  - supported by appropriate research
  - meet production requirements

Text Book.
Text Book 1.Compositing Visual Effects: Essentials for the Aspiring Artist
By Steve Wright
•Publisher: Focal Press
•Number Of Pages: 264
•Publication Date: 2007-11-21
•ISBN-10 / ASIN: 0240809637
•ISBN-13 / EAN: 9780240809632
•Binding: Paperback

Text Book 2.How to Cheat in Adobe Flash CS5: The Art of Design and Animation
Author: Chris Georgenes
Publication Date: August 24, 2010
ISBN-10: 0240522079
ISBN-13: 978-0240522074
Edition: 1

Please email trainer for a copy of required book quoting text book name and author and ISBN no.

Reference Text Book.
Reference Text Book 1.Digital Compositing for Film and Video, Second Edition (Focal Press Visual Effects and Animation)
By Steve Wright
•Publisher: Focal Press
•Number Of Pages: 472
•Publication Date: 2006-05-02
•ISBN-10 / ASIN: 024080760X
•ISBN-13 / EAN: 9780240807607

Reference Text Book 2. Adobe After Effects CS5 Classroom in a Book
By Adobe Creative Team
•Publisher: Adobe Press
•Number Of Pages: 400
•Publication Date: 2010-06-18
•ISBN-10 / ASIN: 0321704495
•ISBN-13 / EAN: 9780321704498

•Binding: Paperback

Reference Text Book 3. How to Cheat in Flash CS3: The art of design and animation in Adobe Flash CS3
Author: Chris Georgenes
Publication Date: August 28, 2007
ISBN-10: 0240520580
ISBN-13: 978-0240520582

A copy of the text book can be found or hired through the library services, contact the administration department for more information and a copy to be hired out.

Software.
Adobe After Effects. CS5
Adobe Flash Animation cs5
Adobe Premier cs5
Maya 2008, Maya 2011 or Maya 2012

Student Study instructions.

- Read through this document as it contains an outline of the course and is a source of your reading material and assessment.
- Read through each section on theory and read any of the additional reading links or follow any other link readings that you need to perform also view all powerpoints as these will help as they are summaries of key point in the theory.
- Perform all the Practical work as these are tutorials that will help you develop your skills in the subject matter. Most of the Practical work are written tutorials or videos, follow the instructions in them and save any work that you have done as this will count towards your assignment. e.g. If there is a video on Maya, how to create a tunnel Environment then follow the steps in the video in Maya yourself and save as you progress through the video.
  Or it is a tutorial to create a tunnel Scene follow the steps in the written tutorial and save the file as perhaps Tunnel.ma or CD_Covre.psd if your working in photo shop.
  Keep all these files that you create and submit to your trainer via email or upload or post a usb or dvd to KAL Multimedia Training.
- As you read through the Theory Save any Resource Downloads as they are useful materials and down links that you will need to read and use for the assignment.
- Answer the summary quiz questions and save in a word document your answers as this is part of you assessment.
- Perform all the activities and save all work that you do for or in the activities. If you have any enquiries about the activity's or need clarification please email your trainer.
- Finally do the assignment in this unit see the course web site for assignment details.
- You are also required to email your trainer once a week stating what work you have been doing, sending any work, part of a quiz, part of a tutorial that you have done or any questions that you have as part of your training agreement when you signed your training plan and enrolment from. The email address that you should use to keep in contact with is your online trainer or soey_0@hotmail.com the I.T. Multimedia trainer or for general enquires soey_0@hotmail.com, in the subject line but your student number First name and last name and subject matter. If you do not keep in contact with your trainer you will be in breach of the training contract and will be withdrawn from the course.

Assessment.
To be demeaned competent in this unit you must undertake and submit the following to be demeaned competent in this unit.

- Demonstrate knowledge by undertaking an oral Quiz or written assessment under exam conditions.
- Demonstrate a skill by undertaking a simulated work place assignment (Assignment) Or undertake a work place task accompanying a job log with verification of work performed by your supervisor or undertake a work place task accompanying a skills check list or a check list by your work place trainer or a third party portfolio or complete all the simulated class activities.

Assignment

Item	**Description**	Yes☑	No☒
□ Task 0	Quiz document	❑	❑
□ Task 1	2 x write a project brief, storybaord sketches etc. documents	❑	❑
□ Task 2	10 x Experimental Digital Visual Effects	❑	❑
□ Task 3	2 x effect Scenes with a number of digital visual effects or 10 Digital Visual Effects.	❑	❑
□ Task 4	2 x Design Specification Documents which includes your animation design notes or settings.	❑	❑

Appendix Table of Contents.

Delivery	Topics	Duration
Week 1		
Theory	1.0 Clarify design requirements	
Activity		
Summary		
Theory	1. What does With reference to **production documentation** identify the scope of **design projects.**Mean**?** **What is Scope?** The work that needs to be accomplished to deliver a product, service, or result with the specified features and functions. Href: http://en.wikipedia.org/wiki/Scope_(project_management) How do you define Scope? How to Define Scope. **Reading**. *The content comes from the TenStep Project Management Process™ and may be reviewed at www.TenStep.com.* **What is production documentation?** Production documentation is used to document what the client wants, the creative specifications, basically the information that has been supplied to you to create a special effect using animation and other Computer Graphics (CG) and filming techniques. Documentation that might be supplied to you could be the following: • animatics • brief • script • shot list • storyboard • technical specifications. From the production documentation you might need to create the same digital effect but for different projects for example a movie might want a particular effect i.e. ping explosion and a computer game developed might also need that effect. The following is a list of design projects that you might need to create a effect or different effects for: • films • television productions • commercials/advertisements • games • e-learning resources • websites • mobile phones • promotional/informational videos/DVDs • digital simulations	

	• virtual worlds. What is Animatics? href: http://en.wikipedia.org/wiki/Storyboard#Animatics "Animatics In animation and special effects work, the storyboarding stage may be followed by simplified mock-ups called "animatics" to give a better idea of how the scene will look and feel with motion and timing. "	
Activity		
Summary	Element 1.1 Questions 1.1.1 State at least 6 different forms of production documentation. Ans: • animatics • brief • script • shot list • storyboard • technical specifications. Element 1.1 Questions 1.1.2. State at least 10 design projects that might use animation and digital visual effects. Ans: • films • television productions • commercials/advertisements • games • e-learning resources • websites • mobile phones • promotional/informational videos/DVDs • digital simulations • virtual worlds. Element 1.1 Questions 1.1.3. What does "With reference to **production documentation** identify the scope of **design projects"** mean? What it means is with the story boards, script, shoot list, client brief and technical specifications, what work needs to be done to full fill the result with the specified features and functions for any of the following projects such as films, television productions, commercials/advertisements, games, e-learning resources, websites, mobile phones, promotional/informational videos/DVDs, digital simulations, virtual worlds.	
Theory	2. What does Identify **factors** that may have an impact on the design process mean? What are some of the factors that might affect the design process is the following: • audience/user • availability of personnel	

	• availability of resources
	• available budget
	• complexity of project
	• expectations of producers and/or directors
	• intellectual property
	• need to attract finance
	• production schedule
	• production values
	• technical parameters, including:
	  • technology constraints
	  • console
	  • platform
	  • bandwidth
	  • memory/RAM
	  • HDTV
	• timelines.	

Activity		

Summary	Element 1.2 Question 1.2.1 What does "2. Identify **factors** that may have an impact on the design process" means.
	What it means is that when developing a digital visual effect you need to take in consideration parameter like the following:
	Ans:
	• audience/user
	• availability of personnel
	• availability of resources
	• available budget
	• complexity of project
	• expectations of producers and/or directors
	• intellectual property
	• need to attract finance
	• production schedule
	• production values
	• technical parameters, including:
	  • technology constraints
	  • console
	  • platform
	  • bandwidth
	  • memory/RAM
	  • HDTV
	• timelines.	

Theory	3. What does Participate in preliminary concept meetings to clarify understanding of design requirements mean? **What is preliminary concept meetings about?** It is an initial meeting with the script writer, storyboard designer and the producer before and after shots have been shot for a series of scenes during the post production for you to verify to the team of what effects are required. This does not only apply to film but also applies to other design projects, for games you might meet with the developer and designer to clarify the	

<table>
<tr><td></td><td>parameters of an affect that needs to be create for the game.</td><td></td></tr>
<tr><td>Activity</td><td></td><td></td></tr>
<tr><td>Summary.</td><td>Element 1.3.1 Question 1.3.1 What does “Participate in preliminary concept meetings to clarify understanding of design requirements” mean.
Ans:
It is an initial meeting with the script writer, storyboard designer and the producer before and after shots have been shot for a series of scenes during the post production for you to verify to the team of what effects are required.
This does not only apply to film but also applies to other design projects, for games you might meet with the developer and designer to clarify the parameters of an affect that needs to be create for the game.</td><td></td></tr>
<tr><td>Theory</td><td>4. What does With reference to production documentation, itemise elements that need to be addressed during the design phase mean?

In each of the production documentation documents there are notes and information about how an effect is composed of. The following are examples
<table>
<tr><th>Production Documentation document</th><th>Type of information / description held in production documentation document.</th><th>Itemised elements for the design phase.</th></tr>
<tr><td>animatics</td><td></td><td></td></tr>
<tr><td>brief</td><td>A 3d animation monkey that fits in a cat travel cage, hair is to be spiky.</td><td>Monkey, cage, short hair, fit in cage.</td></tr>
<tr><td>script</td><td>Monkey in cage breaks out, monkey has short hair</td><td>Monkey, cage,</td></tr>
<tr><td>shot list</td><td>Running water filmed behind green screen to be put into mountain side water fall in the desert.</td><td>Water is need, to be filmed and green screen required and saved in a video format.</td></tr>
<tr><td>storyboard</td><td>Scene 1 Car is on fire.
Scene 2. Car Explodes</td><td>Something on fire.
Explosion.</td></tr>
<tr><td>technical specifications.</td><td>Car set on fire then explodes the video is to be 2 separate avi files and then final video is then converted for the web as answf file.</td><td>2 avis file for film non hd. 1024 x 976
1 swf file for the web 96 dpi, 800 x 600</td></tr>
</table></td><td></td></tr>
<tr><td>Activity</td><td></td><td></td></tr>
<tr><td>Summary</td><td>Element 1.4 Question 1.4.1</td><td></td></tr>
<tr><td></td><td>2.0 Generate and assess ideas</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Theory</td><td>7.What does Generate a range of design ideas that respond sympathetically to the brief and provide creative solutions to design issues means?

What generate a range of design ideas is to come up with a no of plans to create</td><td></td></tr>
</table>

	an effect such as perhaps altering the camera angle of an effect to get a different perspective to an effect or even alter a current effect to portray a new effect but results in the save effect requirements been meet as stated in a brief or a concise statement or summary in the relevant production documentation such as a story board. These generation of effects can be simple story boards, sketches, animation sequence diagrams or animistic.	
Activity		
Summary	Element 2.1 Question 2.1 What does "Generate a range of design ideas that respond sympathetically to the brief and provide creative solutions to design issues" means. Ans: What generate a range of design ideas is to come up with a no of plans to create an effect such as perhaps altering the camera angle of an effect to get a different perspective to an effect or even alter a current effect to portray a new effect but results in the save effect requirements been meet as stated in a brief or a concise statement or summary in the relevant production documentation such as a story board. These generation of effects can be simple story boards, sketches, animation sequence diagrams or animistic.	
Theory	8. What does Assess ideas and collaborate, as required, with **relevant personnel** to maximise contribution of ideas to initial concepts mean? What does Assess ideas and collaborate with relevant personnel to maximise contribution of ideas to initial concepts mean. What it means is once you have come up with some initial ideas for an effect or animation sequence you should get other members of the group or expers or viewers to comment on what you have create and see if what you have done is any good, weather it meets user requirements and a time where improvements can be suggested and new ideas can be brought to the table to get a relevant effect. People that might be involved in the collaboration of generating and maximising on other members of the team can be some of the following personnel: • animators • clients. • compositors • designers • director • director of photography • head of department • producer • supervisor • technical director • writers • other technical/specialist personnel.	
Activity	Research 3 personnel that is involved in the development of designing animation and digital visual effects and sate there roles and responsibilities and save that information in a file called Activity 2.2.doc	
Summary	Element 2.2 Question 2.2.1 What does "Assess ideas and collaborate, as required, with **relevant personnel** to maximise contribution of ideas to initial	

	concepts" mean. Ans: What it means is once you have come up with some initial ideas for an effect or animation sequence you should get other members of the group or expers or viewers to comment on what you have create and see if what you have done is any good, weather it meets user requirements and a time where improvements can be suggested and new ideas can be brought to the table to get a relevant effect. People that might be involved in the collaboration of generating and maximising on other members of the team can be some of the following personnel: • animators • clients. • compositors • designers • director • director of photography • head of department • producer • supervisor • technical director • writers • other technical/specialist personnel.	
Theory	9. What does Continuously reflect on and appraise ideas for implications on cost, technical feasibility, and creative requirements means? Reflect to look back on. To evaluate in official capacity. When design animations and digital visual effects you should consider the cost, technical feasibility against the creative requirements or the client brief. Cost such as labour in creating the special effect, equipment needed to acquire that affect, stock footage, materials required to create effect etc. Other considerations to consider is to perhaps purchase existing stock effects from other venders to save time and development or you could purchase current stock and edit it to suite your needs or the clients. **For more reading on technical feasibility considerations see appendix on how to create a feasibility report.** **Reading** How to create a feasibility Report.	
Activity		
Summary	Element 2.3 Question 2.3.1 What does "Continuously reflect on and appraise ideas for implications on cost, technical feasibility, and creative requirements" mean. Ans: When design animations and digital visual effects you should consider the cost, technical feasibility against the creative requirements or the client brief. Cost such as labour in creating the special effect, equipment needed to acquire that affect, stock footage, materials required to create effect etc.	

	Other considerations to consider is to perhaps purchase existing stock effects from other venders to save time and development or you could purchase current stock and edit it to suite your needs or the clients.	
	3.0 Conduct research and experimentation	

Theory	11. **Research** aspects of **content** and **target audiencecharacteristics** that might influence **production styles** and **techniques**
	What is research aspects of content and target audience characteristics that might influence production style and techniques refers to production styles such as a comic book, dramatic, fantasy, Disney cartons bright vibrant colors, ink drawings for instance bright colors such as "The Simpsons", Astroboy, Dragon ball Z, also styles such as educational/instructive line drawings, informational and promotional.
	Other factors that affect the style of a production is factors such as computer literacy, literacy, demographics such as age, gender, education occupation etc.
	Target audience characters or style of production factors also include the following:
	• computer literacy
	• demographics, e.g.:
	  • age
	  • gender
	  • education
	  • occupation
	  • location
	  • cultural background
	• hobbies
	• interests
	• internet literacy
	• language, literacy and numeracy
	• personas
	• specific needs - physical or psychological.	

Activity		

Summary	Element 3.1 Question 3.1 What does "**Research** aspects of **content** and **target audiencecharacteristics** that might influence **production styles** and **techniques**" mean.
	Ans:
	It refers to production styles such as a comic book, dramatic, fantasy, Disney cartons bright vibrant colors, ink drawings for instance bright colors such as "The Simpsons", Astroboy, Dragon ball Z, also styles such as educational/instructive line drawings, informational and promotional.
	Other factors that affect the style of a production is factors such as computer literacy, literacy, demographics such as age, gender, education occupation etc.
	Target audience characters or style of production factors also include the following:
	• computer literacy
	• demographics, e.g.:
	  • age
	  • gender	

	• education • occupation • location • cultural background • hobbies • interests • internet literacy • language, literacy and numeracy • personas • specific needs - physical or psychological.	
Theory	12. Trial various **techniques** to test the suitability of their use in given design projects As it states trial or experiment with different effects or alter parameter for an effect to obtain desired out come using a number of techniques to create an effect such as combining 2d animation, 2d graphics, 3d modelling, 3d animation and compositing or combining a number of visual elements into single images to create an illusion that all those parts of elements are part of one scene. What is compositing? See appendix on how to Document your special effects animations.	
Week 2, 3 Practical TutorialActivity's	**Adobe Flash animation.** Task 1. Read and do all the tutorials from Text Book 2.How to Cheat in Adobe Flash CS5: The Art of Design and Animation, Read Chapters 1 to 5. and Chapter 7and save project files then export the animations as mov files as this will count or will contribute to your assignment work. **Extra Tutorials Optional.** Read and do tutorials from Reference Text book 2 Adobe Flash C5 Classroom in a Book. Chapters 1 to 4and save project files then export the animations as mov files. **Bones.** Read and do tutorials from Reference Text book 2 Adobe Flash C5 Classroom in a Book. Do all the Tutorials in Chapter 5 and save project files then export the animations as movfiles.	15 hrs
Week 4, 5 Practical Tutorial Activity's	**Maya.** **Watch the following videos to learn about particles in Maya.** Maya Emitting Particles – Introduction. http://www.digitaltutors.com/11/training.php?vid=1042&autoplay=1 Emitting Particles from objects 2. Href: http://www.digitaltutors.com/11/training.php?vid=1043&autoplay=1 How to Create Effects using Fields. Href: http://www.digitaltutors.com/11/training.php?vid=1044&autoplay=1	25 hrs

	Snow Effect Part 2 (Cloud). http://www.digitaltutors.com/11/training.php?vid=5823&autoplay=1	
Maya Practical Work	Watch or Do and Follow the following tutorials and create maya file, save maya file, create a avi file for your reference then convert to mp4 for web use and so that you can save a copy on to usb and dvd to be sent to kal multimedia training as evidence of work done. How to Make Realistic Clouds using Maya Fluids Software: Maya Author: Avi Morgan Author Website: http://www.avimorgan.com/ Fire Explosion Example - Fire Explosion. http://www.tutorialsworld.com/index.php?option=com_content&task=view&id=1&Itemid=3 Explosion. Maya Tutorials:explosion using particle instancer http://www.imanishi.com/mayablog_en/2008/09/maya-tutorialexplosion-using-p.html Maya Fire works Example http://www.imanishi.com/mayablog_en/2008/10/maya-tutorialmaking-fireworks.html Maya Fire Example. http://cg.tutsplus.com/tutorials/autodesk-maya/how-to-create-an-awesome-fire-effect-using-maya-fluids/ Floral Animation with Maya's Paint Effects – Animation and Effect Tutorial http://cg.tutsplus.com/tutorials/autodesk-maya/quicktip_animation_maya_paint_fx_effects_floral_animation_growth/ Maya Setting up a Pond. Pond Example http://www.digitaltutors.com/11/training.php?vid=1742 Maya Pond Tutorial by Stuart Christensen - You tube video. http://www.youtube.com/watch?v=y4GU0kMfwTo Maya Fire Tutorial Part 1 of 2 by Stuart Christensen - You tube video. http://www.youtube.com/watch?v=v3WG5m1uAVc&feature=relmfu Maya 2011 3D Fluid ContainerPart 1 of 2 for Explosions, Fire, Smoke Tutorial Part 1 of 2 by Stuart Christensen http://www.youtube.com/watch?v=r9BGARKpU5o Maya 2011 3D Fluid ContainerPart 2 of 2 for Explosions, Fire, Smoke Tutorial Part 2 of 2 by Stuart Christensen	

	http://www.youtube.com/watch?v=HXMWPIIte3I Maya Create a 3D Galaxy Tutorial by Stuart Christensen - You tube video. http://www.youtube.com/watch?v=zkxnO-B1428&feature=related Maya 2011 Underwater Preset Tutorial by Stuart Christensen - You tube video. http://www.youtube.com/watch?v=OBEpTF3faY0&feature=related	
Week 6, 7 Practical Tutorial Activity's	**After Effects.** **Practical Task 1. Go to the Video Copilot web site and do the basic training videos. Adobe After Effects Basic Trainingvideos by Andrew Kramer.** Follow and save your after effects that you create as mov files for your use and mp4 as smaller compressed files for assignment purpose and so that you can send al your effects to kal on dvd or usb. **Practical Task 2.**Do at least 10 video copilot after effects tutorials, save the projects files and save your original avi files for your self and then convert them into web format flv or mp4 and save on dvd and send to kal multimedia training as part of assessment. Visit the following web site for aftereffect tutorials, and choose 10 tutorial effects to follow and create http://www.videocopilot.net	25hrs
Activity	Write a Short report outlining how you could use all your animations and videos that you have create for weeks 3,4,5,6, 7 into an animation sequence and what you would do to create the animation sequence. Save the report as Activity 3.2 Animation Experiment Summary Report.doc.	
Summary	Element 3.2 Question 3.2.1 What does "Trial various **techniques** to test the suitability of their use in given design projects" mean. Ans: As it states trial or experiment with different effects or alter parameter for an effect to obtain desired out come using a number of techniques is to create an effect such as combining 2d animation, 2d graphics, 3d modelling, 3d animation and compositing or combining a number of visual elements into single images to create an illusion that all those parts of elements are part of one scene.	
Theory	3.3.1 Organise research and experimentation material for ease of access by relevant personnel during the design development process.	

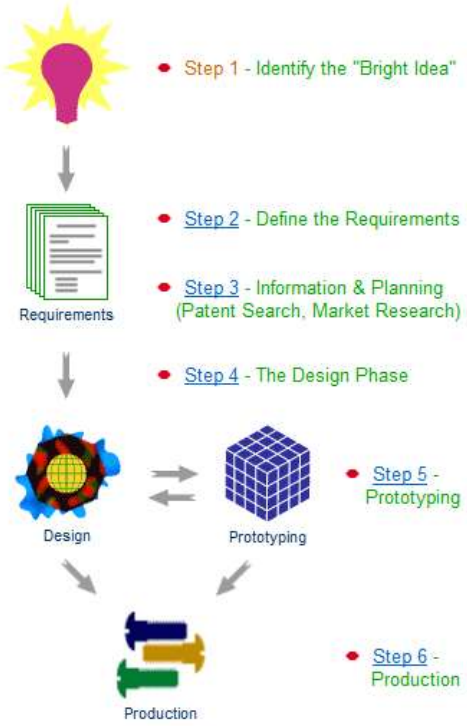


Figure - a sample development process. Image From: http://www.synthx.com/articles/product-development.html

What does "Organise research and experimentation material for ease of access by relevant personnel during the design development process" mean.
It means that you gather all the assets need to create different effects and animation sequences such as stock footage, audio files, sound effects still images, parts of an animation sequence or footage of other effects that will be used in combination to create a new effect or elements of an animation for instance parts of a character that need to be put together in flash or find other stock footage that can be used to create a desired effect. E.g. use an image of some one and use a software program to create an animation or film that person rather than animate that persons face and incorporating audio, that is researching and experimenting with the design of an animation and digital effect.

An example of a software program that can animate a photo so that it look like some one is talking with facial expressions is called Crazy Talk.

Or perhaps another tool to create an effect would to be use third party plug ins such as Trapcode particular.

Theory.	Element 3.3 Question 3.3.1 What does "Organise research and experimentation material for ease of access by relevant personnel during the design development process" mean? It means that you gather all the assets need to create different effects and animation sequences such as stock footage, audio files, sound effects	

	still images, parts of an animation sequence or footage of other effects that will be used in combination to create a new effect or elements of an animation for instance parts of a character that need to be put together in flash or find other stock footage that can be used to create a desired effect. E.g. use an image of some one and use a software program to create an animation or film that person rather than animate that persons face and incorporating audio, that is researching and experimenting with the design of an animation and digital effect. An example of a software program that can animate a photo so that it look like some one is talking with facial expressions is called Crazy Talk. Or perhaps another tool to create an effect would to be use third party plug ins such as Trapcode particular.	
	14. What does Analyse and document research and experimentation findings for use during the design phase mean? Usually all industry's and workplaces have there own development process, however with animation and digital visual effects all media assets weather it be stock footage or CGI generated effects all have settings or parameters that you need to follow or be aware of to incorporate them into a scene, and these settings are written down with the media assets so that you can replicate the desired effect. So with design development process the written documentation to recreate the designed end results is part of the design development process. Not just creating the effect and that is the end, it is about writing what you did to create that effect or create that particular stock footage or animation, e.g. at frame 10 change opacity, animation has 100 frames, at frame 45 enlarge object and animation point is to start left hand side of object. Or frame rate is set at 17 fps for the web etc. Means that you should document experimentation that you have performed for instance importing some stock footage, for example masking a section out or chrome keying a video and then re rendering the footage with alpha channels so that it is transparent and in tga format but saved as a AVi. Hence performing all these task is a development process that have a required effect, so you need to document these settings and information so that other people can incorporate a similar effect to other media or similar effect situations or finding relevant effect documentation. After finding the relevant documentation say on the web you then need to distribute these settings or information so that every one in your team have all the relevant information. Or basically what analyse and document research and experimentation findings for use during the design phase is about writing in more detail the action sequencing how the effect or animation is going to be put together.	
Activity		

Summary	Element 3.4 Question 3.4.1 What does “Analyse and document research and experimentation findings for use during the design phase” mean. Ans: Usually all industry’s and workplaces have there own development process, however with animation and digital visual effects all media assets weather it be stock footage or CGI generated effects all have settings or parameters that you need to follow or be aware of to incorporate them into a scene, and these settings are written down with the media assets so that you can replicate the desired effect. So with design development process the written documentation to recreate the designed end results is part of the design development process. Not just creating the effect and that is the end, it is about writing what you did to create that effect or create that particular stock footage or animation, e.g. at frame 10 change opacity, animation has 100 frames, at frame 45 enlarge object and animation point is to start left hand side of object. Or frame rate is set at 17 fps for the web etc. Or basically what analyse and document research and experimentation findings for use during the design phase is about writing in more detail the action sequencing how the effect or animation is going to be put together.	
	Produce draft design specifications	
Theory	Element 4.1 15. What does In consultation with relevant personnel, evaluate initial concept ideas in light of research and experimentation findings and select the most appropriate approacheman? What it means is that after analysis and reviewing research on animations and digital effects the team or relevant personnel such as producer, graphic artisetc that you decided what effect or animation you are going to use based on a number of criteria such as requirements, skill level, how much it will cost to put together, how much time it will take, can it be reused on other jobs for the see able future, is it possible or not possible, is it realistic or not and is it the desired result and what is the best way to implement the solution as well as who will do what and when to optimise on time, cost and resources at hand.	
Activity.		
Summary	Element 4.1 Question 4.1.1 - 15. What does “In consultation with relevant personnel, evaluate initial concept ideas in light of research and experimentation findings and select the most appropriate approach” mean. Ans: What it means is that after analysis and reviewing research on animations and digital effects the team or relevant personnel such as producer, graphic artisetc that you decided what effect or animation you are going to use based on a number of criteria such as requirements, skill level, how much it will cost to put together, how much time it will take, can it be reused on other jobs for the see able future, is it possible or not possible, is it realistic or not and is it the desired result and what is the best way to implement the solution as well as who will do what and when to optimise on time, cost and resources at hand.	
Theory.	Element 4.2 What does Ensure that agreement is reached with relevant personnel on a consistent interpretation of design and visual details mean? What it means that every one in the team agrees to the desired result meets the	

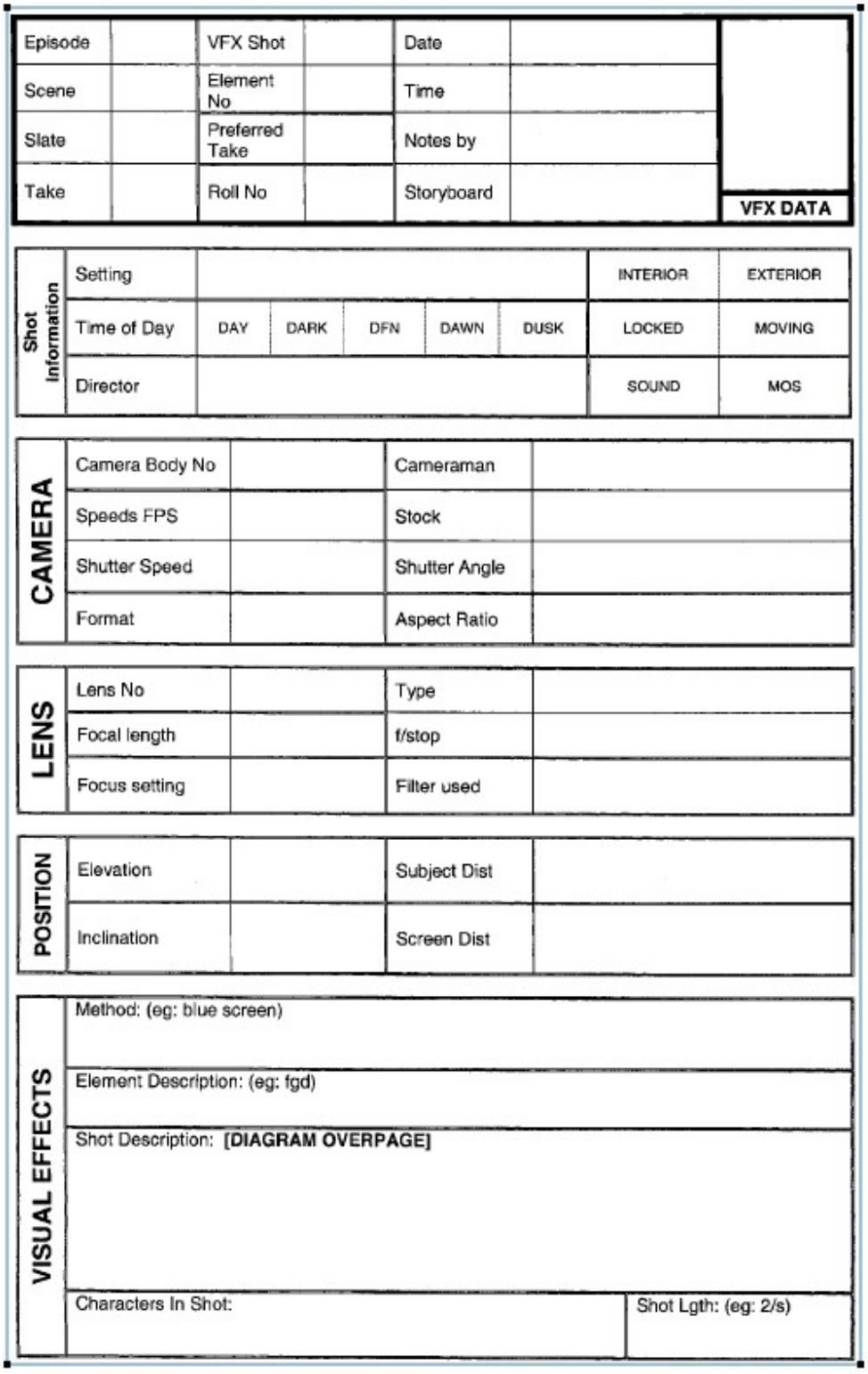
	user requirements and understand what needs to be performed to achieve the desired result such as effect or animation sequence required.	
Activity		
Summary.	Element 4.2 Question 4.2.1 16. "What does Ensure that agreement is reached with relevant personnel on a consistent interpretation of design and visual details" mean. Ans: What it means that every one in the team agrees to the desired result meets the user requirements and understand what needs to be performed to achieve the desired result such as effect or animation sequence required.	
Theory	Element 4.3 17. What does Create storyboards as required man? Like all things animation, visual effects that you are going to compile is based on time. The creation of the story board would happen when you document the experimentations of the animation or digital effects. But you can go further and write notes next to the story board created. Notes such as frame rate, timings, delays, scripting code, audio ques, other effect ques and arrows to note animation origin points. But story boards are visual representations of how a sequence of events will occur along with notes such as descriptions and other details along with arrows to depict camera movements or animation movements.	
Activity		
Summary	Element 4.3 Question 4.3.1 What does create storyboards as required" mean. Ans: Like all things animation, visual effects that you are going to compile is based on time. The creation of the story board would happen when you document the experimentations of the animation or digital effects. But you can go further and write notes next to the story board created. Notes such as frame rate, timings, delays, scripting code, audio ques, other effect ques and arrows to note animation origin points. But story boards are visual representations of how a sequence of events will occur along with notes such as descriptions and other details along with arrows to depict camera movements or animation movements.	
Theory	Element 4.4 18. What does Prepare or supervise the preparation of sample material to be included in **design specifications** as required mean? What this means that you oversee the development of the Design specification for an animation or visual effect document ensuring that all media elements required to create the effect is prepared or saved in a location where all project team members can access all the relevant media elements for example, audio files, images, stock footage, storyboards, animation sequence diagrams etc. **Reading: For more information see Appendix on Sample Specifications Document Information.**	
Activity		
Summary	Element 4.4 Question 4.4.1 What does Prepare or supervise the preparation of sample material to be included in **design specifications** as required" mean. Ans: What this means that you oversee the development of the Design specification for an animation or visual effect document ensuring that all media elements required to create the effect is prepared or saved in a location where all project	

	team members can access all the relevant media elements for example, audio files, images, stock footage, storyboards, animation sequence diagrams etc.	
Theory	Element 4.5 19. What does Write draft design specifications to include relevant advice to design and development teams mean? What it means is that a rough document is put together outlining the user requirements of the animation or digital visual effect to be created and how it will be created with settings to set and sequence in which it should be put together along with sequencing diagrams or storyboards and distributed to all team members so that different sections of the development team can start on relevant sections.	
Activity		
Summary	Element 4.5.1 Question 19. Write draft design specifications to include relevant advice to design and development teams What it means is that a rough document is put together outlining the user requirements of the animation or digital visual effect to be created and how it will be created with settings to set and sequence in which it should be put together along with sequencing diagrams or storyboards and distributed to all team members so that different sections of the development team can start on relevant sections.	
Theory	Element 4.6 20. Discuss draft design specifications with relevant personnel to ensure that all requirements have been addressed What this means is that you review all the user requirements of the animation or digital visual effect with the other team members of the group and tick off each item of the user requirements as the effect meets each requirement. If not then rework is required.	
Activity	Create a Criteria checklist based on a user requirements document and ensure that they or a design document meet each of the criteria.	
Summary		
Theory	**21.0 Finalise design specifications**	
Activity		
Summary		
Theory	22. What does Present draft **design specifications** to relevant personnel for review mean? What this means is that you review all the user requirements of the animation or digital visual effect with the other team members of the group and tick off each item of the user requirements as the effect meets each requirement. If not then rework is required.	
Activity	Create a Criteria checklist based on a user requirements document and ensure that they or a design document meet each of the criteria.	
Summary	Element 4.6.1, 5.1 What does Discuss draft design specifications with relevant personnel to ensure that all requirements have been addressed and Present draft **design specifications** to relevant personnel for review" mean. Ans: What this means is that you review all the user requirements of the animation or digital visual effect with the other team members of the group and tick off each item of the user requirements as the effect meets each requirement. If not then rework is required.	

Theory	23. What does Participate in the initial and ongoing evaluation of design specifications mean? What this means is that you evaluate the work that you have done and weather the work produced meet the design specifications document not the users. This should have been done before the development process has started.	
Activity		
Summary	Element 5.2.1 Question 23 What does “Participate in the initial and ongoing evaluation of design specifications” mean. Ans: What this means is that you evaluate the work that you have done and weather the work produced meet the design specifications document not the users. This should have been done before the development process has started.	
Theory	24. Negotiate and agree to additions or modifications and amend design specifications as required	
	25. Clarify the ongoing role of the designer during the production phase and in the evaluation of the final animations or digital visual effects	
	26. Review process of designing animation and digital visual effects and note areas for future improvement	

Appendix.

Appendix Special Effects Documentation Sheet –
Sample Post Production Special Effect Form Sheet.



Episode		VFX Shot		Date		VFX DATA
Scene		Element No		Time		
Slate		Preferred Take		Notes by		
Take		Roll No		Storyboard		

Shot Information	Setting						INTERIOR	EXTERIOR
	Time of Day	DAY	DARK	DFN	DAWN	DUSK	LOCKED	MOVING
	Director						SOUND	MOS

CAMERA	Camera Body No		Cameraman	
	Speeds FPS		Stock	
	Shutter Speed		Shutter Angle	
	Format		Aspect Ratio	

LENS	Lens No		Type	
	Focal length		f/stop	
	Focus setting		Filter used	

POSITION	Elevation		Subject Dist	
	Inclination		Screen Dist	

VISUAL EFFECTS	Method: (eg: blue screen)	
	Element Description: (eg: fgd)	
	Shot Description: **[DIAGRAM OVERPAGE]**	
	Characters In Shot:	Shot Lgth: (eg: 2/s)

Appendix – What is a Feasibility Report?

Feasibility Report

The purpose of a feasibility report or study is to define the size, extent, possibility and costs for the information technology project that is being considered, and to recommend a number of possible costed alternatives.

A feasibility report is created to allow incremental commitment by management to large projects. For each phase, increased detail regarding the vision, implementation plan and costs are presented to management for approval for the next stage.

The feasibility report is the first large document that is provided to management with cost estimates and details of the various alternatives for solving a business problem, or taking advantage of a business opportunity.

Because management makes a decision based on the information provided in this report, it is essential that the information is accurate and up to date.

The report should provide information on:

Technical feasibility

- Do the technology and the personnel exist within the organisation to successfully introduce the proposed new system?
- Will new hardware and software be required?
- Will expertise outside the company be required to create the new system?

Operational feasibility

- What current work practices will need to change if the new system is introduced?
- Does the new system have the support of management?

Legal and contractual feasibility

- Are there copyright issues, union requirements or government Standards that need to be worked through?
- Are there existing contractual arrangements with either suppliers or staff that may need changing?
- Will additional licences be required?

Political feasibility

- How do the key stakeholders in the company view the system?

Schedule feasibility

- Can the suggested timeframes including milestones and completion dates on the critical path be achieved?
- Are there external deadlines that need to be considered?
- What size and mix of skills will the project team require?

Financial feasibility

- What are the tangible financial benefits and costs for introducing the new system?
- What are the intangible benefits and costs that may occur with the new system?
- What are the on-time and recurrent costs associated with the new system?
- What result does a cost/benefit analysis provide?

A suggested collection of headings for a comprehensive feasibility report appears below:

- *System Summary*
- *Project Summary*
  - Project name
  - Responsible Analyst
  - Responsible user
  - Scope
  - Start date
  - Project completion date
  - Completion date for structured specification
  - Project budget amount
- *Background*
- *Project Objectives*
- *Current System Summary*
  - System deficiencies
  - System description
- *New System Constraints and Assumptions*
  - Specific performance requirements
  - Interfaces to other systems
  - Hardware constraints
  - Software constraints
- *New System Alternatives*
  - Summary of alternatives
  - Descriptions of each alternative
    - Essential transformations
    - Principal required inputs and outputs
    - Required data stores
  - Expected improvements (for each alternative)
    - Improvements in service
    - Increases in revenue
    - Reductions in cost
  - Expected impacts (of each alternative)
    - Hardware
    - Software

        - Organisational
        - Operational

- *Project Constraints*

- *Personnel*

- *Budget*

- *Recommendation*

- *Appendices*
    - Cost/benefit comparisons of alternatives
    - Project cost estimates and schedule
    - Detailed activities schedule and budget for specification of user requirements phase
    - User requirements phase

Appendix Sample Specifications Document Information.

Design Specifications Document.

- A design specification provides explicit information about the requirements for a product and how the product is to be put together.
- It is the most traditional kind of specification, having been used historically in public contracting for buildings, highways, and other public works, and represents the kind of thinking in which architects and engineers have been trained.
- Its use is called for where a structure or product has to be specially made to meet a unique need.
- For example, a design specification must include all necessary drawings, dimensions, terms, and definitions of non-standard terms, and the materials used must be described fully to include thickness, size, color, etc.

What is a Specification.

- **A specification is a *"detailed and exact statement of particulars, especially a statement prescribing materials, dimensions, and workmanship for something to be built, installed, or manufactured."* (Brusaw C et al. 1997:561)**

Specification – Purpose

- **Specifications give details about products and processes.**
- **They are concerned with the what, the where and the when of products and processes.**
- **They define what the user wants, and what the supplier expects and agrees to provide.**
- **The type of specifications you write will be determined by your purpose.**

Requirement type	Explanation
Performance	**Performance requirements represent the performance the system is required to exhibit to meet the needs of users.** • **What is the maximum download time for web pages?** • **What is the acceptable throughput rate?** • **What is the required response time?**
Information	**Information requirements represent the information that is pertinent to the users in terms of content, timeliness, accuracy and format.** • **What are the necessary inputs and outputs? When must they happen?**

	• **Where is the required data to be stored?** • **How current must the information be?** • **What are the interfaces to the external systems?**
Economy	**Economy requirements represent the need for the system to reduce costs or increase profits.** • **What are the areas of the system where costs may be reduced?** • **How much cost should be reduced or profits should be increased?** • **What are the budgetary limits?** • **What is the timetable for development?**
Control (and Security)	**Control requirements represent the environment in which the system must operate, as well as the type and degree of security that must be provided.** • **Must access to the system or information be controlled?** • **What are the privacy requirements?** • **Does the criticality of the data necessitate the need for special handling (backups, off-site storage, etc) of the data?**
Efficiency	**Efficiency requirements represent the system's ability to produce outputs with minimal waste.** • **Are there duplicate steps in the process that must be eliminated?** • **Are there ways to reduce waste in the way the system uses its resources?**
Service	**Service requirements represent needs in order for the system to be reliable, flexible and expandable.** • **Who will use the system and where are they located?** • **Will there be different types of users?** • **What are the appropriate human factors?** • **What training devices and training materials are to be included in the system?** • **What training devices and training materials are to be developed and maintained separately from the system, such as stand-alone computer-based training (CBT) programs or databases?** • **What are the reliability/availability requirements?** • **How should the system be packaged and distributed?** • **What documentation is required?**

Sample Specifications Document

Introduction		Purpose statement — why the specifications are being written, who requires them, and what prior knowledge and skills are assumed.
Background Information		Complex requirements may need a brief history to make them understood.
Glossary		Define technical terms, abbreviations and acronyms, if users will benefit.
Scope		A general statement of the breadth and limitations of the requirements. Briefly say what you are including and leaving out. The scope is a useful overview of the main requirements.
Detailed Requirements		*Functional*— purpose of requirements and the desired results. *Performance* — details of operating inputs and outputs and performance parameters. *Physical*— equipment requirements, dimensions, and weight. *Technical* — design details, processes, maintenance requirements, physical aspects, and operational requirements.

Specifications Document.

Introduction
Purpose
Background Information
Glossary
Scope
Detailed Requirements
Functional: To promote the products and services.
Performance:
Physical:
Technical Requirements: (Story Board, Structure Chart, Prototype, concept drawings or design – drawings).

Functional Requirements
Functional — purpose of requirements and the desired results.
Purpose

- The fundamental purpose of technical documents is to be practical. Readers of technical documents are more interested in how they can use the specifications than in the content itself.
- They will use the document to:
    - increase their knowledge,
    - make a decision, or
    - take action.

User needs

- Before you start writing, ask yourself questions about the users:
    - experience,
    - technical knowledge,
    - interests, and
    - likely attitude to the document.
- People read technical documents selectively. They do not necessarily start at the beginning and read through to the end. Instead they select the information they need and ignore the rest. And they want to access that information quickly and easily.
- Also remember that users often read and act simultaneously, for example, when using a computer manual. That is why you need to organise the information and design the specifications to help users access the information they want.

Performance Requirements

- **Identifying Technical Requirements for Input/Output**
- The stages involved in identifying technical requirements for input/output are:
- Identify the interaction process (whether for business to business or business to consumer)
- Identify the trigger/s that begins the interaction
- Identify the input/output data required for the process
- Identify relevant protocols for the data exchange

- Document the input and output requirements for the interaction

Physical — equipment requirements, dimensions, and weight.

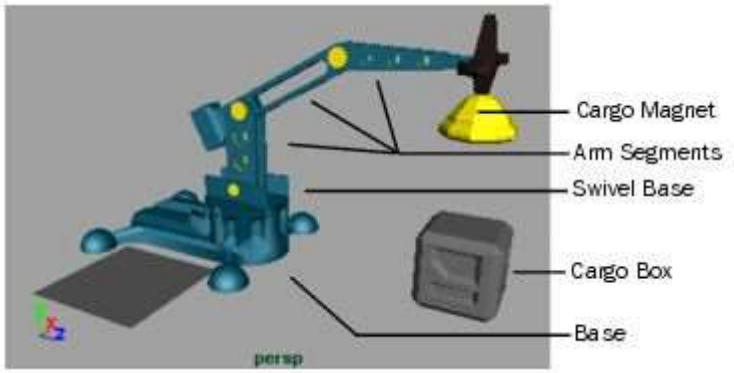
Technical Requirements

- **The stages involved in identifying the interface requirements are:**
- Identify the sources of required data
- Identify the data items and data structures required for the exchange
- Consider alternatives or select methods of data exchange
- Identify relevant protocols for the data exchange
- Document or reference the technical requirements for data exchange including: the source; data items; data structures; timing, method; and protocols

Appendix How to Document Animations

Designing Animations. The following example images are taken from the Maya Help.

Project Name: How to Operate the C101 Heavy Loader Crane.
Draw a diagram of each of the components and label all the parts that you want to animate.

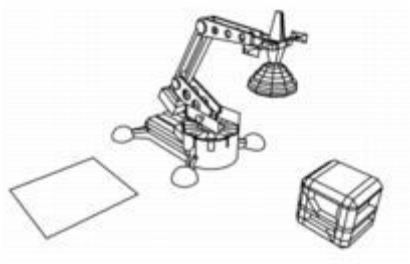


Planning the animation using a Story Board.

Key Poses.

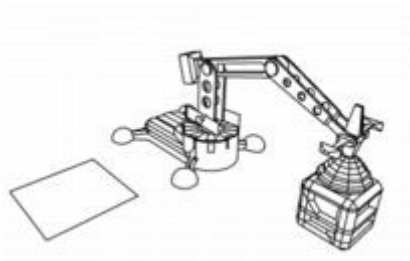
The basic premise for the action is as follows:

Initial Position



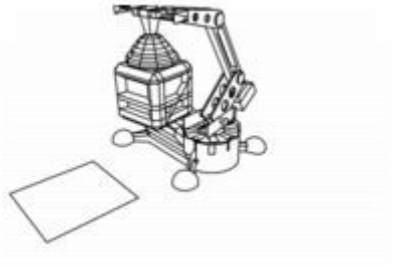
- The cargo box is positioned directly in front of the mechanical arm.

Second Position.



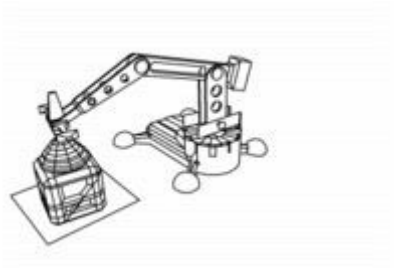
- The mechanical arm extends, and positions the cargo magnet to be directly touching the top of the cargo box.

Third Position

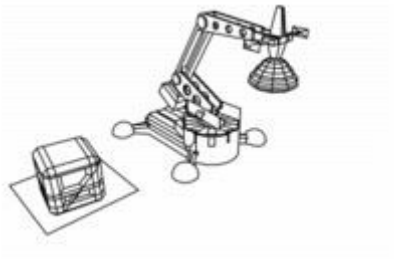


- The mechanical arm extends upwards, lifting the cargo box, and rotates to the side.

Fourth Position



- The mechanical arm lowers the box, placing it in a new position.



- The mechanical arm extends upwards, leaves the cargo box in the new location, and rotates back to its original position.

Animation Sequence Planning Sheet.

The table below breaks down the action indicating what action occurs for each object at the specified keyframes.

Frame	Mechanical Arm	Cargo Box
1	Collapsed position	Initial position
30	Vertically extended position	Initial position
60	Vertically lowered so that cargo magnet is positioned on top of cargo box	Initial position
80	Vertically lifted to extended position with cargo box	Cargo box lifted with mechanical arm

100	SwivelBase rotated along with arm to side	Cargo box repositioned along with mechanical arm
120	Vertically lowered along with cargo box to second position above surface	Cargo box is lowered along with mechanical arm to second position
140	Vertically lifted to extended position	Second position
160	SwivelBase rotated with arm to original position	Second position
180	Collapsed position	Second position

Setting Key frames to Animation Sequence.

Frame	Select	Set attribute	Select
1	ArmControl	TransY: 0 TransZ: -13	Set Key
30	ArmControl	TransY: 7 TransZ: -13	Set Key
59	ArmControl	TransY: -9 TransZ: 0	Set Key
60	ArmControl	TransY: -9 TransZ: 0	Set Key
80	ArmControl	TransY: 6 TransZ: -13	Set Key
80	SwivelBase	RotateY: 0	Set Key
100	SwivelBase	RotateY: -100	Set Key
100	ArmControl	TransY: 6 TransZ: -13	Set Key
120	ArmControl	TransY: -9 TransZ: 0	Set Key

121	ArmControl	TransY: -9 TransZ: 0	Set Key
140	ArmControl	TransY: 6 TransZ: -13	Set Key
140	SwivelBase	RotateY: -100	Set Key
160	SwivelBase	RotateY: 0	Set Key
160	ArmControl	TransY: 6 TransZ: -13	Set Key
180	ArmControl	TransY: 0 TransZ: -13	Set Key

Frame	Select	Set attribute	Select
1	CargoBoxparentConstraint	ArmControl W0: 0 Platform W1: 0	key selected
59	CargoBoxparentConstraint	ArmControl W0: 0 Platform W1: 0	key selected
60	CargoBoxparentConstraint	ArmControl W0: 1 Platform W1: 0	key selected
120	CargoBoxparentConstraint	ArmControl W0: 1 Platform W1: 0	key selected
121	CargoBoxparentConstraint	ArmControl W0: 0 Platform W1: 1	key selected

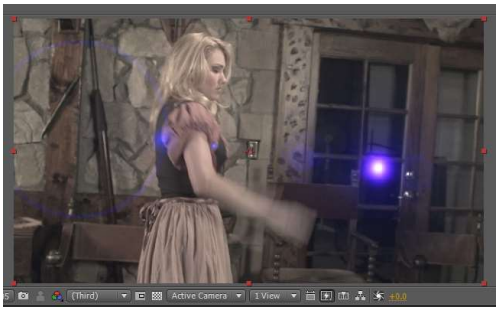
After Effects – Magical Hits.
Video Footage is taken from the Video Copilot web site and settings have been altered to demonstrate how to Document a animation sequence.

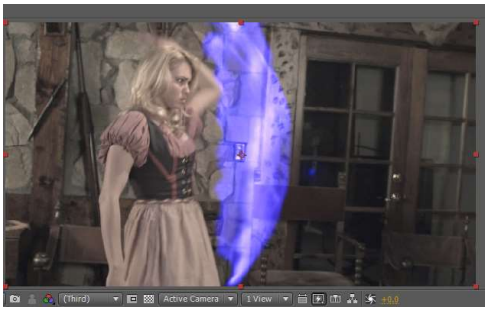
Animation Description. Design Brief.
A energy ball gets directed at a female and a semi-circle appears as a shield to block energy ball. Animation is to go the length of the initial video Magic Hits.mov.which is 1min long. Color is to be florescent blue.

Project Files Needed.

Field5Side.mov**(Particle Emitter hitting a Ball - Maya).**

Magic Hits_web.mov





Animation Sequence.
Asset: Effect, Lens Flare Layer

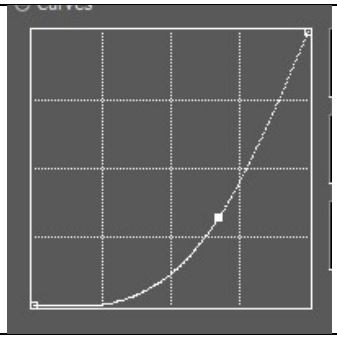
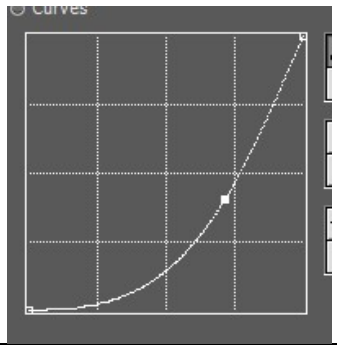
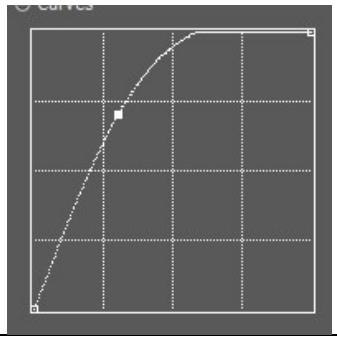
Frame / Jog Position	Attributes	Attributes settings values	Frame Type
0:00:00:00	Flare Centre	2688.8, 572.7	Key Frame
	Job Position	100%	Key Frame
0:00:00:06	Flare Centre	1250.0, 614.9	Key Frame
	Job Position	55%	Key Frame
0:00:00:13	Flare Centre	1250.0, 614.9	Easy Ease
	Job Position	3%	Key Frame

Anchor Point: 960.0, 5.540

Position: 960, 540.0

Color:

Curve Channel	Image

Red	
Green	
Blue	

File name: Field5Side.mov.

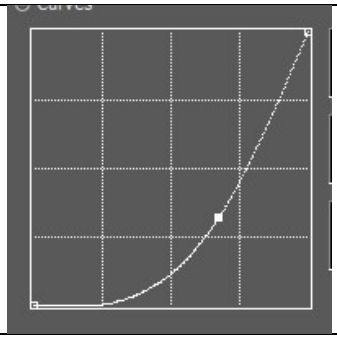
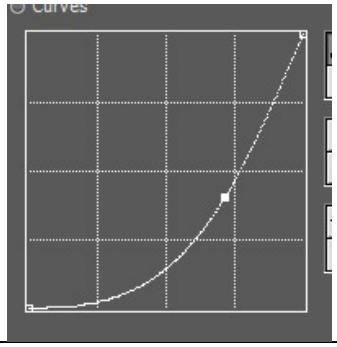
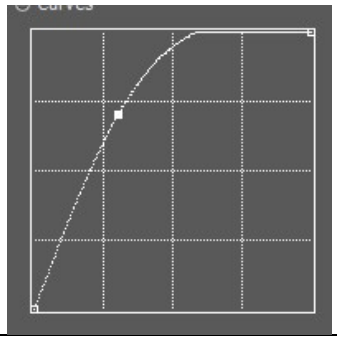
Frame / Jog Position	Attributes	Attributes settings values	Frame Type
0:00:00:07	Position	875.5, 486.6	Key Frame
0:00:00:16	Position	955.5, 470.6	Key Frame

Scale: 134.8, 206.6%

Anchor Point: 960.0, 5.540

Color:

Curve Channel	Image

Red	
Green	
Blue	

By Shannon so.