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PRESENTATION GUIDELINES

DESIGN YOUR OWN MULTIMEDIA LEARNING ENVIRONMENT (D.O.M.E.)
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Introduction

Welcome to the planetarium dome and the world of dome shows. Dome shows are not illustrated lectures, but integrated productions of words and visuals.

D.O.M.E Experiences

Inside a planetarium the dome fills the field of view of the audience. The only direction where there isn't any imagery is down or across to other members of the audience. This means that an audience feels that they have become part of the experience. This will impact how objects in the dome should move and change.

Images on the dome can convey a huge amount of information. Images should be chosen and presented for a long enough duration so that the audience can view, discover and absorb the experience.

Start slow, the immersive environment means that when you move the camera, the audience feels that they are moving. Objects appear to move faster in the dome than they do on a preview screen.

To avoid the audience having to twist and turn, consider how your dome is set up. There are two main ways: projector in the centre with a fisheye lens, with concentric seating, or projector at the side with a mirror system, with forward facing unidirectional seating.

For concentric seating, the common viewing area is the top of the dome, but this is uncomfortable for extended periods, so consider having multiple images, or setting the seating to be slightly unidirectional and having images appear on that side of the dome.

How to develop a DOME show

1. Pick your topic. Your script's purpose and objectives should be summed up in a couple of sentences, no more than 25 words. A short show should have only one Big Idea. Don't create a show about black holes and visit every known planet to get to the black hole! Your topic will come from your research and from your own and your audience's interests.
2. Develop an outline / flightpath. A script for a story needs to have an opening, a middle and an end and it can have an opening, exposition, complication, climax, resolution, conclusion. A script for a documentary style presentation will include facts and information but should progress as a story. You should have a clear idea where your script is headed (the flightpath).
3. Write the script. This can include storyboards that have an idea of the visuals and the accompanying audio. A good way to do this is a two-column script, with space for the storyboards on the side – if you find gaps where there is nothing

visual going on re-examine that section. You need to consider the visuals you have access to as you write your script. See below for sources of copyright free images. There should be 'cooperation' between your images and your script. If something is worth mentioning in your script, there should be a visual to go with it. Allow time for images to be appreciated, but 30 seconds of just one visual is probably too much. You can try writing the ending first, so that it is clear where your script needs to go!

4. Create your visuals. You can assemble images, and plan and organise sequences of night sky and effects. A note on colour: When showing the night sky, the interior of the dome is dark, so avoid black and white images. The black will blend and the white will be too bright. Be aware that different projectors and dome surfaces can produce different colours than your preview system.
5. Trouble shoot and test. Read your script aloud, matching your visuals or effects to the script. If you are recording audio, then this needs to be recorded and then the timing of the visuals matched to the audio recording.
6. Present.
7. Get feedback and evaluate.

Scripts

See Youth Astronomy Apprenticeships (link in google drive)

Digitalis Open Astronomy Curricula: https://digitaliseducation.com/curricula

Repositories for Images

ESO: https://www.eso.org/public/images/

NASA: https://www.nasa.gov/multimedia/imagegallery/index.html

Astronomy Picture of the Day: https://apod.nasa.gov/apod/astropix.html

Gateway to Astronaut Photography: https://eol.jsc.nasa.gov/

Hubble Images: https://hubblesite.org/images

Webb Images: https://webbtelescope.org/images and https://esawebb.org/images/

Full Dome Still Images: https://www.ips-planetarium.org/page/fulldomestills

Dome Clips

Look for mp4 in fisheye format or fulldome preview. Do not get the 4k fulldome masters.

European Southern Observatory:
https://www.eso.org/public/videos/archive/category/fulldome/
Two Small Pieces of Glass: https://cdn.eso.org/videos/dome_preview/tspog.mp4

NASA: https://svs.gsfc.nasa.gov/Gallery/FulldomeGallery.html

Hubble: https://esahubble.org/videos/archive/category/fulldome/

One Sky Project: https://oneskyproject.org/

Immersive Experiences' List of FREE Digital Dome Content from the British Fulldome
Institute (BFI): https://bit.ly/3VRhD65

Audio Clips

https://www.ips-planetarium.org/page/pagesofstars

Free Music: https://www.bensound.com/ - download good for one video and comes
with attribution source text.

Other Supports

Guide to Astronomy activities, with video supports and presentation guides: Night Sky
Network: https://nightsky.jpl.nasa.gov/download-search.cfm

FullDome Database, trailers and overviews of full dome shows: https://www.fddb.org/

References

Yu, Neafus & Wyatt "Filmmaking for Fulldome: Best Practices for Immersive Cinema"
Planetarian, Vol 45, No 4, Dec 2016 and Vol 46, No 1 January 2017)

Steps for a DOME Show adapted from:
https://www.bellmuseum.umn.edu/blog/planetarium-production-101/

Tips For Excellent Planetarium Scriptwriting IPS 2005:
https://cdn.ymaws.com/www.ips-planetarium.org/resource/resmgr/pdf-
pubs/2005scriptwriting_tips_sp09.pdf

Great Lakes Planetarium Association: Live from the Planetarium Video:
https://glpa.org/resources/professional-development-resources/live-from-the-
planetarium/