

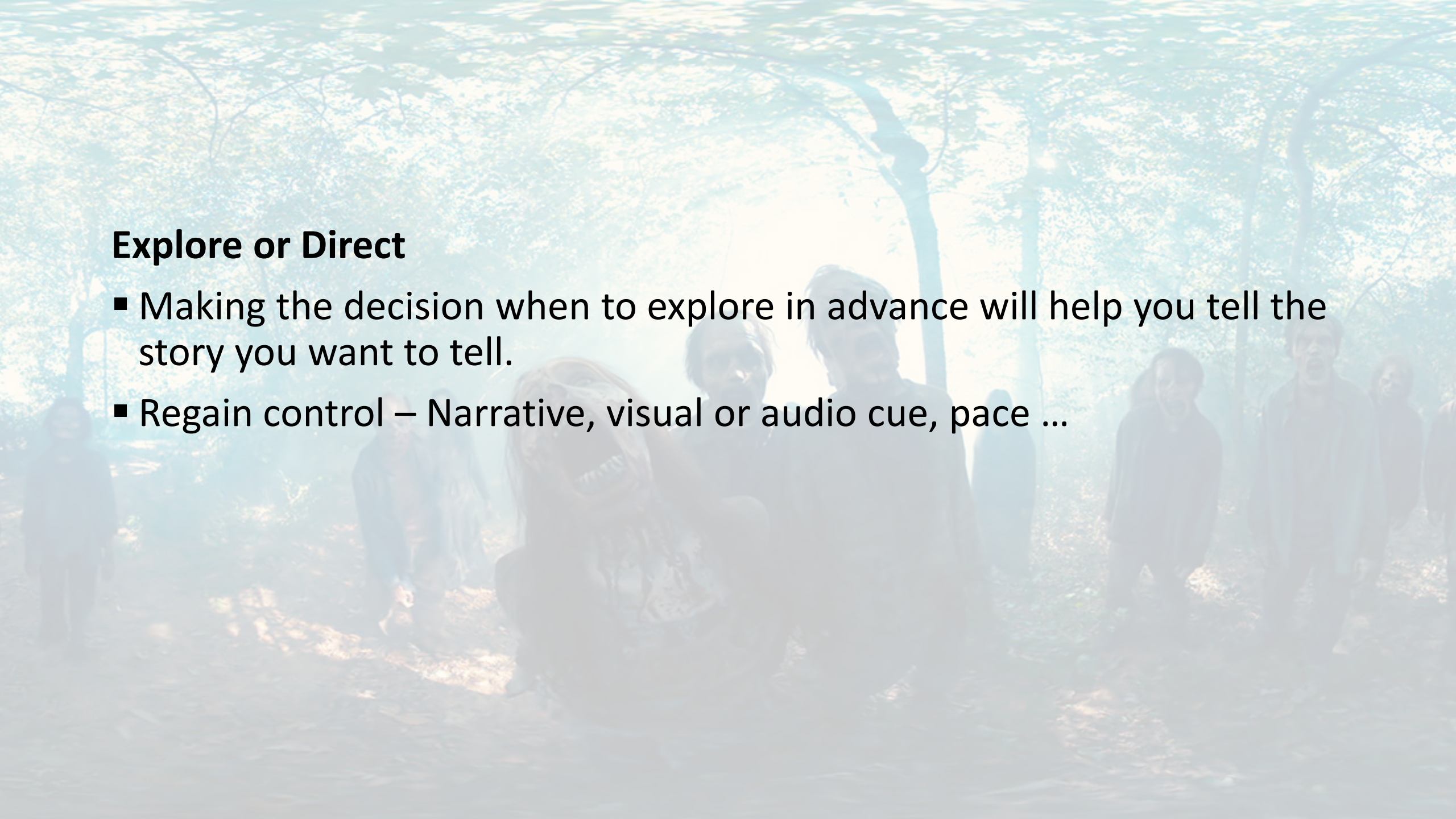
A large school of fish, possibly sardines, swimming in a circular pattern that creates a vortex-like effect. The fish are densely packed in the center and become more sparse towards the edges. The background is a light, hazy blue.

Camera Placement

- Consider where the camera placement will best capture your story.
- What is happening in front, around and behind?
- What is compelling about seeing a 360 image in the world you are capturing? (Environment is a character)

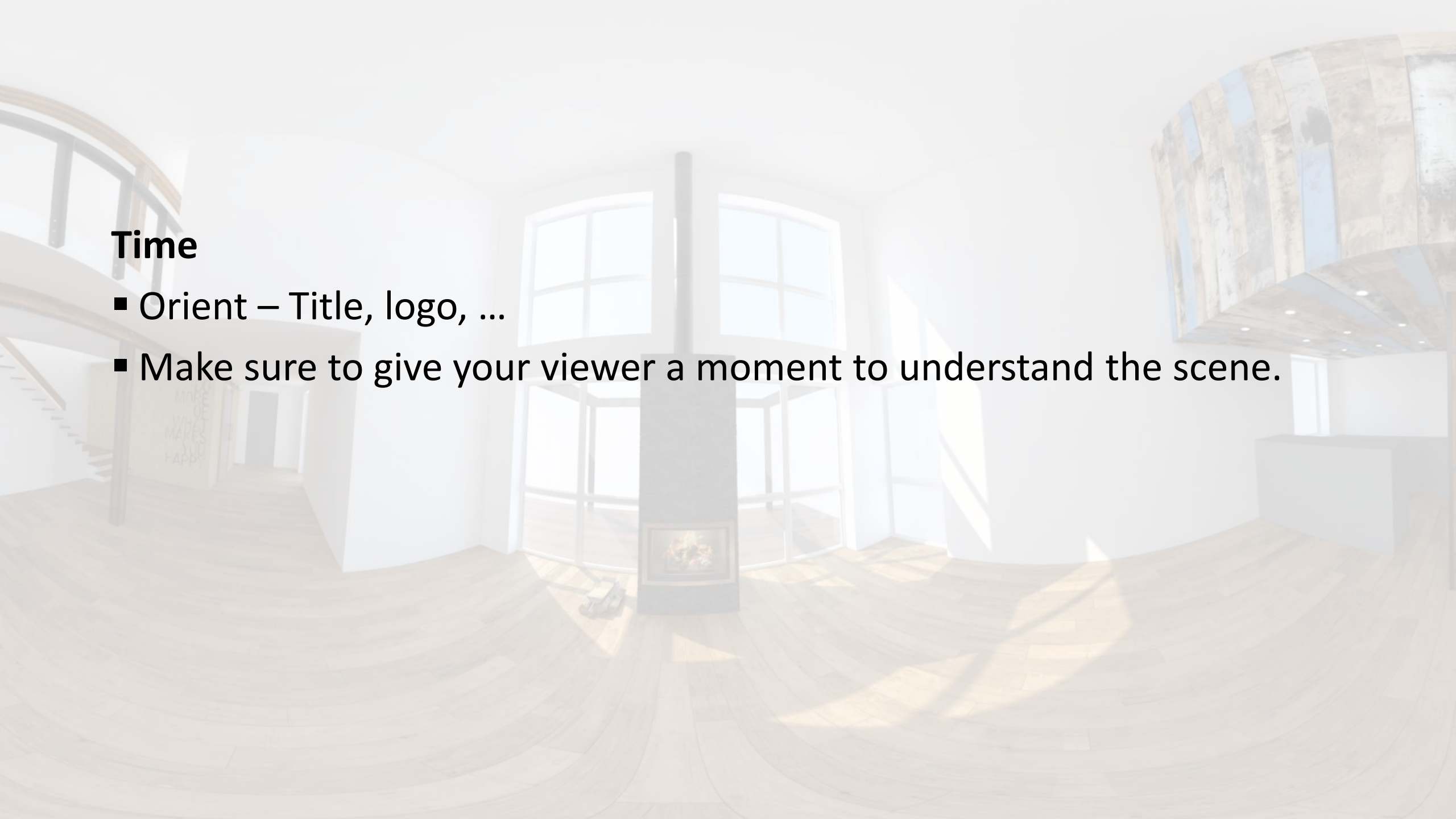
Explore or Direct

- Making the decision when to explore in advance will help you tell the story you want to tell.
- Regain control – Narrative, visual or audio cue, pace ...



Time

- Orient – Title, logo, ...
- Make sure to give your viewer a moment to understand the scene.





Look This Way

- Keep the canvas uncluttered
- Purposeful choreography will allow you to keep direction

Stabilize the Camera

- Secure the camera so that it does not shake, drift or roll
- Minimize movement, establish anchor if needed (i.e. interior of a car)

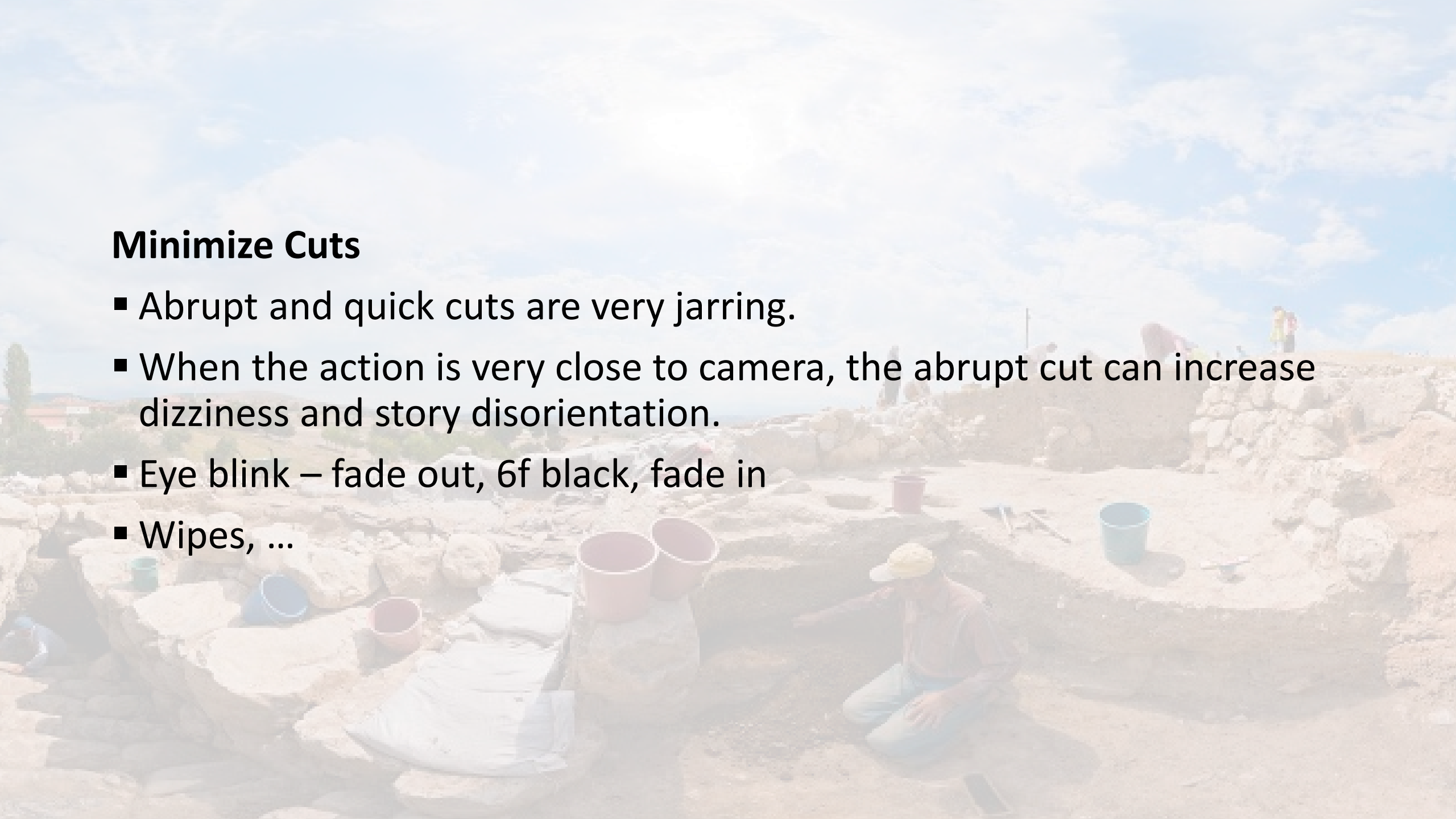


Honor the Horizon Line

When there is a horizon line, keep it steady. This manages the viewer's equilibrium.

Minimize Cuts

- Abrupt and quick cuts are very jarring.
- When the action is very close to camera, the abrupt cut can increase dizziness and story disorientation.
- Eye blink – fade out, 6f black, fade in
- Wipes, ...



A person wearing a VR headset, looking into the device. The image is faded and serves as a background for the text.

Bye Bye 4th Wall

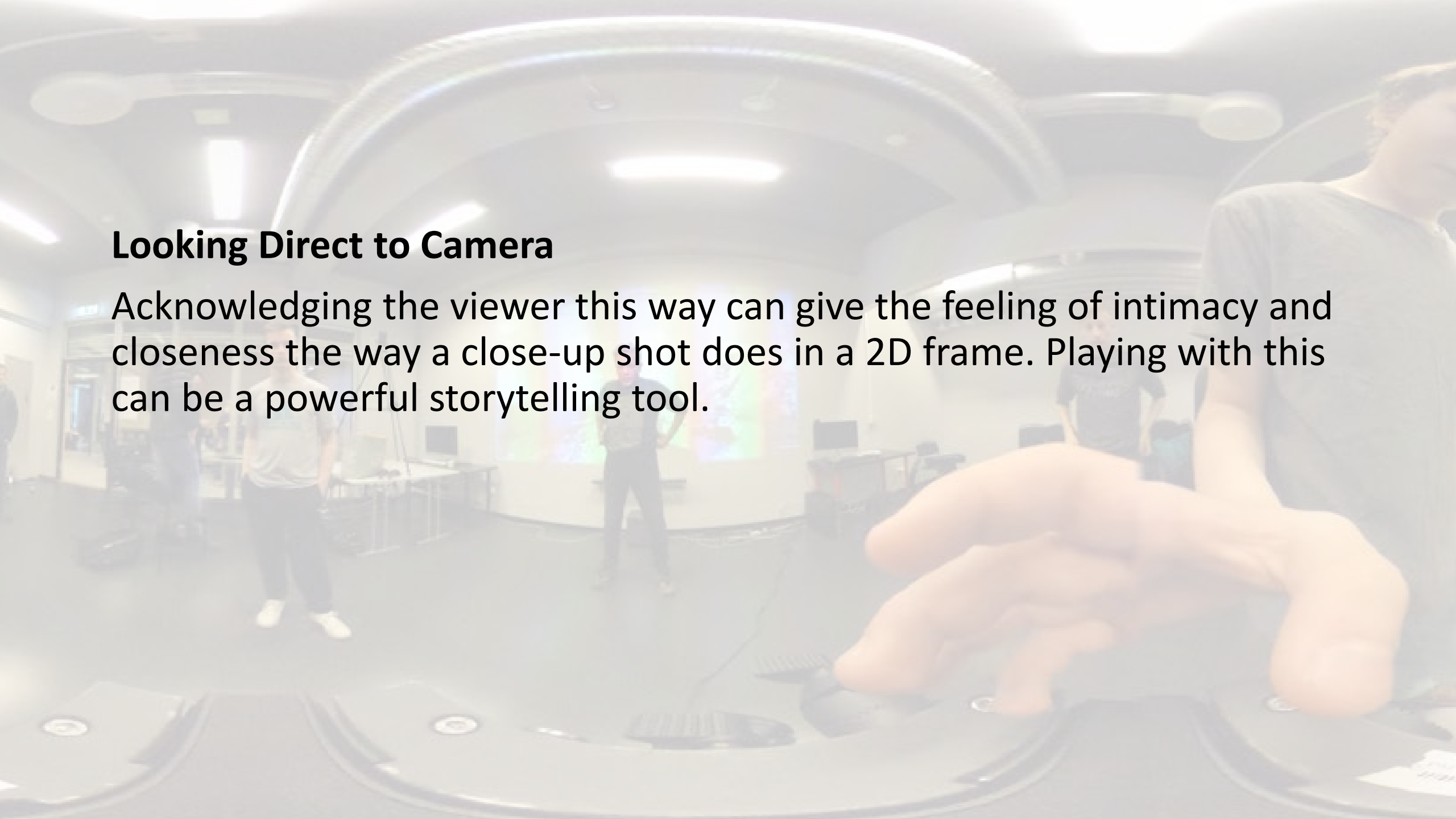
- No such thing as “behind the camera”. Monitors, lighting and crew need to make other arrangements. (or not)
- Cleverly lighting your scene with real-life elements can help.

Capturing People

Right placement for the camera so that people do not look warped.
(Putting camera at mid chest height can minimize this)

Looking Direct to Camera

Acknowledging the viewer this way can give the feeling of intimacy and closeness the way a close-up shot does in a 2D frame. Playing with this can be a powerful storytelling tool.





Incorporating Sound

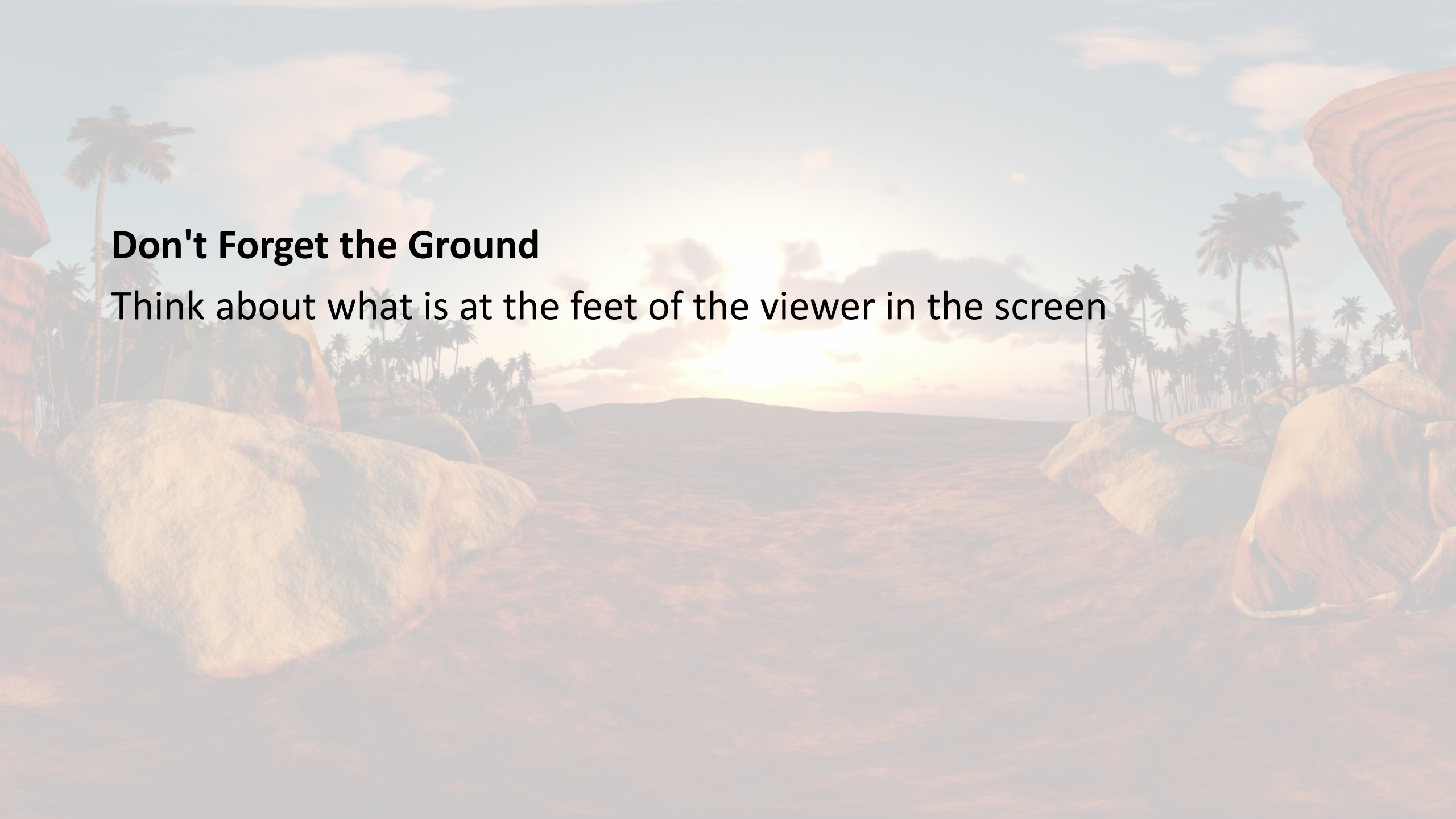
- Sound cues the viewer to action happening or about to happen.
- Help guide the viewer's gaze in the sphere.

Graphics and Text

- Adding graphics and text can be helpful and add stabilizing orientation points.
- Add the text in the 4 quadrants of the sphere
- Too low or too high in the frame they may go unnoticed

Distance/Blocking (Stage)

- Use distance and blocking to your advantage
- When particular action needs attention, coming closer to the camera can get the attention of a viewer.

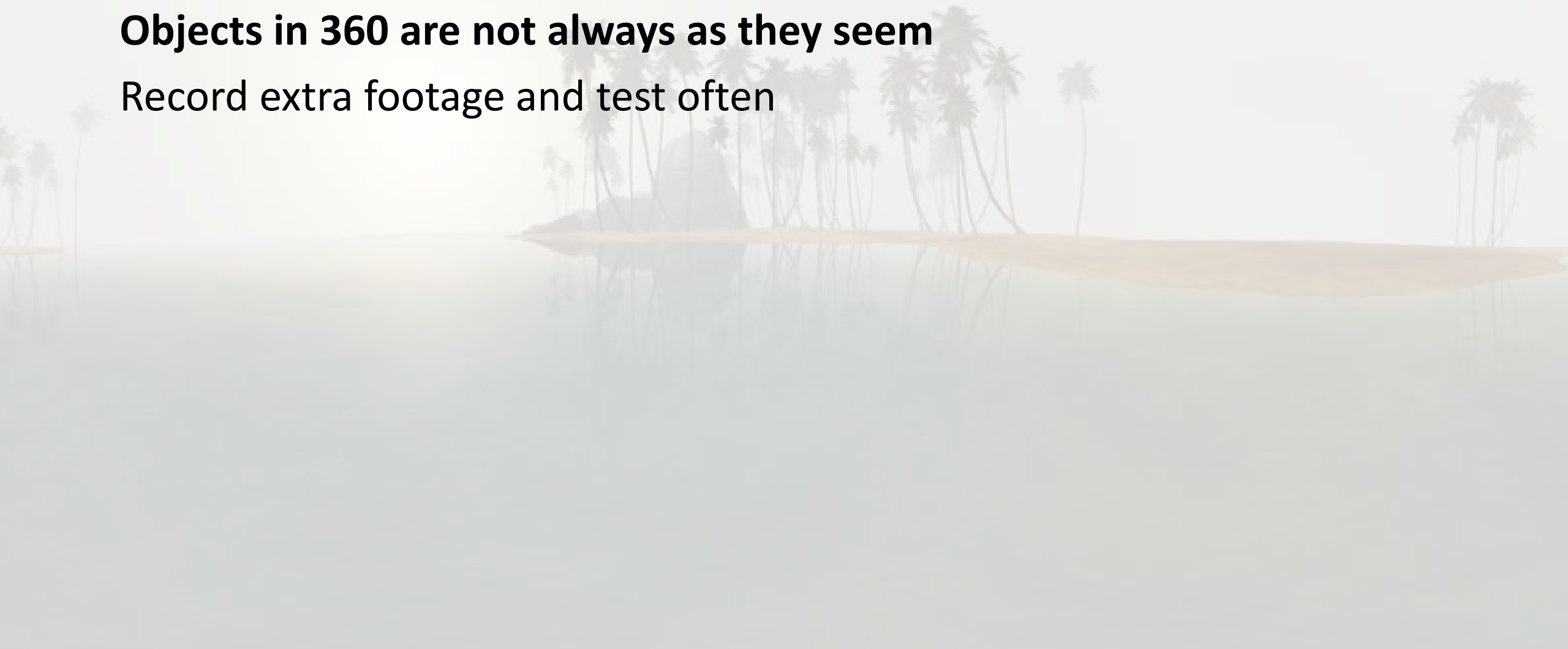
A tropical landscape with palm trees, large rocks, and a sunset sky. The scene is viewed from a low angle, looking out over a sandy beach towards the ocean. The sky is filled with soft, colorful clouds in shades of orange, yellow, and blue. The foreground is dominated by large, smooth, light-colored rocks on the left and right sides. In the background, a line of palm trees stands against the horizon. The overall atmosphere is serene and beautiful.

Don't Forget the Ground

Think about what is at the feet of the viewer in the screen

Objects in 360 are not always as they seem

Record extra footage and test often





Resolution is a depth thing

Find the sweet spot of your camera and use the focal point for your main interactions

A lush, green forest scene with many tall, slender trees. The ground is covered in dense green foliage and fallen branches. A bright sun flare is visible in the upper left corner, casting a warm glow over the scene. The sky is blue with some white clouds visible through the tree canopy.

What is the gift of VR?

Theta Ricoh camera shoots 1920x960, square pixels, 29.97fps, 44.1khz audio.

VIDEO

Video needs to be re-encoded into a spherical video using [their special software](<https://theta360.com/en/support/download/>).

Adobe Premiere seems best for cutting due to flexibility in sequence settings and such. Export using the same source settings as the Ricoh camera's footage.

The resulting video will need metadata injected, use [this](<https://github.com/google/spatial-media/releases>).

AUDIO

Reaper is the best DAW for serious sound editing. [Here](https://support.google.com/jump/answer/6399746?hl=en&ref_topic=6399824) is Google's documentation on spatial audio.

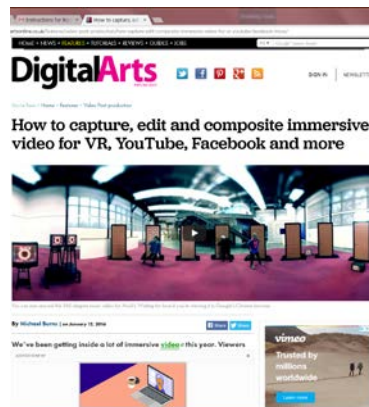
Spatial audio in youtube works for Chrome on desktops and Android. iOS just gets stereo.
In premiere export the Quicktime as per [these audio specs](<https://support.google.com/jump/answer/6400185?hl=en>).

To use spatial audio, Youtube will want audio encoded in the Ambix format, which is different from the Furse-Malham B-format many ambisonic plug-ins generate. [Here](<http://www.matthiaskronlachner.com/?p=2015>) is a nice ambisonics plug-in toolkit that can convert to Ambix and offers many other features.



How to Edit 360/VR Footage in Premiere Pro CC 2017

<https://youtu.be/OwN9a0Kwe0E>



How to capture, edit and composite immersive video for VR, YouTube, Facebook and more

<http://www.digitalartsonline.co.uk/features/video-post-production/how-capture-edit-composite-immersive-video-for-vr-youtube-facebook-more/>



5 Apps for Creating Your Own VR Content

<https://www.inverse.com/article/14983-4-great-apps-for-creating-your-own-vr-content>

Etc.....

Team Assign 3: VR 360

Due Dates:

Rough Cut/Storyboards: Thursday, Nov 2 - 11:59:59 PM

Final Cut: Tuesday, Nov 14 - 11:59:59 PM

Submission Details: Submit on \\randon > dfs > classes > 2017_semester_3 > visualstory > Assignments > Team Assignment 3 > Team Name

REQUIREMENTS:

1. Produce a 2 - 3 minute VR experience that tells at least one complete story arc (beginning, middle, and end)
2. You may use visual/audio cues to help guide your viewers but it must not break the story immersion.
3. Sound effects OK, narration OK, but no dialogue
4. The rough cut/storyboards will need to be able to communicate your goals clearly. This will give faculty a chance to give feedback, which you will need to implement. If feedback is not implemented to a 'reasonable' degree one letter grade will be deducted from final product.

You need to deliver a complete story to your viewers using The Pixar Story Structure:

[Once upon a time] there was _____. Every day, _____. One day _____. Because of that, _____. Because of that, _____. Until finally _____.

[The Pixar Story Structure - <http://blog.school-planners.co.uk/teaching-the-pixar-story-structure>]