PROCEDURE PROTOCOLS

Space Availability

- Check with staff on available lab space.

Preparation

- Upon entering the lab space, ensure that participant stool is in place and free of any obstacles.
- Start the computer and open Google Form for the designated participant.
- Turn on Oculus and test buffering rates.
- Place Oculus on its charger while waiting for the participant.
- Place silicon interface cover on Oculus HMD.
- Wipe down all surfaces, including the Oculus and computer.
- Have a list of participant IDs ready for when participants arrive.
- Have copies of the consent form ready to hand out.
- Have extra pens that may be given to each student (rather than touching similar objects).
- Have a paper “In-Session / Do not Disturb” sign and tape to place on the lab door for when the participant arrives.

Participant Arrival

- Greet the participant.
- Show the Participant to their seat.
- Once the participant is seated, shut the door and place the “Do not Disturb Sign” on the door.

- **Script**: *"Thanks for coming in today. I really appreciate your participation in my study and if you can go ahead and please turn your phone off or put it on mute, we can get started. …*
- **"***I am conducting this study to understand user's emotional reactions to VR content and its potential for educational uses.*
- *For your participation today, you're going to watch about 10 minutes' worth of videos using a VR headset. Then, you're going to answer a questionnaire. Overall, with set-up and the questionnaire, your participation today should take approximately 30 minutes. Then, tomorrow, you will receive a follow-up email that will have three short questions. Last, I want to mention that by participating in this research you will receive:*
    - *Extra credit from your course instructor that announced this study*

      OR
    - *A $5 gift card to a coffee shop.*
- *Now, there is a second study that occurs outside of this space. If selected, we'll have an interview where I ask you some additional questions. For participation in this portion, if you're interested in that, you will receive a $50 gift card.*

Informed Consent Form

- Hand the participant a consent form.
    - Go through all points of the consent form.
- Ask the participant if they agree to consent and see if they have any questions.
- Be sure to indicate that a copy of the consent form is for them to keep.

Time Check

- ***Script: "****Just to double-check, do you have 30 minutes to set aside for participation today? Do you have class or work that you'll need to hurry to? I just want to make sure that now is a good time, and I don't want you to feel rushed at all. If it's not, we can always reschedule!"*
    - Wait for confirmation regarding time commitment.

General Instructions

- **Script**: "*For this study, I am interested in your emotions and levels of interest regarding the content in the VR videos I am about to present to you. You will first fill out some information about yourself. Next, you'll take a couple of minutes to hang out and relax. Then, you will watch three videos. Then, you will take a 30-second break. Then, you will watch the final three videos. After watching all of these videos, you will complete a questionnaire about your experience. Are you clear about what I'm asking you to do?"* [Answer any questions]
- **Script**: "*I do ask that you do not discuss this research outside of this room with others, as everything should remain confidential. Lastly, the questionnaires and main task are not a test, so please take this experiment in a relaxed manner. Nothing you do in this experiment will be used to judge you as an individual."*

Demographics and Screening for VR Experience

- **Script**: "*To start, please fill out this brief questionnaire about yourself. Once you reach the bottom of the form, please hand it back."*
    - Lead student to the designated computer.
    - Upon receiving the computer, go to the next page of the form. Give the participant an ID number.

- **Script: "***So, just to know a little more about you, could you tell me if you've used a virtual reality headset before? If so, what was it like?"*
    - If their answer is no:
        - **Script**: *That's perfectly fine. Have you ever been to a 3D movie before?*
    - If their answer again is no, be certain to provide extra well-fare checks during exposure to ensure that they are not experiencing cybersickness.
    - Make a note of their answer in the form to control for prior experience.

Wearing the Headset Instructions

- **Script***: "Okay, you may now take a seat on this chair over here, and I'm going to walk you through putting the headset. However, I just want you to know that you may stop at any point if you need to, okay?"*
        - **Wait for confirmation**.
    - *So, place the headset in a position that's comfortable on your head.*
    - *Then, pull the Velcro straps into position. Put the rear strap into position just below the crown of your head.*
    - *Next, pull the top Velcro strap so that it's fairly tight.*
        - *You may see a little light coming through around your nose. This is normal. To reduce the amount of light, please gently pull down on the two levers above your ears."*

Oculus Start-up and Initial Video Instructions

- **Script***: "Please describe for me what you see.*
    - If the answer indicates that they are witnessing a white grid on a black background, they are good to proceed,

    - If the answer is No, troubleshoot with the headset to determine the issue.
- **Script***: "While there may be a little blur on this screen, it shouldn't be significant. Can you describe the clarity of the image."*
    - If the image is relatively clear, let the playlist continue.
    - If the answer is No, troubleshoot with the headset to determine the issue.
- **Script***: In this first video, we are just going to take 30 seconds and get you acclimated to the experience and also make sure that the video isn't too blurry. Then, when I ask you to, I'll just need you to select, pause. Do you understand what you need to do?"*
    - Wait for confirmation if they're ready.
    - If the image is relatively clear, proceed to play the rest of the YouTube playlist.
    - If the answer is No, troubleshoot with the headset to determine the issue.

Stimuli Exposure

- Observe them as they proceed with their videos. After the third video, ask them to stop.
- Wait for confirmation if they're ready.
- Observe them as they proceed with their videos. After the sixth video, ask them to stop.
- **Script***: "Alright, that's all of the videos! You can take your headset off now, and I'm going to ask you to fill out a quick questionnaire, but, first, how are you feeling?"*
    - If they say they're feeling okay, proceed to the next steps.
    - If they are not feeling well, skip to Appendix K: Cybersickness Protocol.

Laboratory Data Collection Instructions

- Return to computer. Check to make sure that the correct participant form is open and on the correct page.

- **Script**: *"Now, please take a seat over here and fill out this questionnaire. If you have any questions or something is unclear, please let me know and I can help out. When you're finished, let me know."*

Debriefing, Follow-up Questions, and Future Participation

- On completion of the questionnaire, thank the subjects for their participation; clarify any further questions regarding the experimental procedures, data analysis, or use of data.
- ***Script***: *Great! So, again, thank you for your participation in this study. Tomorrow, you'll receive a follow-up email with just three short questions. Again, it's really important that you answer those questions."*
- *If you have any further questions, please feel free to contact me. Also, please remember this study is confidential so do not discuss it with others. If you are selected for an interview, you will receive an email.*
- *Thank you again so much!*

Clean-up

- Be sure to remove the "Do not Disturb Sign" from the door.
- Re-arrange the room as necessary.
- Remove silicon interface cover and clean with an anti-bacterial wipe.
- Using a dry cloth to clean the outside of the headset.
- Use an anti-bacterial wipe to clean the straps and the facial interface foam.
- Use a dry optical lens micro-fiber cloth to ***gently*** clean the lenses.
- Use a non-abrasive anti-bacterial wipe to clean the HMD's hand-held remotes.
- Use an anti-bacterial wipe to clean the computer.