Augmented Reality Mirror (ar_mirror) Demo Tutorial and Lesson Plan Guide
Guide Objectives

• Provide teachers a general guide how to navigate the ar_mirror physiology demos and to provide students with project ideas.
Open AR_Mirror_Bone_Demo in Unity

The main screen should look something like this...

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You’ll notice many assets folders available. Unity allows for multiple scenes to be created.

The demo’s only have one scene, so we will open it and check it out.
Open the BoneDemo scene
Changing Bone Overlays
Open the SkeletonViewer
This provides you access to where the specific bone images are linked to each respective joint. You can change these to whatever images you have.
Note: The Orbbec camera recognizes each of the labelled joints. Technically, you can associate a 3D image between any of these respective joints.

You could have the students overlay images in any combination.
The images are saved in the “Prefabs” folder, and you can add more images here to allow you to plug and play.
If you press the play button, you can see how your changes affect the program.
What you see in the main screen is what you’ll see when your demo is running.

When you’re finished checking, press the play button again to stop the demo
You can also manipulate the code by right clicking in box and selecting “Edit Script” This opens Visual Studio to view your C# script.
This allows you to check out the script responsible for rendering the bone overlay in the program.

Some suggestions are to have the you annotate the code or see what happens if they modify the code.
Example: Adding a bone between the hand joints
Step 1.

Define a new GameObject.
Step 2.

Define a new bone. This allows you to select an image for this in Unity.
Step 3.

Define the connecting points.

In this case, the bone you defined previously will now be connected between these two joints.
Step 4.
Attach your changes to Unity. This will allow you to now update the images to attach, including the option to attach an image between the hand joints.

Note: If any syntax errors occurred, Visual Studio will flag it and prompt you to make any necessary corrections/changes.
Back in Unity, the renderer has been updated, and a new option to add an image is available.

When you click on it, it opens the image folder and allows you to select an image.
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Femur is attached!

Note: Since the model is not upright, the rendering can be a bit off. It works best when the user is upright.