

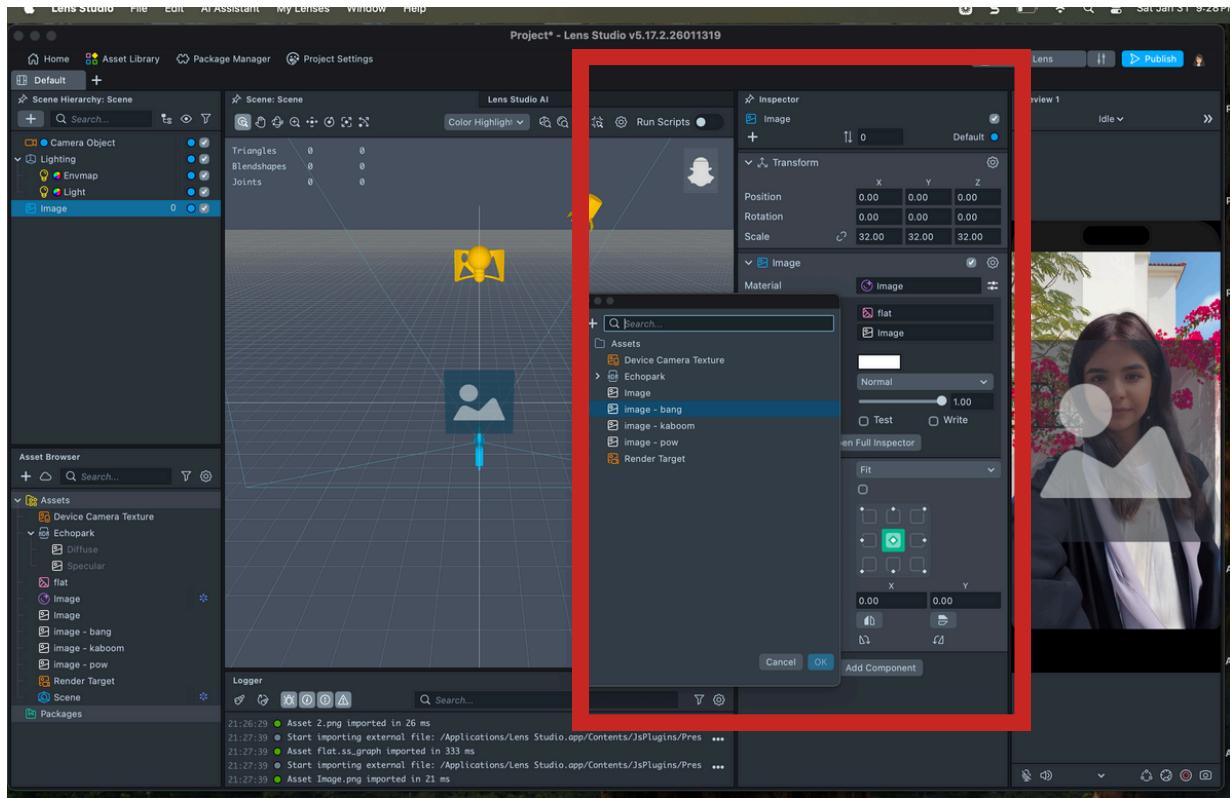
Bringing the Object and the Art Together

Inspector Panel

Learning Objectives

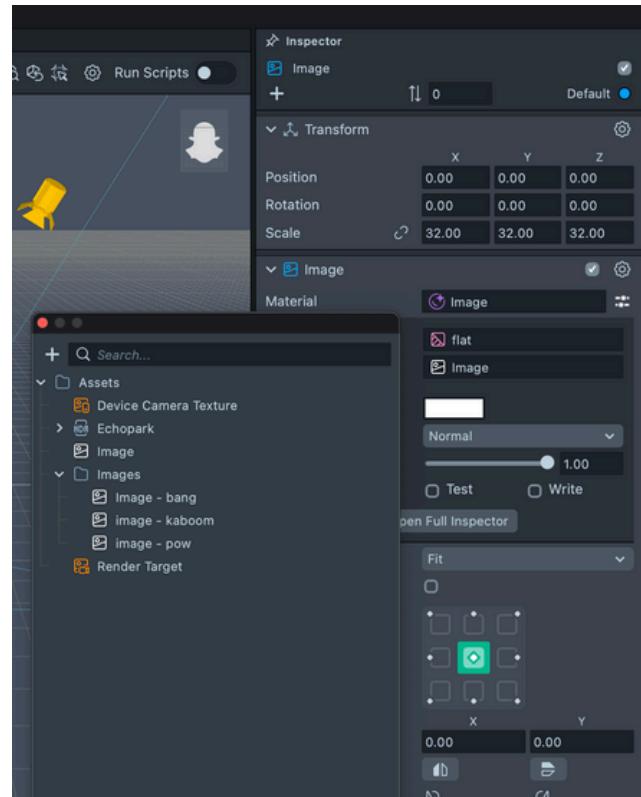
1. Update the image object to display an image
2. Use the Inspector Panel to change how the image looks in AR
3. Describe how hierarchy can change your AR experience.
4. Identify the Inspector Panel components for an image object

Right now, your Image Object is just a placeholder. To turn it into your actual artwork, we need to tell the Inspector which "Texture" to use.



How to Swap the Image

1. **Select:** In the Objects Panel, click on your Image object.
2. **Inspect:** Look over at the Inspector Panel on the right. Look for the box that says Texture. It currently says Default.
3. **Link:** Click that Texture box. A window will pop up showing everything in your Asset Browser.
4. **Choose:** Open your Images folder and select an image file. Click OK.





Experiment Time!

Once your image is visible, try this:

- Look at the Inspector under the Image Component.
- Find the Alpha slider or the Color box.
- Change the color or lower the alpha—watch your art change transparency or tint right before your eyes!

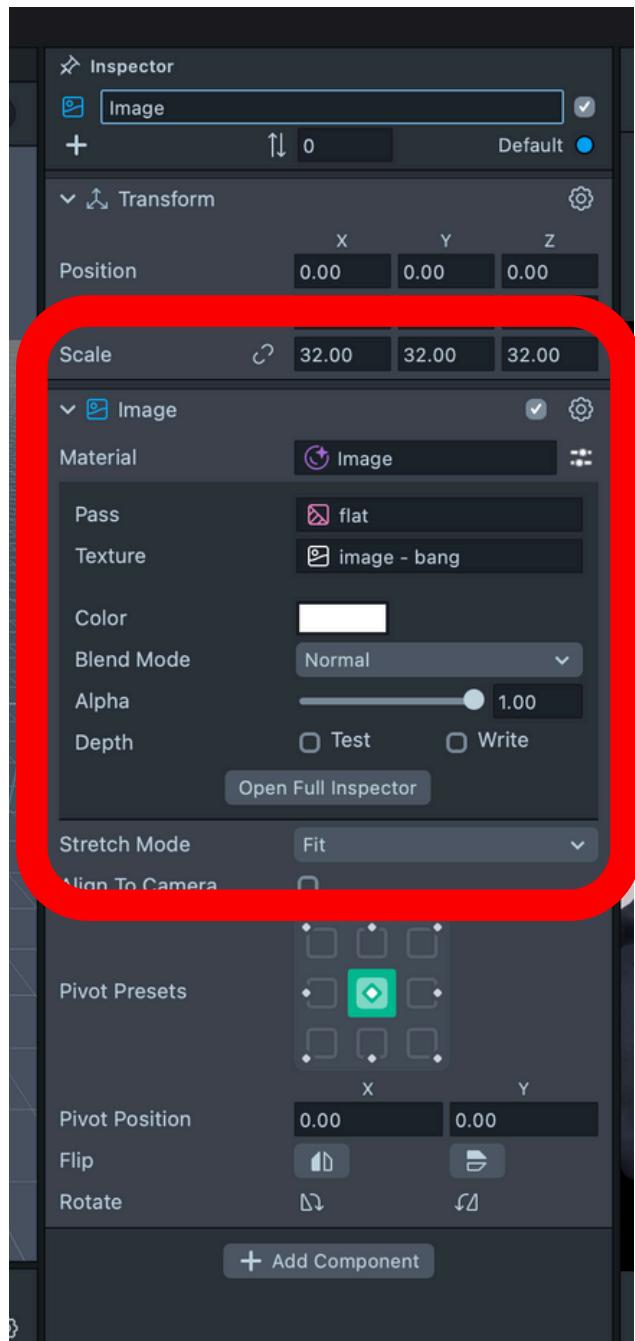
Important: These only make changes to your AR experience, it does not change your original image



This is like putting a photo into a frame. The Image Object is the "frame" you hung on the wall, and the Texture in the Inspector is the "photo" you're sliding inside. You can keep the same frame but swap the photo as many times as you want!

The Result

Your white square has vanished! In its place, you should see your PNG art appearing in the Preview Panel.



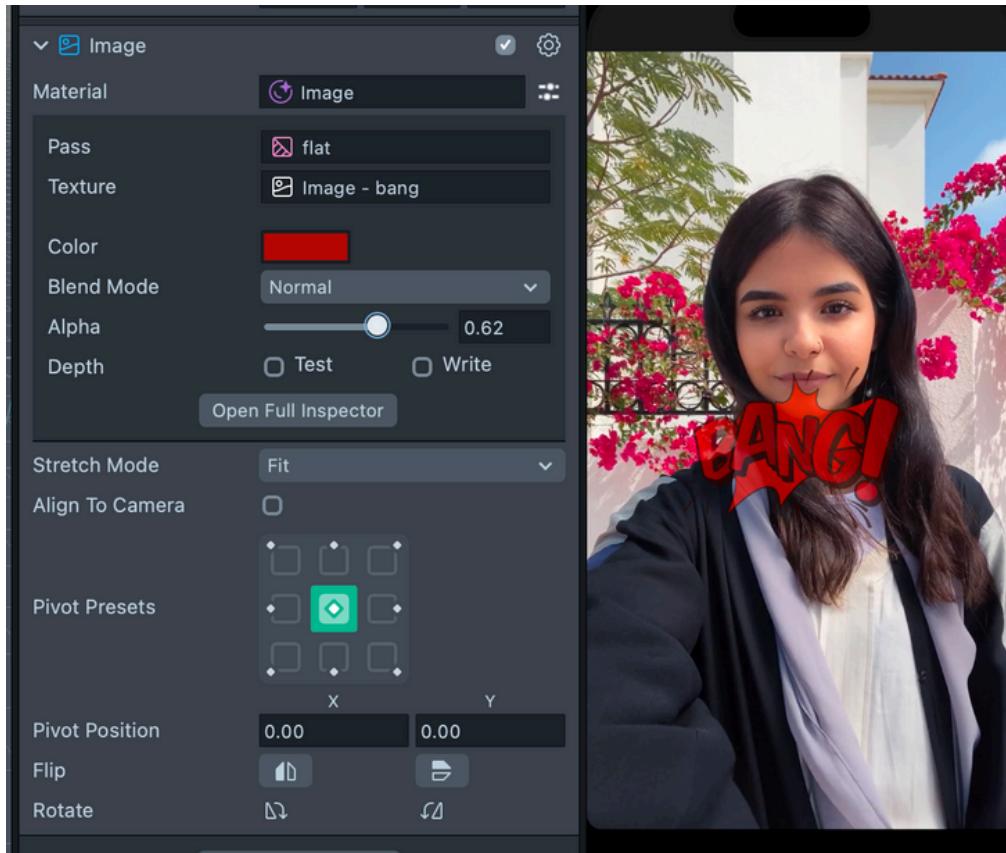
Plugged Activity:

Experiment with the ARt

Experiment Time!

Once your image is visible, try this:

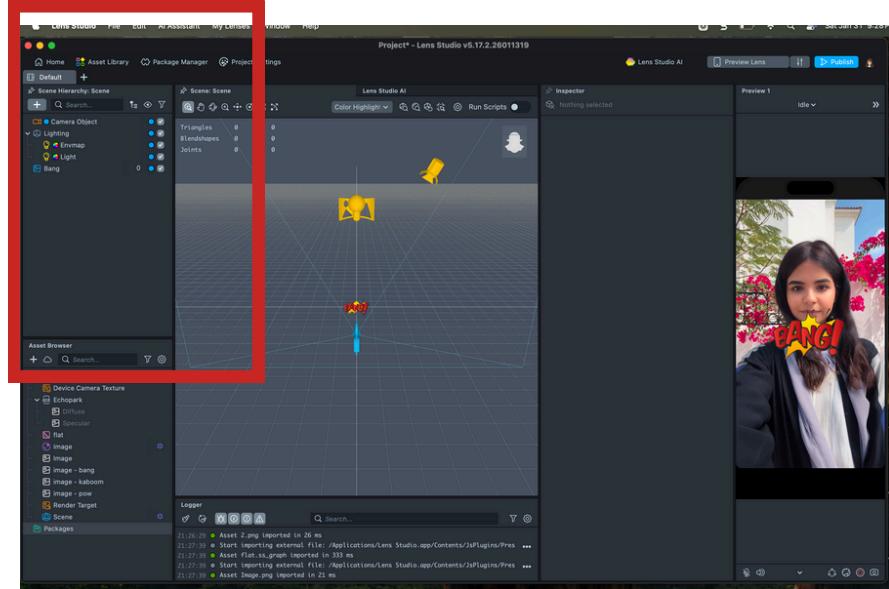
- Look at the Inspector under the Image Component.
- Find the Alpha slider or the Color box.
- Change the color or lower the alpha—watch your art change transparency or tint right before your eyes!



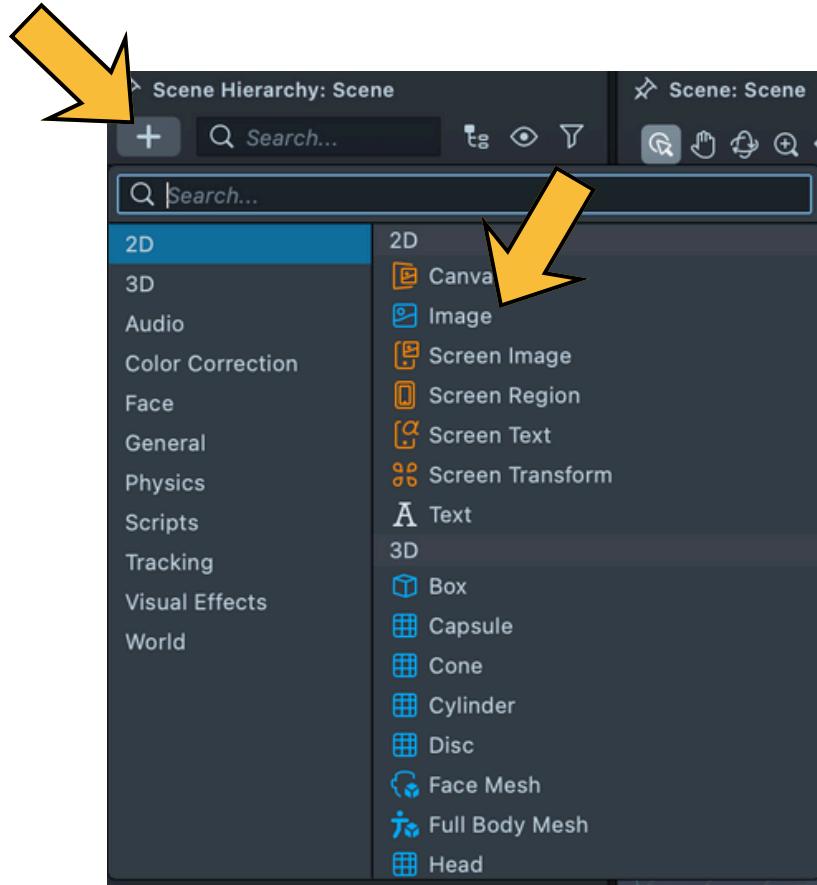
Understanding the Hierarchy

When you add another object, you aren't just adding a second picture—you are starting a List. In the tech world, we call this the Hierarchy.

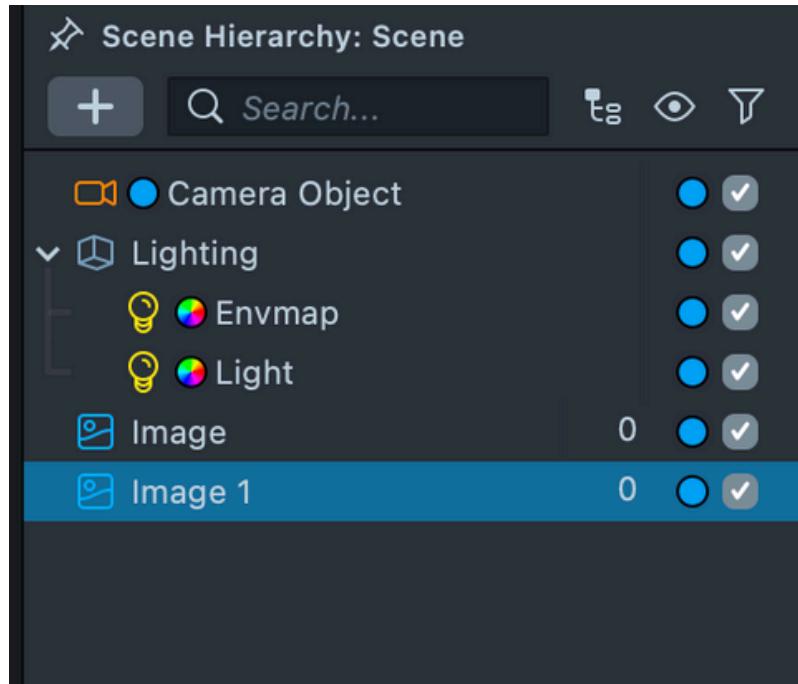
To add another image object container click in the scene panel.



Click on the plus symbol (+) then choose Image



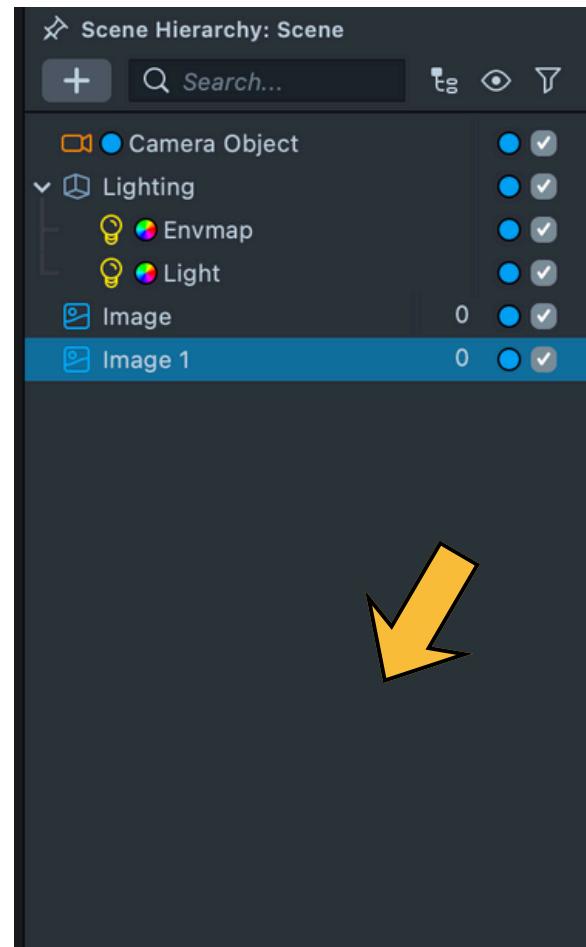
We see that an image object has been added under our first one.



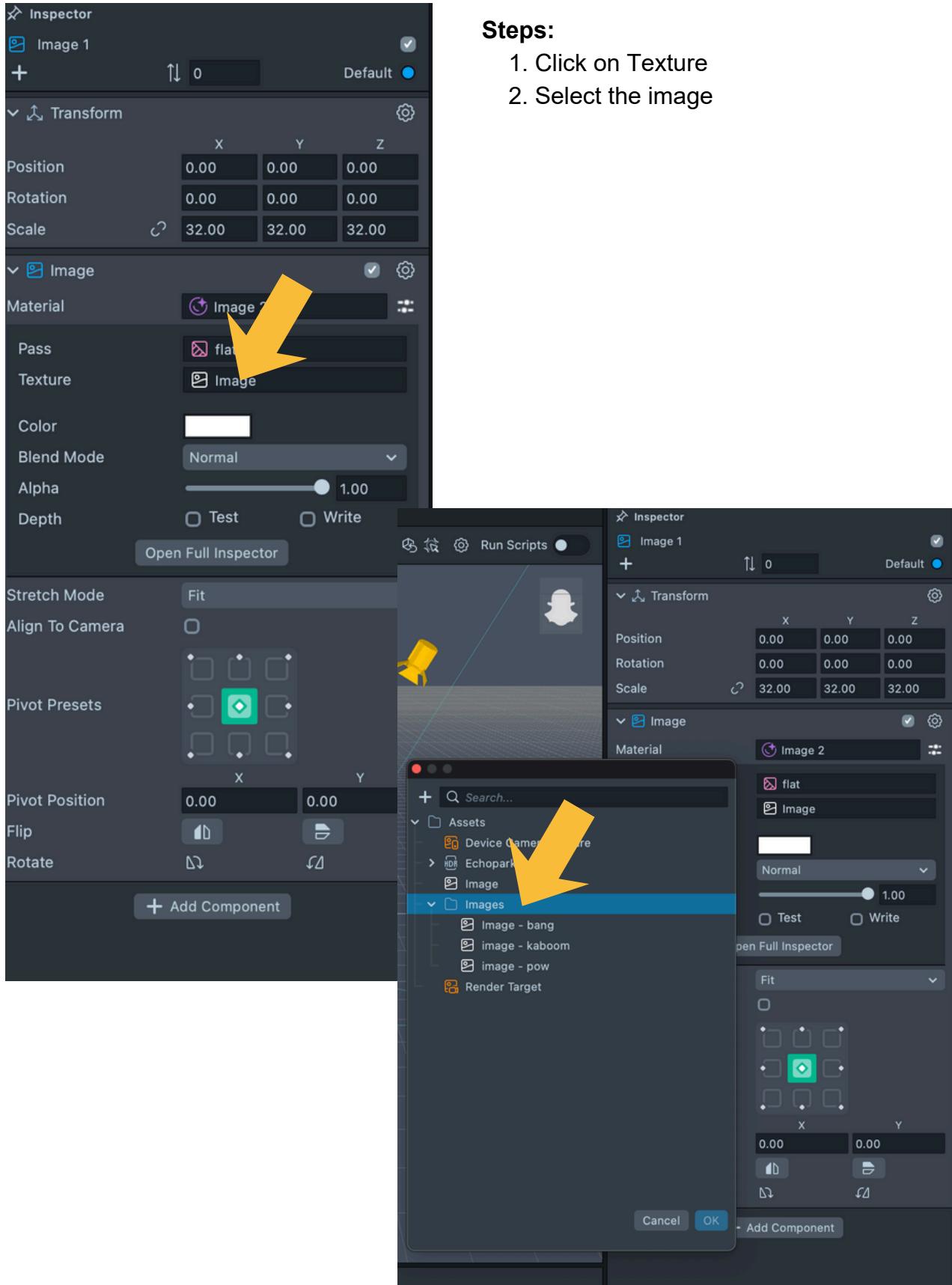
Troubleshooting Tip:

If you click on an object before adding another object, it will be nested under the clicked object.

By clicking on the blank area, instead of an object, you will add another object without nesting it under another.



With the second image object selected, we see the same options as before in our Inspector Panel. Repeat the same steps as completed as before to add an image.



When you select your Image Object, the Inspector panel becomes your control center. It allows you to transform a simple placeholder into a customized piece of your AR world.

The Image Inspector Overview

The Inspector is organized into components. Think of these as different categories of settings for your object. Here is the breakdown from top to bottom:

1. The Header: Identity & Visibility

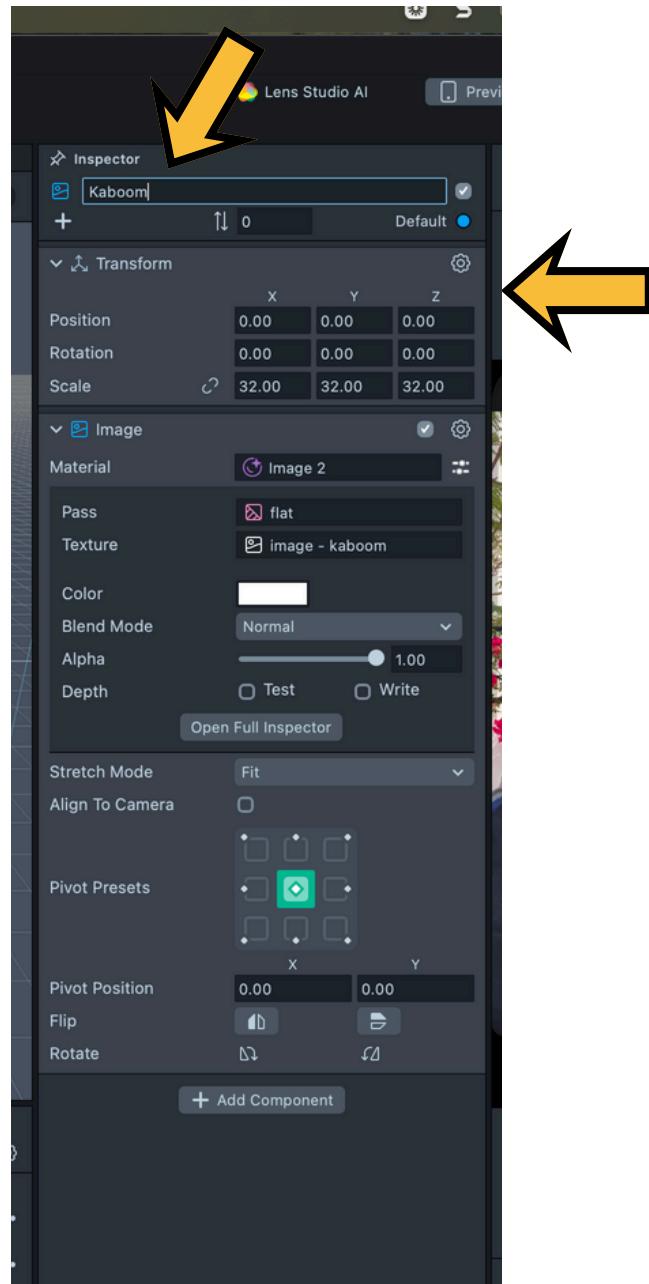
At the very top, you see the name of your object.

- Renaming:** Click directly on the name (it likely says Image) to type a new one. **Tip:** Give it a name that describes it.
- The Checkbox:** The small box next to the name is the Visibility Toggle. Unchecking this makes the object invisible in your Lens without deleting it.
- Layer Order:** The 0 indicates what position the image is in a layer. (applicable when you have multiple objects in your lens)

2. Transform: Position & Size

This section handles the "Physics" of your image—where it sits and how big it is.

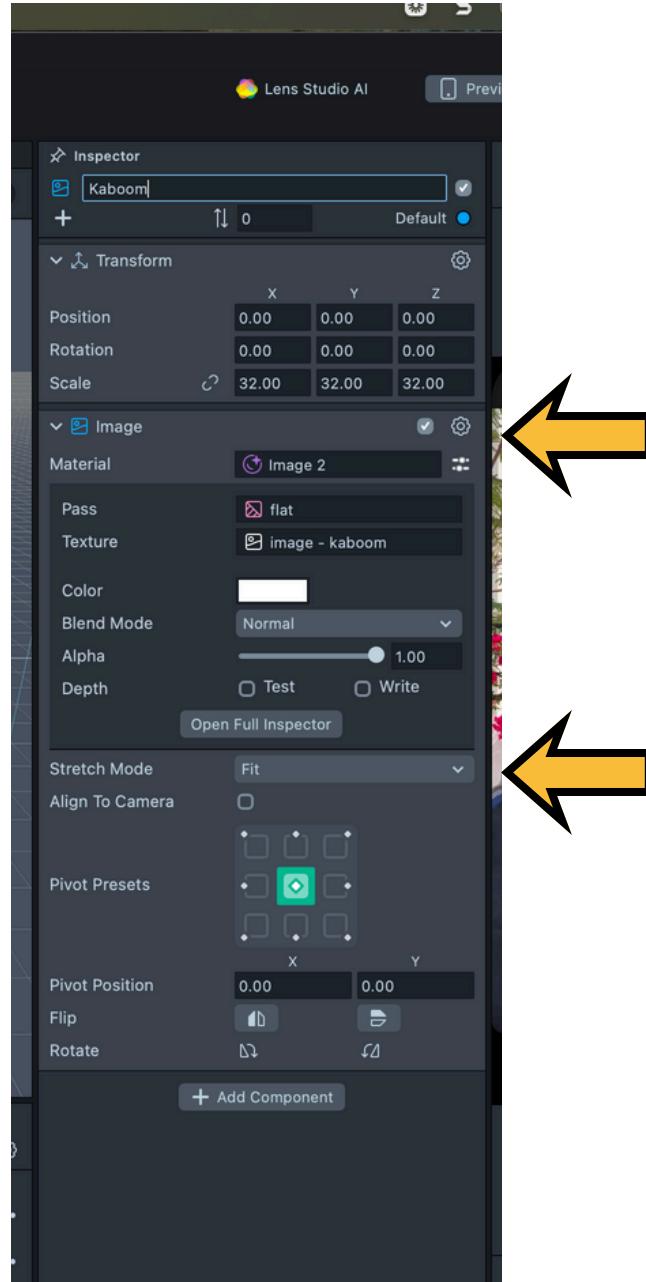
- Position (X, Y, Z):** Moves your image left/right (X), up/down (Y), or forward/backward (Z).
- Rotation:** Spins your image.
- Scale:** Changes the size. If the "Link" icon is clicked, the image will grow evenly so it doesn't look stretched!



3. Image Component: The "Look"

This is the heart of the settings where you actually link your art.

- **Pass:** This defines the visual "shader" or "math" used to draw your image on the screen.
- **Texture:** This is the most important box! Click here to select your PNG from the Asset Browser.
- **Color:** You can click the white box to "tint" your image a different color.
- **Alpha:** This slider controls Transparency. 1.00 is solid; 0.00 is completely invisible.
- **Blend Mode:** This changes how the image "mixes" with the camera feed (like "Multiply" or "Overlay" in Photoshop)
- **Depth:** This setting determines how your object interacts with the "Z-axis" (the invisible line pointing toward and away from the camera).



4. Stretch & Pivot: Placement

- **Stretch Mode:** Usually set to Fit or Fill. This tells the image how to behave if the phone screen is a different size than your computer screen.
- **Align To Camera:** This is a tool that changes how your image behaves when the user moves their phone.
- **Pivot Presets:** The grid of dots allows you to choose the "anchor point" of the image. If you pick the center dot, the image spins around its middle.
- **Pivot Position:** This lets you type in exact coordinates to move that "thumbtack" to a custom spot on X and Y axes.
- **Flip:** Flips the image horizontally or vertically.
- **Rotate:** Allows to quickly turn an object 90 degrees clockwise or counter clockwise.

Stop and Check

Before we move on to adding interactivity, let's ensure your Digital Blueprint is solid.

Note: You're allowed creative liberty in this workbook, so your project may not match mine exactly! However, we need to make sure the basic fundamentals have been met so your project works later on.

1. Assets Panel (Bottom Left)

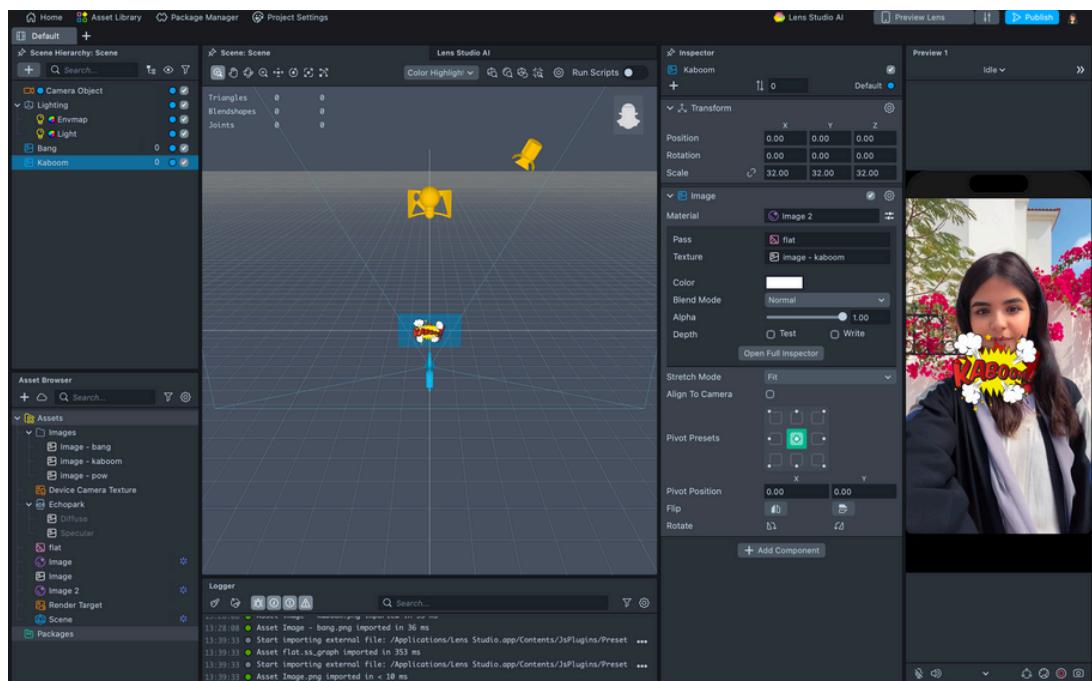
- [] Do you see one dedicated folder you created to keep your project tidy?
- [] Are the image files sitting inside that folder?

2. Objects Panel (Top Left)

- [] The Scene List: Do you have 2 Image Objects listed here?
- [] The Identity Check: Have you renamed them appropriately?

3. Preview Panel (Right Side)

- [] The Visual Test:
 - If you see one image: Perfect! You are exactly where you need to be.
 - If you see both images: Awesome! You got curious and explored the Transform settings early.
 - If you see zero images: Time for some Rubber Duck Debugging! Check your Logger—did the images fail to import? Or are they hidden behind the camera?



Plugged In Activity

The "No-Rules" Exploration Zone

Now that you know where the buttons are, it's time to see what they actually do. There is no right or wrong way to build AR—there is only "What if I try this?"

The Challenge

Pick one of your Image Objects and try these experiments. Check them off as you discover a new look!

- [] The Ghost Look: Slide the Alpha to 0.5. How does it change the way the person looks behind the image?
- [] The Tint: Click the white Color box and pick a bright neon green or red. What happened to your original art?
- [] The Mirror: Click the Flip icons. Can you make your character face the opposite direction?
- [] The Tilted View: Go to Rotation in the Transform section and type in 45.

Your "Safety Net" (How to Fix Anything)

If you try something and think, "Yikes, I liked it better before," don't worry! You can't break Lens Studio. Here is your escape plan:

1. *The Magic Undo*

If you make a mistake, immediately press Ctrl + Z (or Cmd + Z on Mac). This is like a time machine that takes you back one step.

2. *The Reset Button*

If you've changed too many things and want to start over, look for the small gear icon  at the top of the Transform or Image component. Click it and select Reset. It will snap back to exactly how it was when you first added it.

3. *The Visibility Ghost*

If an object is just in your way, uncheck the box next to its name in the Objects Panel. It's not deleted; it's just taking a nap!



Pro-Tip for Creators

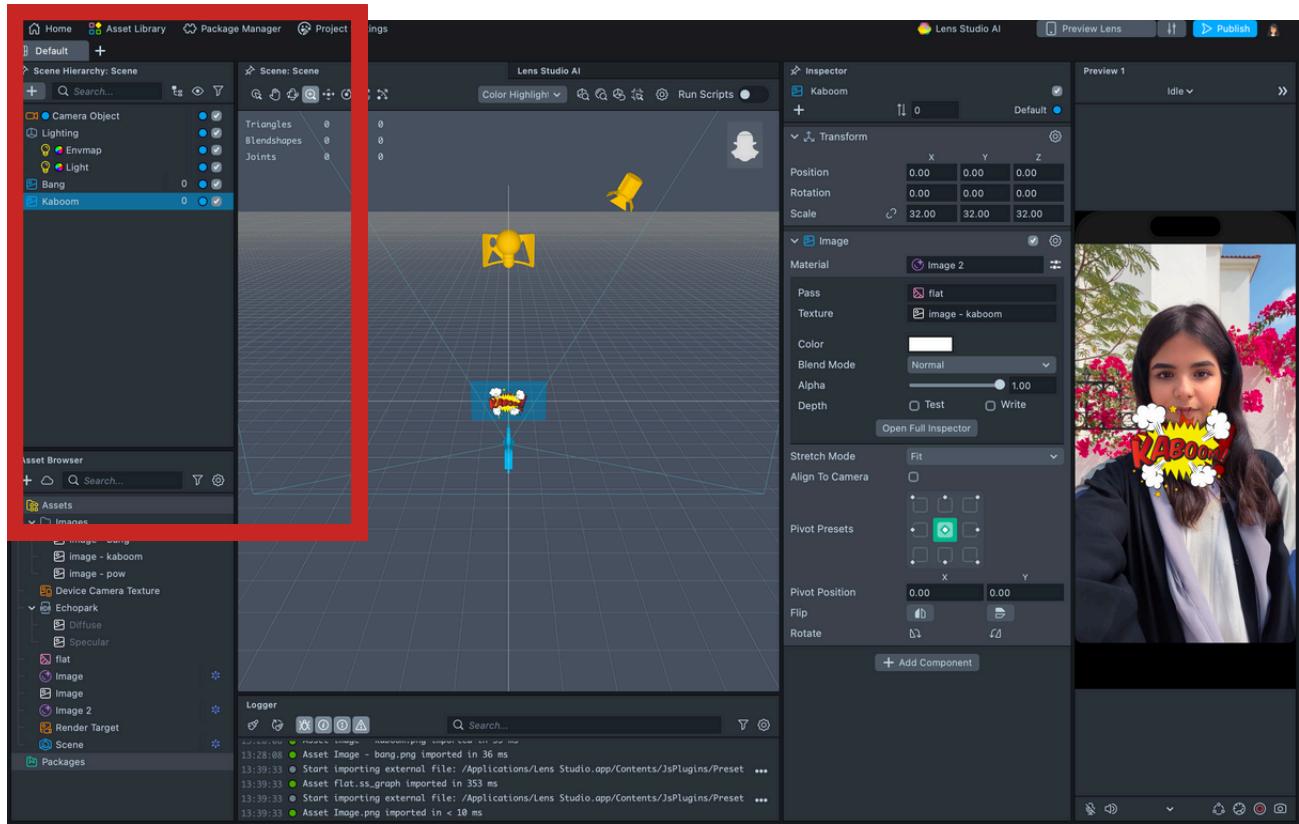
Professional AR developers spend 90% of their time "messing around" with sliders to see what looks cool. If you aren't making "mistakes," you aren't exploring!

When you add your second (or third!) Image Object, you aren't just adding a file; you are building a hierarchy. This means a ranked list.

In the Objects Panel, the position of an item tells Lens Studio how to draw or display it.

The Stacking Order

- *The Rule of the List:* Objects at the bottom of the list appear "on top" or "in front" of everything else.
- *The "Leapfrog" Trick:* If your new image is hiding your first one, click and drag it to the top or bottom of the list. You'll see them "leapfrog" over each other in the Preview Panel!





No mistakes...just happy accidents.
-Bob Ross

Continuing to build without saving is the only "real" mistake a creator can make! Lens Studio does not automatically save your changes, so it's important you do it regularly.

Saving Your Masterpiece

You've imported assets, created objects, and experimented with the Inspector. Now, let's make sure all that hard work is tucked away safely.

How to Save

1. Go to the File menu in the top left corner of the screen.
2. Select Save As... (The first time you save, always use "Save As").
3. Name Your Project: Choose a name that makes sense, like My_First_Lens_Project.
4. Pick a Spot: Save it to your "Documents" folder or a specific "AR Class" folder on your computer.

Pro-Tips for Saving

- The "Safety" Shortcut: Get into the habit of pressing Ctrl + S (or Cmd + S) every few minutes. It takes one second and can save you hours of rework!
- Version Control: If you are about to try something really wild and you aren't sure if you'll like it, use Save As and name it Project_Version_2. This keeps your original version safe just in case!
- The Project Folder: When you save, Lens Studio creates a special folder. Don't move files around inside that folder manually on your computer; let Lens Studio handle the organization.

Knowledge Check

Customizing the Experience

Instructions: Answer the following questions to demonstrate your mastery of the Inspector Panel and the logic of object layering.

1. *Bringing the Art to the Container*

You have created an Image Object, but it still shows a white placeholder box. Which property in the Inspector Panel must you change to display your image asset?

- A. Name
- B. Texture
- C. Script
- D. Layer

2. *The Layering Logic (Hierarchy)*

You have two images in your Objects Panel: a "ZAP" sticker at the top of the list and a "POW" sticker at the bottom. In the Preview Panel, the "POW" sticker is partially covering the "ZAP" sticker.

What happens if you drag the "POW" sticker to the top of the list?

- A. The "POW" sticker will move behind the "ZAP" sticker.
- B. The "ZAP" sticker will be deleted.
- C. The "POW" sticker will move to the front of the "ZAP" sticker.
- D. The Logger will show a red error.

3. *Visual Engineering*

You want your sticker to look like a giant billboard in the distance instead of a small sticker on a desk. Which Transform setting would you change to make the sticker physically larger in the 3D scene?

Answer:
