

## Perspective Lesson 1:

### Zero-Point Perspective: How to show depth and recreate it on paper

#### Tools needed:

- One background of “Hills” per student
- One set of trees of different sizes, cut out and ready for gluing
- Gluesticks or glue
- Pencils, Colored Pencils, Crayons, ect. (optional)
- (Optional) Access to a window which can see quite a distance away—enough distance that something large (a car or a tree) can look small enough to “pick up” with your hand.

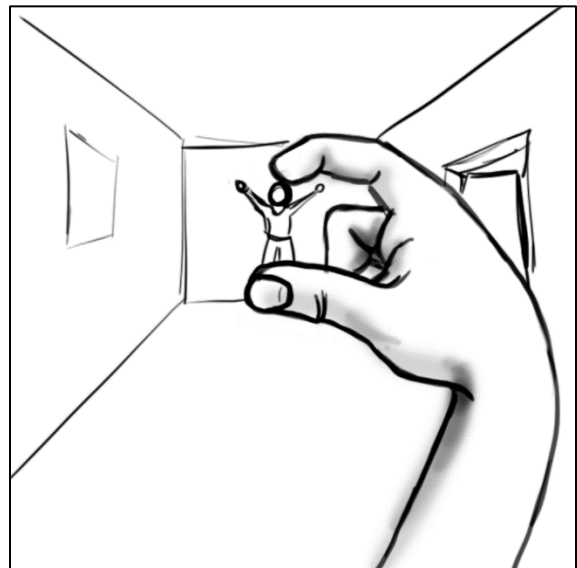
**NOTE:** This is an exercise which benefits from printing the exercise pages ahead of time, and then printing and cutting out the trees before class starts.

**Goal:** For the students to understand depth: how to see it in real life, and how to re-create it in paintings. Vocabulary includes Perspective, Height, Width, Depth, Overlap, and Picture Plane

*<If you have access to a window, take them to it, and let them look out. Outside will work too, but we are introducing the words “Picture Plane”, which is similar to a window pane.>*

**Tutor:** Ever look out the window and see how some things which are closer to the window look bigger than similar things which are farther away? If a tree is near a window, it is very tall, but another tree, far away, can look smaller, or even tiny?

*<Depending on what you see through the window, have the students use their fingers to measure how big or small something is. For example, last year, we were overlooking the parking lot for class. I had the kids use their hands to “measure” how big an item is. A tree that’s far away might fit between their thumb and forefinger—even though we know it’s much taller than us if we were standing next to it. Alternatively, see if a parent or yourself walks to one end of a hall while the students stay at the other. Can they measure that person? Have they shrunk in real life, or they just appear smaller because they are far away? If none of these things is possible, use the train photo and ask the children if the train cars are really getting smaller as the train rolls by, or do they APPEAR smaller because they are farther away? >*



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**Tutor:** Why is that?

*<because things look smaller the farther away they are from the “window” and the window’s viewer-you!>*

**Tutor:** This sense of distance you can see every day, or out of the window, is called **“DEPTH”**.

**“Height”** is how tall things are from the bottom to the top.

**“Width”** is how broad things are from side to side

But **“Depth”** is how far something is from the “window” you look through. And the farther away something is from your “window”, the smaller it will look.

*<You can show the height-width-depth graphic if you like>*

But when we draw, we have a problem. Paper is mostly flat, isn’t it? But then again, so is a window...

In fact, if you think of a painting as a “window” you look through to see something outside, you’ll be thinking like an artist. In art, artists think of their paper or canvas as a “window” they call **“the picture plane.”** Now all they have to do is draw things the way they’d see it through the “window” of the paper.

So, how can we make things on paper look like what we see out a window?

*<We can make things smaller, like the trees. You can show the diagram on page 5 here but it’s not necessary to expound on at this time. >*

Making things smaller is one way. If things are far away from your paper, in the background, they should be smaller. Have you ever been in a car, and could see a really, really long way away? Have trees ever looked like they were so small there were just a tiny green line? So small you could barely see them?

That point, where big things are so small you can hardly see them anymore, is call the HORIZON. Say that with me, “Horizon”.

*<Show “Horizon” vocab sheet>*

“Horizon” comes from the Greek language, meaning “boundary”. The Horizon is the farthest point we can see—where it looks like the sky comes down to meet the ground (“Hello, Ground”) and it looks like the ground comes up to meet the sky (“Hello Sky”)<sup>1</sup>. Things that we can see all the way on the horizon look so small, we can barely see any details. And we can’t see anything behind the horizon line—that stuff is still there, but it’s so far away, we can’t see it. Do you see the trees in this picture? There’s one very close to you, ones further away, and then ones all the way on the horizon, do you see that?

*<Show the photo of northern Chicago>*

Can we see the horizon on this picture? How about these buildings? Do you think they’re big? How about those one s far away? Are do they look small?

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<sup>1</sup> Yes, this is goofy, but my first art teacher, Mrs. McD, taught us about horizons this way, and obviously, it stuck.

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<yes>

If we were to walk up to that building, WOULD they be small?

<No>

Now, one more thing:

*<Hold two pieces of paper, or two books up, and hold one slightly in front of the other. (See sketch at right) They should overlap slightly from the students' perspectives. >*

How about this? How can you tell which of these pieces of paper are in front of the other?

<yes>

That's right, the one in front covers part of the back one. This is called **"overlapping."** Overlapping happens when something closer to you and the picture plane covers up a part, or most, of the items farther behind. In fact, both of these things are overlapping part of me, aren't they?



<Yes>

Let's look at the picture of Chicago—are some of these far away buildings being overlapped by closer buildings?

<yes>

So that's two ways to show how some things are in front of other things in the picture plane "window" of the artist's paper. Let's see if we can try that.

*<Pass out the hills paper (There are two patterns to pick from, pages 6-7, and the cut out the trees, page 8, four of different sizes.)>*

Can we see which of these hills is in front?

Now, if I put the same size of tree on each of these hills, does that look like the trees are far away? It kind of makes them look like they are all close to us, right?

What if I put the small trees on the front hill, and the big trees in back, does that look right?

No. Artists try to copy reality by making things in front bigger, and things in back smaller. This goes for trees, buildings, and even people in a painting!

Do you know what this, making a painting look like it has real-life depth, is called in art?

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It's called "**Perspective**". There's lots of types of "Perspective" but this concept, that things get smaller the farther away they are, and that closer things overlap and can hide parts of the farther things, is the first lesson!<sup>2</sup>

So let's glue our trees down, first the small one in the very far hill, then the next biggest, and see if they overlap!

**OPTION:** Encourage the students to draw a couple of objects on the picture, and make sure they adjust the size accordingly. If they need suggestions, try flowers or plants, houses, people, or animals.

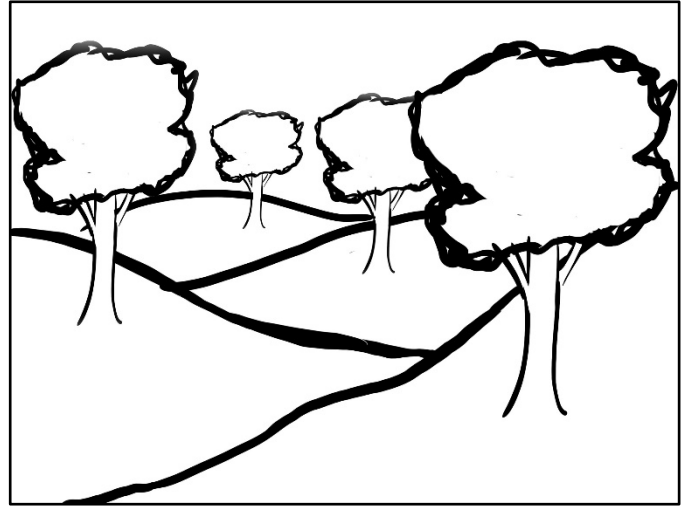


Figure 1: A sample of how this exercise could look upon completion

## Review:

*(Feel free to show the vocabulary sheets or diagrams at this time.)*

Today, we learned about "Depth" and how it can work in a drawing. What is Depth?

*<The distance an object is from the viewer/window>*

What is the Picture Plane, and what is it like?

*<It's the surface of the paper, and it's like a window>*

Are far away objects look bigger, smaller, or the same size as close-up objects?

*<Smaller!>*

When something that's closer to us covers a part of something that's farther behind, what do we call that?

*<Overlap/Overlapping>*

All of these techniques is part of what artistic technique?

*<Perspective>*

Above all, what do we remember about drawing?

*<It's about the process and the progress, not the product!>*

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<sup>2</sup> This specific type of perspective can be called "zero-point perspective" because the artist is not anchoring things to a specific vanishing point. Most landscapes are done like this, with background objects smaller than foreground objects.

## At Home:

Look for examples of horizon and overlapping in your everyday life. Can you see the horizon as you drive around? Can you see examples of big items (trees, machines, buildings, rocks, ect.) looking small enough you can put them in your hands?

Consider looking at art or book illustrations to see examples of overlap and smaller background objects.

When walking, or traveling in a car or train, or plane, see how things overlap and grow, then shrink, as they get closer and farther away from you.

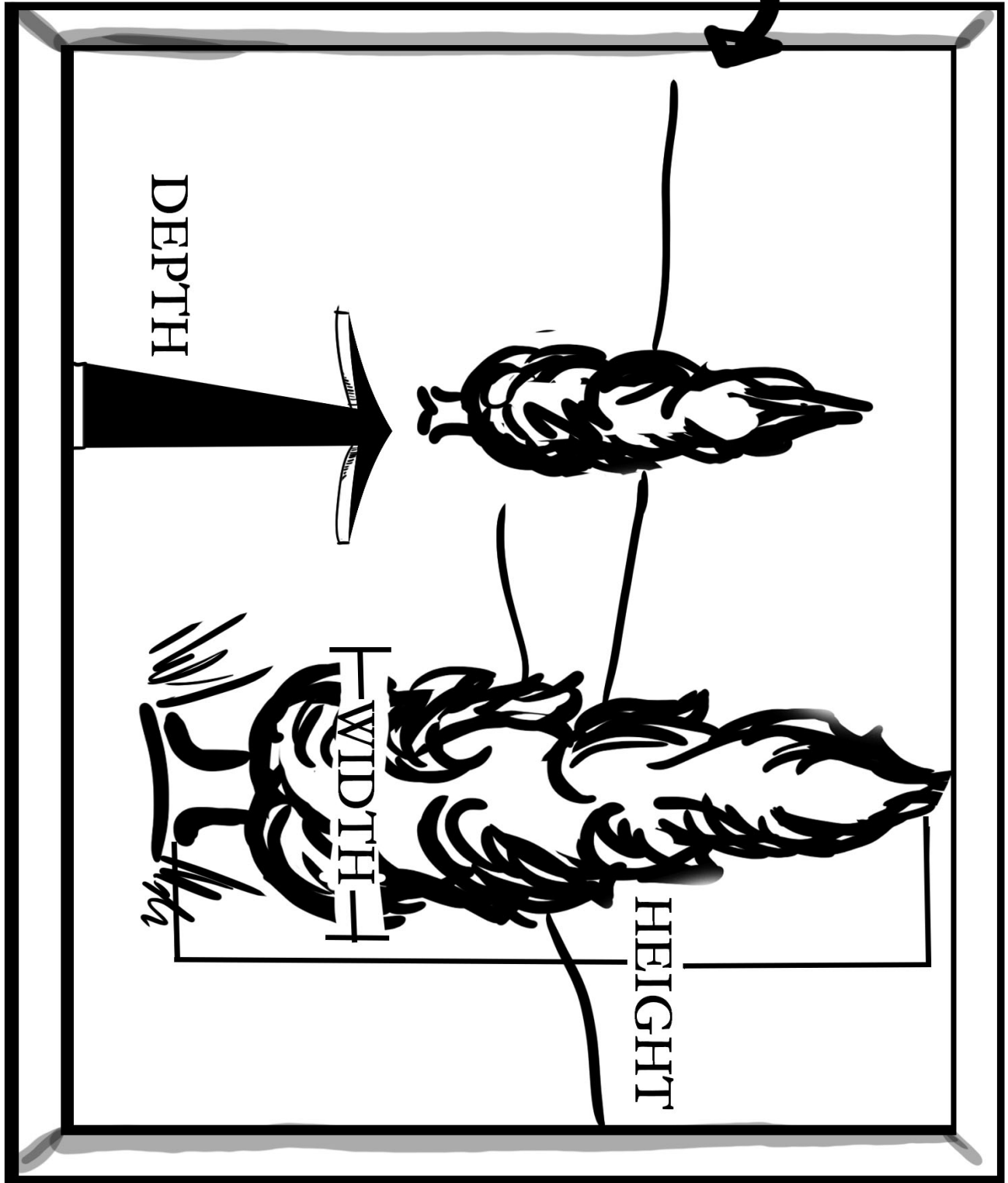
Open up the coversation: how big is Jupiter, relative to Earth? Why does it look like a star when we can see it in the sky? How big is the moon relative to Earth? How big does it look in the sky?

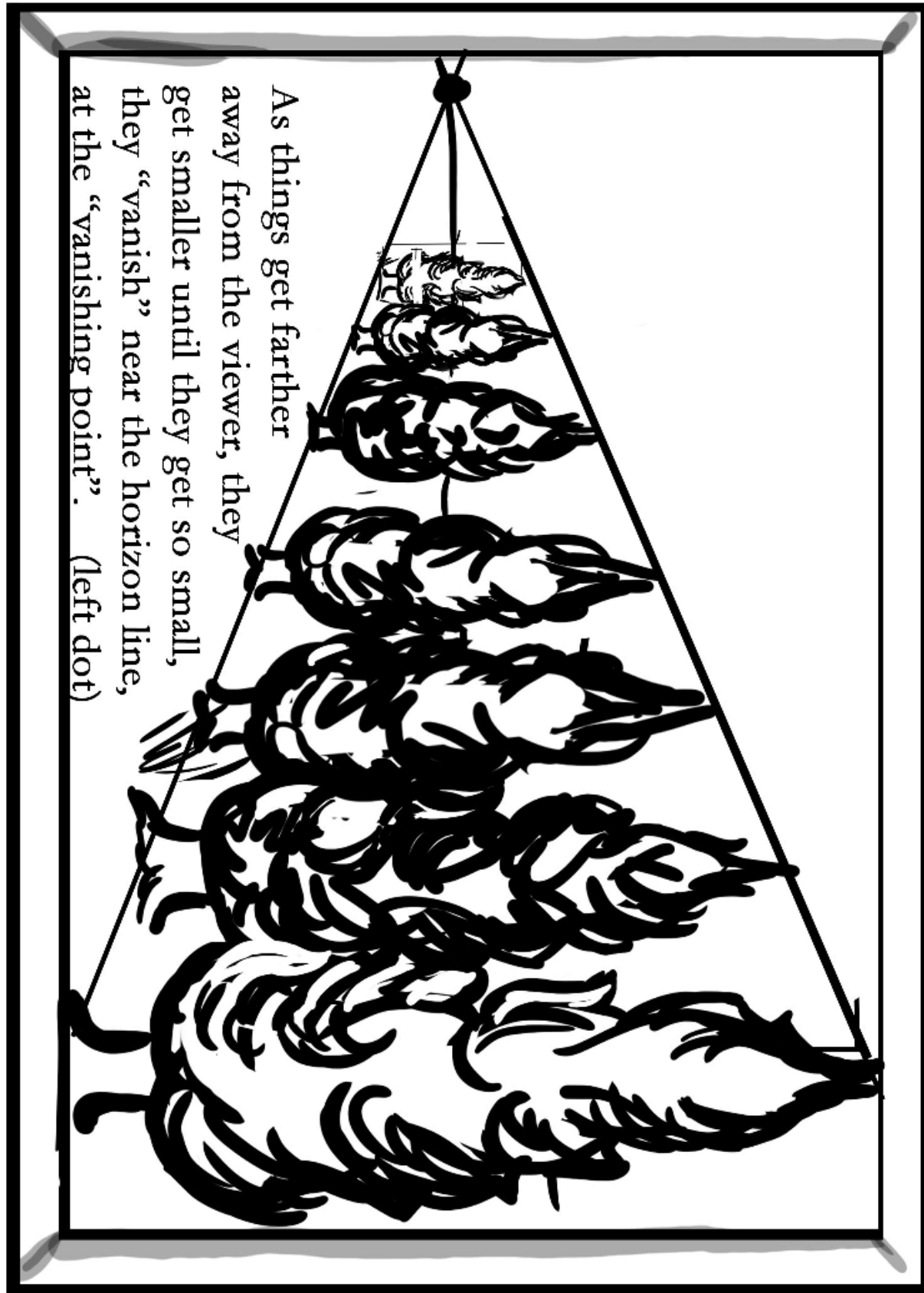
(Fun Optical Illusion: Sometimes, the Moon looks very large, when it rises and sets near the horizon, and when it's high in the sky, the Moon appears much smaller. If you hold an item at arm's length and cover the Moon (like a quarter) at the horizon, and do it again when the Moon is high in the sky, you'll discover it's the same size—it appears smaller high in the sky because there is nothing to compare it to—unlike the horizon, where it looks huge compared to the items in front of it. )



Are the train cars actually getting smaller as the train is getting longer, or do the back cars simply APPEAR smaller because they are farther away?

The edge of the paper is like the edge of a window-- it's called: "The Picture Plane" (Like a "window pane")





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# Perspective

(n) An art technique which helps artists create the look of real space on a flat sheet of paper.

One way to do this is make things smaller as they get farther away, and make closer things overlap far-away things.

## Picture Plane

The surface of the paper or canvas the artist draws or paints on. It's similar to a window, and the artist creates a world the viewer can look into.





**HORIZON:** In landscapes, the point where the sky meets the earth, the limit of vision from a particular place.

**Etymology:** From the Greek word “horos” ( ὅρος ) meaning, “Boundary”

# Overlap

(v.) To extend over something, and cover a part of that object in the process. In art, things which are in front of something else overlap the background objects.



*"Ancient Ruins of Pompeii, Italy" (altered) photographed by Svetlana Tikhonova  
publicdomainpictures.net*

These pillars in Pompeii overlap the plants behind them.

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