

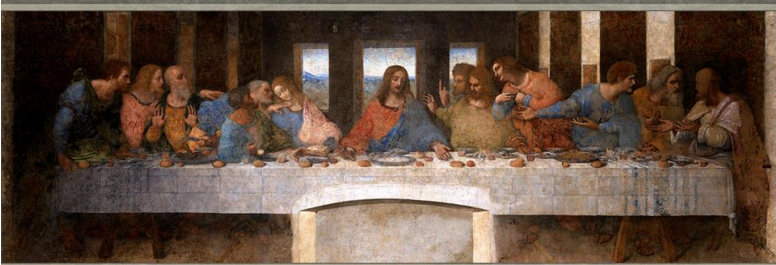

Lesson Title: Optical Illusions with Perspective and Form

Grade: 4th-5th

Teacher: Jaret Fortuna-Gil

	Lesson Plan	Rationale
1.	<b>Big Idea: Structure</b>	<p><b>Why is this a relevant concept for students to explore? How does it connect to contemporary culture and context?</b></p> <p>Line and Form are powerful in the creation of a visual vocabulary. Playing with the perspective illusion allows students to engage with line to create actual structure that relates to the creation of form. This creation of structure will allow students to see and think about the world in 3D. This is a difficult but vital skill for this age group to develop as they move forward into geometric shape studies in math, as well as the expression of 3 dimensional ideas in their drawing.</p>
2.	<b>Key Concepts:</b>  1. Create visual space through optical illusions in their drawings 2. Utilize new knowledge of perspective in the structures of buildings and details on their city streets	<p><b>Why is it important for students to know these concepts?</b></p> <p>Continued development of spatial reasoning is incredibly important for our students as they relate drawing to the physical world around them. Not only will it increase their ability to draw, but relate ideas about the world with horizon line and vanishing points to solid foundations. Taking that knowledge and wielding it is also important as students engage kinesthetically with their learning – something they may miss in their regular classroom activities. Working kinesthetically will allow students to have a higher level of engagement and retention and relate ideas of structure to the world as well as things they see or may want to draw later.</p>
3.	<b>Objectives (what students will do):</b>  1. Practice applying perspective to objects and details in 1 point perspective 2. Utilize past coverage of watercolor to create a wide range of saturations in the creation of more realistic colors for their cityscape	<p><b>How do the objectives fully support learning and how do they connect to the students' lives?</b></p> <ol style="list-style-type: none"><li>1. See and draw in 3D utilizing line and mathematical properties to create this form. Integration of space again, structure, and math. Practicing this will allow students to be able to draw just about anything with three dimensionality.</li><li>2. We continue to develop skills with a great medium that will continue to grow students' connections to the arts. Saturation as a concept will help students develop a deeper understanding of light and shadow - specifically in how white and black are not the only/ best ways to create</li></ol>

	<p>3. Implement ideas about space as it relates to the real world (horizon line, and vanishing points) and how our brain can be deceived by this knowledge</p>	<p>these effects. Just as they are not what are being applied in the real world.</p> <p>3. Knowing that your brain is so strong it can be tricked is an important realization to young minds. It encourages scientific exploration and examination of the world around them - to challenge reality and illusion. This encourages students to ask new questions and break new ground just in knowing how their brains work.</p>
4.	<p><b>Essential Questions</b></p> <p>1. What 3 types of line can we use in 1pt perspective</p> <p>2. What happens as objects get closer to the vanishing point?</p> <p>3. What happens to objects below the vanishing point (worm's eye view or bird's eye view?)</p>	<p><b>How are these questions meaningful to the student? How do you know?</b></p> <p>1. This is vital to the success of their drawing. IF students can't figure out where to put which lines, their work will not be successful in creating a linear illusion for their structures.</p> <p>2. Knowing how big or small things are in real life based on the distance to their own real world vanishing point. Thinking about those distances can help determine the actual distance or size of an object. Without this knowledge, a students reality would continue to exist in a vacuum of flat space.</p> <p>3. Seeing an object from above or below and really thinking about what that means forces students to look and think about what they are drawing. Does it make sense? Knowing this will allow students to engage with objects and drawings later with the knowledge of where they may be located if an object looks a specific way. (above or below)</p>
5.	<p><b>Standards:</b></p> <p><b>NVAS:</b></p> <p>1. VA:Cr2.2.5a: Demonstrate quality craftsmanship through care for and use of materials, tools, and equipment.</p> <p><b>Michigan:</b></p> <p>1. <b>VA.I.6.4</b> Develop reflective thinking skills by observing, analyzing, and critically evaluating works of art for the purpose of improving technical quality.</p> <p>2. <b>VA.II.6.3</b> Collaborate, communicate, and work with others to create new ideas at a developing level.</p>	<p><b>How do these standards support each other?</b></p> <p><b>NVAS:</b></p> <p>1. There are several materials in play here and they all work harmoniously for the end product. However, if students are irresponsible in any step, it could be devastating for that final product.</p> <p><b>Michigan</b></p> <p>1. Looking at master work and each other's work will help students constantly engage with the idea of what works in perspective/ space and what does not. Even if they come back to their piece and don't know WHY something is wrong, only that something is wrong. The analysis of lots of work allows students to start to create this relationship that asks questions of their own processes.</p> <p>2. Developing ideas, asking questions, and learning from each other is a vital and constant recurring theme in my classroom. There is one me</p>

		and many many of them. Asking each other questions is not only encouraged, it is required.
6.	<p><b>Teaching Resources:</b></p> <p><a href="https://www.youtube.com/watch?v=rfdJyDfIHlc">https://www.youtube.com/watch?v=rfdJyDfIHlc</a></p> <p>-engage students with the idea of optical illusions and Pareidolia</p>  <p>The Last Supper -Da Vinci</p>  <p>The School of Athens -Raphael</p>	<p><b>Explain how the students will explore the concepts of the big idea through artists and their artwork.</b></p> <p>Pareidolia is a way to engage their thinking about optical illusions. The students can look at a concept they are very familiar with in how clouds can take form in our brains.</p> <p>Next students will look at the Last Supper as an introduction to 1 point perspective. This is another piece with which they are somewhat familiar, and then breaking down how the vanishing point can help create depth.</p> <p>Expanding further we will look at a Master work of perspective with the School of Athens by Raphael. Look at how even with all the details, the perspective is consistent and makes the painting 3D.</p> <p>Terrace of a Cafe at Night is a piece students have looked at in our room as well, so bringing it back to demonstrate how every artist, in every movement, utilizes perspective rules to bring things to life – even more abstract artists like Van Gogh – helps students grasp the importance of the concept in art history and in their own work.</p>



Terrace of a Cafe at Night  
-Van Gogh

7.

## CREATING

**Lesson Plan Sequence** this will span over several days

1. Days 1-2: Optical Illusions! How do they work and why? Have students look at pareidolia and make Splash Paintings with watercolors. Discover how more water can create more splash but less saturation. Once we are done, go back over the splashes with watercolor pencil and see if we can't create our own pareidolia inspired illusions.

2. Now that we've explored illusion, let's look at some mathematical reasoning behind how these illusions work. Day

Share rationale for choices in teaching and learning strategies, here is where I should see additional evidence of the readings. How will you scaffold the lesson to maximize learning?

1. Have fun and engage with the idea of illusion!! These splash paintings also serve as a foundation for our big project.
2. Math and art working together is all perspective is taking advantage of. If students can utilize the angles they will be successful. This will be a day of exploration as well, just centered around 1 pt perspective.
3. Looking at Da Vinci's work as something they may have seen and exposing them to perspective with freedom to draw how they think it would be are part of developing a critical thinking and problem solving part of their brain.
4. Now the student will be given step by step instruction on how to begin their drawings. This way, they at least start with a solid 3D space upon which they may build. As they build and ask questions, they teach



<p>3 will be spent looking at Da Vinci's work - something they are familiar with - and introducing the idea of linear perspective. Horizon line, vanishing point, and 1 point perspective development happens here. Finish with some open experimentation with 1 point as students start to familiarize themselves with this new idea.</p> <p>3. Days 4-5 will now create 3D versions of their name utilizing 1 point perspective. They must either work in a low horizon line or a high one - forcing them to work in bird's eye or worm's eye, and see the differences as they work side by side with others. Students will be encouraged to have fun and make lots of mistakes! These are for their learning, and not the final product, so they are encouraged to ask lots of questions of each other as they work to maintain their illusions.</p> <p>4. Days 6 will be the introduction of Raphael's work The School of Athens as a more complex realization of what they will begin to embark on. We will talk about what they see in the work and discuss why the perspective works. Then I will lay the foundation for students to do a drawing of a city street which they will later put buildings and larger details in however they see fit - all utilizing their new knowledge of 1 pt perspective.</p> <p>5. 7-9 students will now begin filling in details after a demonstration of Front and Sides of buildings and their details. I will repeat this demo EACH DAY to ensure students are getting a healthy reminder about how the process works and how to maintain their desired perspectives as they are working. When they are finished with their line drawings - and</p>	<p>each other things, and re-teach, and start their thinking about what is possible in this type of drawing.</p> <p>5. Now they have been working for 2 days and can start to feel comfortable and really take on some bigge</p>
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	<p>have checked to ensure their perspective is working to create structure and illusion of space - they may outline with black sharpie.</p> <p>6. Now we will wrap up with a revisit of a painting we actually looked at toward the beginning of the year. Terrace of a Cafe at Night is a beautifully painted scene that utilizes lots of fun lighting as well as linear perspective. Students can be inspired by the rich saturation of elements in this work, and note how light works with the structural build up that Van Gogh manages in his painting. Students will return to their original watercolor medium to finalize their work. Emphasis on mixing colors in their palette to create a range of saturations and colors that will work together cohesively in their work. Further developing an idea of lighting will be pushed on students who have reached the end early. This should take 1-2 days.</p>	
8.	<p><b>Differentiation/Accommodations/Modifications</b></p> <p>Accommodations:</p> <ul style="list-style-type: none"> <li>-Differently abled - Will be able to draw without the extra step of the ruler. Worry less about perfect details in the perspective than the actual structure of the buildings themselves.</li> <li>-Gifted students - Take time with decisions and make sure perspective is really working. Apply watercolors evenly and develop a cohesive pallet. Utilize light and shadow to enhance structures.</li> </ul>	Share rationale for each

9.	<p><b>Assessment Strategies:</b></p> <p>Splash Paintings (Formative) - Start with pareidolia and optical illusion to increase engagement and interaction with not only illusion but watercolor and light and shadow interactions as well</p> <p>Master Work Analysis (VTS/Discussion) - Looking at master work is always an essential part of learning, and often helps break down complex ideas into something tangible for students</p> <p>Name in Perspective (Formative) - Applying idea of 1 pt now, and getting closer to the actual application of an idea that will go into their final work</p> <p>City Scapes (Summative) - Combining all the ideas, and creating structure from these studies and illusions we've been looking at for 2 weeks worth of classes.</p>	<p><b>Share rationale for formative and summative assessment, HOW will this reveal knowledge acquired and how they will use it?</b></p> <p><b>Splash Painting</b> - This is the play process as students develop beginning knowledge of watercolor as well as illusion. It does a great job tying in interest, as well as the basic concepts, before diving into the heavier fundamentals of perspective drawing.</p> <p><b>Master Works:</b> Here we add the heavy, the analysis. Students need to be able to take on professionals - especially master work - for their own continued development of self critique and understanding. The better the students are able to model the things they see, the stronger their work will be.</p> <p><b>Names in Perspective:</b> Now we get to bridge some of the fun with the heavy before making the big bold jump. Their names are something they identify with and have a lot of confidence in. Turning their fun lettering into 3D will help demonstrate real world applications, and serve as a jumping point for their development</p> <p><b>City Scapes</b> - This is the end. ALL of the things we've talked about go into this amazing project. They always turn out great, but without the fundamentals, they start to lean and wobble and fall apart. This is showing that students are incorporating optical illusion in their spacing to create solid believable structures. Then the watercolor goes on top to really polish, and again hone that mastery of a medium that allows them to further their perspective illusions.</p>
10	<p><b>Insert photo of teacher created exemplar here:</b></p>	<p><b>Rationale here should discuss the significance of what was created and address prior knowledge (ideas, context etc) students will need to understand the lesson content.</b></p> <p><b>Splash Painting-</b> Centered around having fun and developing an idea for how watercolor paint behaves. We also touch on illusion and playing tricks on the brain - so that later we can continue to think about this illusion as we build our structures.</p>



**CityScapes:** This is the end point summative. Assessing students' different use of value with saturation coming forward and helping with the read of front and sides of buildings. Additionally looking at the actual use of line to form those structures - in addition to then adding all the elements they want to make the cityscapes their own. This is a direct application of ALL the ideas we covered during this lesson plan.



11. **Materials/Tools/Art supplies needed:**

- Pencils
- Watercolors
- Watercolor Papers (4.5x6) + (9x12)
- 8x11 Printer Paper

**What prior knowledge students will need to effectively use materials to express their ideas?**

Students need to know and will continue to develop skills in the proper use and maintenance of these tools. Watercolor in particular and it's saturation with water at different levels will be stressed and vital to the student's success. Additionally, lining up the ruler/yardstick to the edge of the paper will be the only way to ensure students maintain straight lines.

	<ul style="list-style-type: none"> <li>- Watercolor Pencils</li> <li>- Rulers/Yardsticks</li> <li>- Sharpie</li> <li>- Paintbrushes</li> <li>- Water Cups</li> <li>- Colored Pencils</li> <li>- Erasers</li> </ul>	
12.	<p><b>Materials Distribution/Clean Up</b></p> <p>For the beginning of class I have bins with pencil and erasers – as well as extra drawing pencils at the front of the room. Rulers in the back of the room. Students will be shown the location of these items and get used to grabbing the resources they need when they collect their paper from me at the beginning of the hour. This allows me to go over expectations before they begin as well.</p> <p>Students who need watercolor will grab a cup for their table and will be instructed to use the smaller brushes (to insure clean detailing and time management) as well as a palette. If they need to clean it they can grab a wet paper towel and quickly get it ready to work with.</p> <p>During the watercolor process it will be vital that students know to turn their water cups and brushes into the sink. If they have time, it would be great for them to make sure they wash brushes and put away neatly, but if they just put cups in the sink, it makes it easy to rinse and get ready for the next</p>	<p><b>Describe possible systems and management strategies</b></p> <p>These ideas allow students to take charge of their clean up and set the example for each other. We have the expectations already set out, and the further and further we get into the project the more seamless all of these processes should go.</p> <p>Additionally, having this consistent system will allow students to help each other know where to go and what to do, without having to constantly check in with me - as I may be busy with other students!</p>

	<p>group later. They will be expected to return their palettes to the bin as well.</p> <p>Watercolor pieces go in the drying rack. Dry pieces get collected from tables.</p> <p>Everyday, tables are dismissed based on cleanliness and quiet-ness. As soon as a table demonstrates that they are clean, quiet, and ready, I will have them line up.</p>	
13.	<p><b><u>PRESENTING</u></b> How will your students' work be PRESENTED and curated?</p> <p>Students will have work displayed in the hallways outside the art room and leading into the cafeterias following March is Reading Month. These street pieces will serve as compliments to younger students' graffiti works. Additionally they will serve as examples for 6th grade when they start their exploration of perspective drawing later in the year.</p>	<p><b>Who is the audience? What kind of feedback will the artists receive?</b></p> <p>Displaying after the themed reading month will help student work get the attention it deserves! It also will allow each level of student to have something to discuss and engage with – even if their targets and learnings were not really similar!</p> <p>6th graders can be encouraged and challenged by the craftsmanship of 4/5th grade, and even ask them questions about successes and setbacks during their work these 6th graders enter into perspective drawing.</p>