

"Geometry & Art" | OSEU 7: Way of Life & Development

Compelling Question	How does geometry impact art?	
Standards and Practices	4.G. Draw and identify lines and angles, and classify shapes by properties of their lines and angles 4.MD2. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	
Staging the Question	How are lines angles and shapes used to create traditional and modern art?	
Supporting Question 1	Supporting Question 2	Supporting Question 3
How does geometry impact beading art work?	How does geometry impact ledger art?	What is an entrepreneur? What can I create that I can share with the world?
Formative Performance Task	Formative Performance Task	Formative Performance Task
Student will utilize math manipulatives to create a design on graph paper and use geometric terms (i.e. parallel, perpendicular, right angle) to describe the design. Students will research the materials and cost involved in creating their design.	Have students create a piece of ledger art that includes an animal of their choice. Find 3 precise measurements within your art piece. Check with partner and compare findings.	Research entrepreneurship and discuss with class. Write a journal entry of your research and come up with an idea you would like to develop. With a partner, write a plan to implement your idea.
Featured Sources	Featured Sources	Featured Sources
Geometry within the Lakota art Cheyenne Randall https://www.youtube.com/watch?v=TBbeF7JV_nQ Kevin Fast Horse https://www.youtube.com/watch?v=AbRqRns-AIM	What is ledger art? https://www.youtube.com/watch?v=GVZ8AHBHiC0 Ledger art elder https://www.wolakotaproject.org/oseu-5-oral-history-ledger-art-with-donald-montileaux/	What is entrepreneur? https://www.youtube.com/watch?v=mWBif5GTzNs SD entrepreneur https://www.striderbikes.com/l/about-us.php

	Prairie Edge Ledger Art https://prairieedge.com/native-american-indian-fine-art-gallery/native-american-indian-ledger-art/	Elder shows loom beadwork https://www.youtube.com/watch?v=TWoqtwCF4Hc&index=8&list=PLs8d38Q6863vqHK6WolI2hEyS3cRaVfpL
Summative Performance Task	Argument	Is geometry necessary for art?
	Extension	Create a design on graph paper for project
Taking Informed Action	Create student project made from supplies provided by the classroom. (i.e. ledger art, loom beadwork design, graph paper design, own ideas) Successfully explain project to class, family, elders, and community.	