

Backwards Design Unit Planning

Teacher/School: Ludmila Malagon and Sergey Avezbakiyev IS-237

Essential Question: Chance or choice. Which will I let determine my success?

Mini Unit Graphs Title	Big ideas of the mini-unit / concept statement (macro)	Pictograph, bar and line graphs, histogram, double line/bar graphs, Circle graph (Micro)	Read and interpret data represented graphically; circle graph (rule of thumb - skills are verbs - knowledge is a noun)	Are graphs of work of art? How does this connect to the theme of your school	How do we construct line, bar, circle graphs? Possible List of Topical Essential Questions / Focusing Questions	Selected-response-formal-quiz Mini-Unit Assessment Informal ,ongoing observations of students, Peer reviews and peer response groups,	Create a circle graph using percents. Scaffolding towards culminating project
Statistics	Relationships	Combination Permutation Venn diagram	Graphs, circle graphs, line graphs, data display using a variety of methods Identify and explain misleading	Do artists use statistics?	Pictogram? How do we interpret data represented graphically? How do we compare graphs? Construct Venn diagrams?	Selected-response-formal-quiz Informal ,ongoing observations of students, Peer reviews and peer response groups,	Research online the information about how many art works displayed in each museum or gallery. Also, research how many of modern art
Measure of central tendency	Relationship and fairness	Mean Median Mode	Select the appropriate measure of	Do artists use measure of central tendency	How do we find mean, median, and mode of data? How	Selected-response-formal-quiz Informal ,ongoing observations of students, Peer reviews and peer response groups,	Draw a collage of a possibility of modern art
Probability	Fairness	Experimental and theoretical probabilities, Sample and sample	conduct simple experiments to determine experimental probabilities Evaluate	What is the probability to become a famous artist during your lifetime? Chance or	How do we find theoretical probability? How do we determine space sample?	Selected-response-formal-quiz Informal ,ongoing observations of students, Peer reviews and peer response groups,	Contrast the data using all the data and then to the total art displays. Change the ratio into percents.
		space, independent and dependent events	theoretical probabilities in situations involving multipart outcomes (tossing four coins, spinning two spinners, and so on)	choice. What is a possibility for any of us to become a famous artist?	How do we find probability using dependent events? How do we find probability using independent events?	response groups, Test prep skills	
Graphs	Relationship	Pictograph, bar and line graphs, histogram, double	Read and interpret data represented graphically; circle graph	Are graphs of work of art?	How do we construct line, bar, circle graphs? How do we construct double	Selected-response-formal-quiz Informal ,ongoing observations of students,	Create a circle graph using percents.

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A Week at a Glance – Copy as Necessary

WHERE is the student going and what is expected HOOK with needed skills to experience and explore Opportunity to REVISE and RETHINK their understanding		Allow students to EVALUATE work and implications TAILOR work to student needs Be ORGANIZED to maximize engagement		
Monday	Tuesday	Wednesday	Thursday	Friday
Content Focus: Relationships in real life and math Hook: Creating a survey of favorite ice cream flavors Daily Assessment: Creating a visual representation of data	Content Focus: Combinations in life and art Hook: Creating a combinations of responses from survey Daily Assessment: Make a connections with survey	Content Focus: Permutations in life and art Hook: Creating a permutations of responses from survey Daily Assessment: Compare and contrast of two methods	Content Focus: Venn diagram and art Hook: Color mixture (yellow and blue makes green); Daily Assessment: Make an example of color Venn diagram	Content Focus: Introduction to overarching essential questions: Chance or choice. Which will I let determine my success? Hook: Research for museums and galleries Daily Assessment: teacher observation on part of the project
Weekly Assessment: quiz , informal assessment of students, test prep skills, group response				
What have the students produced that scaffolds towards the units culminating assessment? (for example if the unit’s culminating assessment is a newspaper – perhaps the students have written an article) Research online the information about how many art works displayed in each museum or gallery. Also, research how many of modern art abstracts displayed in each museum or gallery.				

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WHERE is the student going and what is expected HOOK with needed skills to experience and explore Opportunity to REVISE and RETHINK their understanding		Allow students to EVALUATE work and implications TAILOR work to student needs Be ORGANIZED to maximize engagement		
Monday	Tuesday	Wednesday	Thursday	Friday
<p>Content Focus: Chance or choice. Which will I let determine my success?</p> <p>Hook: Discussion about a winning a lotto</p> <p>Daily Assessment: Individual students problems of the chance of the winning a lotto on the given number of tickets</p>	<p>Content Focus: What is the probability to become a famous artist during your lifetime? Introduce role of museum curator</p> <p>Hook: Discussion about life chances and professional affiliation</p> <p>Daily Assessment: Calculate a probability of given data</p>	<p>Content Focus: Work with art teacher on modern art abstracts</p> <p>Hook: Compare different art pieces and calculate probability of choosing same piece for a class, grade, and school</p> <p>Daily Assessment: Create the ratio of the given data and change it into percent</p>	<p>Content Focus: Probability of independent and dependent events</p> <p>Hook: Given 100 students entering art school first year. 15 students did not return for the second year and the third year 40 students transferred into the school. What is the probability that two of these students will become famous in their life time?</p> <p>Daily Assessment: Write your own problem</p>	<p>Content Focus: What is the probability to become a famous artist during your lifetime?</p> <p>Hook: Show three pairs of different ratios and ask for an answer: Which of these are the same?</p> <p>Daily Assessment: part 2 of project</p>
<p>Weekly Assessment: quiz , informal assessment of students, test prep skills, group response, teacher observation</p> <p>What have the students produced that scaffolds towards the units culminating assessment? (for example if the unit's culminating assessment is a newspaper – perhaps the students have written an article) Calculate the ratio of modern art abstracts to the total art displays. Change the ratio into percents.</p>				

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WHERE is the student going and what is expected HOOK with needed skills to experience and explore Opportunity to REVISE and RETHINK their understanding		Allow students to EVALUATE work and implications TAILOR work to student needs Be ORGANIZED to maximize engagement		
Monday	Tuesday	Wednesday	Thursday	Friday
<p>Content Focus: Graphs and art Using different graphs represent different data.</p> <p>Hook: Are graphs work of art?</p> <p>Daily Assessment: Students will create line and bar graphs</p>	<p>Content Focus: Graphs and art Using different graphs represent different data.</p> <p>Hook: Are graphs work of art?</p> <p>Daily Assessment: Students will create their own pictogram</p>	<p>Content Focus: Graphs and art Using different graphs represent different data.</p> <p>Hook: Discussion about effectiveness of different graphs representing different data</p> <p>Daily Assessment: Students will create their own graph</p>	<p>Content Focus: Interpret bar graphs, line graphs, circle graphs, line plots, and stem-and-leaf plot</p> <p>Hook: Discussion about effectiveness of different graphs representing same data</p> <p>Daily Assessment: Students will interpret</p>	<p>Content Focus: Creating circle graph as a work of art</p> <p>Hook: Where do we see colorful circles? Maybe in the art...</p> <p>Daily Assessment: Part 3 of project</p>

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		according to their data	their new assignment	
<p>Weekly Assessment: quiz , informal assessment of students, test prep skills, group response, teacher observation</p> <p>What have the students produced that scaffolds towards the units culminating assessment? (for example if the unit's culminating assessment is a newspaper – perhaps the students have written an article) Create a circle graph using percents.</p>				

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WHERE is the student going and what is expected HOOK with needed skills to experience and explore Opportunity to REVISE and RETHINK their understanding		Allow students to EVALUATE work and implications TAILOR work to student needs Be ORGANIZED to maximize engagement		
Monday	Tuesday	Wednesday	Thursday	Friday
Content Focus: How do we find mean in the data? Hook: Can we use mean in art? Mood of the painting Daily Assessment: Students will determine mood of the painting in groups	Content Focus: How do we find median in the data? Hook: Can we use median in art? It used in tone of the painting Daily Assessment: Students will summarize lesson of the day	Content Focus: How do we find mode in the data? Hook: Can we use mode in art? What color used most in the painting Daily Assessment: Using of overhead projector show pictures and asks the students to analyze famous paintings for color, line, and shape. Relate this to the mood of the paintings.	Content Focus: How do we find range of the data? Hook: Can we use range in art? Contrast in the painting and color scale Daily Assessment: Divide class in groups and ask them to arrange the pictures in order from least to greatest using a range. Each group will present their discovery to the class	Content Focus: What is a probability to become a famous artist during your lifetime? Hook: Is it a chance or choice? If probability is low what next... Daily Assessment: Self- assessment of students project according to the rubric
Weekly Assessment: quiz , informal assessment of students, test prep skills, group response, teacher observation				
What have the students produced that scaffolds towards the units culminating assessment? (for example if the unit’s culminating assessment is a newspaper – perhaps the students have written an article) Draw a conclusion of a possibility of modern art abstracts’ display using all the data and the circle graph				

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Unit Resources

Books: Impact Mathematics, Course Two, *Glencoe*
Intervention Skills, Course Two, *Glencoe*
HotTopics, Course Two, *Glencoe*
New York Review Series, Grade Seven Mathematics, *Glencoe*

Websites: www.acuite.com

www.edhelper.com

www.aaamath.com

www.jpeg.com

www.glencoe.com

www.phschool.com

www.teachertube.com

www.youtube.com

Teacher Materials: dices, spinners, cards, transparencies, overhead projector, copy of the paintings, etc.

Other: Sample of art works that uses various mural designs and templates