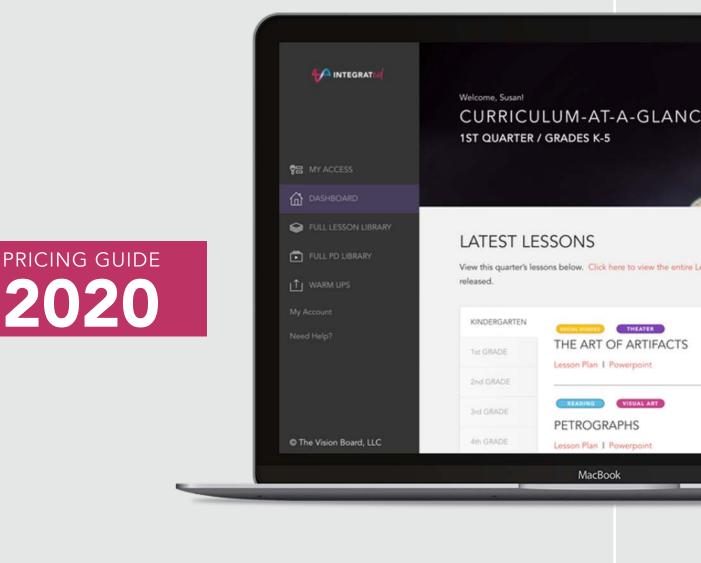


K-12 ARTS INTEGRATION & STEAM CURRICULUM SUPPLEMENT



EducationCloset.com/Integrated-Curriculum

What is IntegratED?

Most teachers would love to do more STEAM activities in their classrooms. But between the lesson planning, prep work, and assessment creation, they just don't have time in an already jam-packed day.

IntegratED is the only digital all-inclusive arts integration and STEAM curriculum supplement for K-8 classrooms.

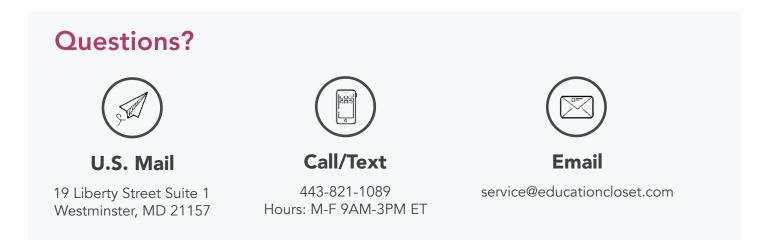
Available for instant access, all the materials are ready for you to use right away.

Inside this digital curriculum are lessons, assessments and resources carefully aligned to E/LA, Math, Social Studies and Science Standards with multiple arts areas.

All the work has been done to save teachers time and let them do what they do best: TEACH.

What's Inside

In this catalog, you'll find information about what's included in each grade level, as well as scope and sequences and some sample lessons. You'll also find information on how to order your instant access to get you using the curriculum immediately.



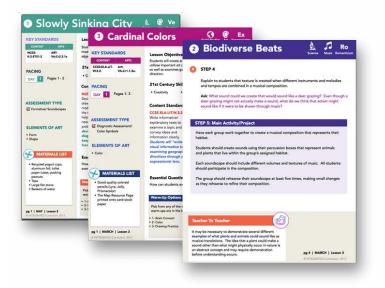
What's Included

Save time with these authentic, fully-planned arts integration and STEAM experiences. This curriculum supplement provides everything you need for engaging, hands-on, creative learning focused on 21st century skills.

LESSON PLANS

There are 15-18 lesson plans per grade that are included.

These lessons are comprehensive and **include step-by-step sequences to ensure you're successful in delivering these for your students.** Every lesson is aligned with two standards: one content standard and one arts standard. We use the Common Core, Next Generation Science and National Arts Standards for these lessons.





CORRESPONDING POWERPOINTS

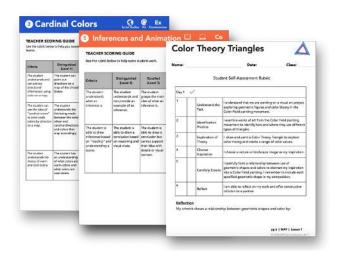
You'll get a powerpoint for every lesson.

These powerpoints make it simple for you to use each lesson. Your artwork examples, videos, sound clips and directions are all provided within your slidedecks. And, each slidedeck is editable. You if you want to add your own flair, you can!

READY-MADE RESOURCES

Professionally designed resources and materials are included. No more stressing about creating student worksheets or support materials. Every reference, handout and card is included with each lesson.

On the map below use your pencil to Kansas and Nebraska. This is the cent (not including Hawaii and Alaska). No color each state in accordance with its	Changin _{Name}	g Shapes	to Forms	Class:
Comment of the second	Directions: Change e additional lines.	ach two-dimensional shape	selow, into a three-dimensional form by	radding
Corper Contraction Contraction	2-D Shape	3-D Form	Drawing Practice	
				he coin?
NUNC Cover AND Mallow Cover Cover Blue (NC) Walter Cover Blue (NC) Blue Blue BNO Blue BNO		-		
MO Parque		AA		
SM (SSN) Ned SSN1 (South WeierPrick PrickRed (South WeierPrick				-



DONE-FOR-YOU ASSESSMENTS

Teacher and student assessments are

provided. Inside each lesson pack, you'll find a teacher scoring guide. There's also a corresponding student scoring guide, which helps to build reflection and evaluation capacity.

PROFESSIONAL DEVELOPMENT BAKED IN

You'll receive an entire professional development video library. Once you click in, you'll be able to view a variety of arts integration strategy videos, as well as lesson overviews. These videos offer you incredible background information and little-known facts. So you'll feel prepared and confident with each lesson.



What can IntegratED do for my school?

Research shows that when students use arts integration and STEAM, there are incredible benefits. Here's just a few:



Increased Achievement

Schools see an average increase of 10-15% student achievement across all populations. For underserved populations, there is an average increase of 20% or more.



21st Century Skill Development

Students who use our supplementary curriculum have shown an average increase of 30% or more in proficiency on targeted E/LA, Math and Science concepts.



Increased Engagement

Schools using arts integration and STEAM curriculum report high levels of student engagement and excitement for the learning process.



Increased Attendance

Because students are so engaged during the integrated lessons, they don't want to miss school!

TRUSTED BY













The IntegratED Curriculum from EducationCloset 5 <u>EducationCloset.com/Integrated-Curriculum</u>

IntegratED Curriculum Price Reference Sheet

GRADE LEVEL	QTY	LIST PRICE (each license)	GRADE LEVEL	QTY	LIST PRICE (each license)
Kindergarten	1-2	\$99 each	Sixth Grade	1-2	\$99 each
	3-5	\$84 each	Z	3-5	\$84 each
	6-10	\$80 each		6-10	\$80 each
	11+	\$69 each		11+	\$69 each
First Grade	1-2	\$99 each	Seventh Grade	1-2	\$99 each
	3-5	\$84 each		3-5	\$84 each
	6-10	\$80 each		6-10	\$80 each
	11+	\$69 each		11+	\$69 each
Second Grade	1-2	\$99 each	Eighth Grade	1-2	\$99 each
	3-5	\$84 each		3-5	\$84 each
	6-10	\$80 each	Ŏ	6-10	\$80 each
	11+	\$69 each		11+	\$69 each
Third Grade	1-2	\$99 each	High School E/LA	1-2	\$99 each
^	3-5	\$84 each		3-5	\$84 each
5	6-10	\$80 each	HS	6-10	\$80 each
	11+	\$69 each		11+	\$69 each
Fourth Grade	1-2	\$99 each	High School STEAM	1-2	\$99 each
	3-5	\$84 each		3-5	\$84 each
4	6-10	\$80 each	H S	6-10	\$80 each
	11+	\$69 each		11+	\$69 each
Fifth Grade	1-2	\$99 each	High School Social Studies	1-2	\$99 each
	3-5	\$84 each		3-5	\$84 each
5	6-10	\$80 each	HS	6-10	\$80 each
	11+	\$69 each		11+	\$69 each
K-5 Multi-Grade	Single License (1)	\$199 each	6-12 Multi-Grade	Single License (1)	\$199 each
Teacher (Music, Art, etc)	Team Pack for 2-10 Multi-Grade Teachers	Email for Pricing	Teacher (Music, Art, etc)	Team Pack for 2-10 Multi-Grade Teachers	Email for Pricing

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The IntegratED Curriculum from EducationCloset

Curriculum Supplement FAQ

If I can get K-5 or 6-12 for \$299, can't I just use that for all my teachers?

No. Each license is provided per teacher. It is attached to an individual teacher's email address and tracks the login information for that teacher for administrative purposes. If the login is used for multiple individuals or IP addresses, the system will automatically shut down access.

The multi-grade licenses are meant for educators who teach multiple grade levels each day. These would include music, art, media, special education and counseling teachers.

Each teacher is also provided with personalized PD certificates once they have finished viewing the professional development videos. This is only possible through the teacher name and email linked to the account.

Can we mix and match licenses? For example, if I need (1) kindergarten license and (2) 1st grade licenses, can we put those together to get this discount?

Yes! Please use the School PO Form instead of individual checkout so we can help you obtain the best value for your teachers.

How long can we keep these licenses?

Licenses expire after one year. They will automatically renew, but you can cancel at any time.

Is new content added each year?

Yes. We add new lessons, materials or professional development each year your license is up-to-date.

Can I use this as a replacement for my art/music/math/etc curriculum?

Not really. This is a curriculum supplement. It's meant to be used for the most challenging concepts taught to your students as a way to reinforce or support their learning. It's not meant as a stand alone curriculum product. That's why there's only 15-18 lessons per year. You want to use these as a way for students to apply their learning.

ELEMENTARY CURRICULUM

KEY STANDARDS	Lesson Objective:	Vocabulary
CONTENT ARTS CCSS.MATH. Art: C.K.OA.A.1 VA:Cr2.1.Ki	Students will practice addition and subtraction through the art of mosaics.	Mosaic Tesserae
	21st Century Skills:	
PACING	Creativity Collabo	iration
DAY 1 Pages 1 - 3 SSESSMENT TYPE Formative/ Greek Superheroes ELEMENTS OF ART • Shape • Color	Content Standards: CCSI Manual Content and Store and Autoretic and Store and Autoretic and Store and Autoretic and Autoretic Programmers and Autoretic Student and Autoretic Student and Autoretic Autoretic Store and Autoretic A	Arts Standards: VNC071.542 Though representation, build shift in various media and approaches to art making. Students will build shift in measur art production through the adding and subtracting of paper tiles.
MATERIALS LIST T multi-colored construction paper	Essential Questions: How can we represent addition the ancient art or mosaics?	n and subtraction through

Theater: TH:Pr6.1.3.

CCSS.ELA.Lit.

DAY 1 Pages 1- 3

ASSESSMENT TYPE

ELEMENTS OF THEATER

Formative Aa Rebel Words

Action
 Language

PACING

1) Instruments of the Renaissance 🛓 🎜 Re KEY STANDARDS Lesson Objective CCSS MATH: C.1.OA.C.S DANCE: DA:Cn10.1.1.b 21st Cer PACING DAY Pages 1 - 3 Content Standards: Arts Standards WU:Pr4.3.1. NGS5.1.PS4.1. Plan and condu gations to ice that vi ASSESSMENT TYPE Diagnostic ELEMENTS OF MUSIC Pitch
 Tone Color MATERIALS LIST can students learn a oration of musical in Open space for gath
 Desks grouped as tab

\$99

\$99

First Grade



Fourth Grade

18 lessons, powerpoints, assessments and handouts. 36 PD Videos.



K-5 Multi-Grade Teacher \$199

108 lessons, powerpoints, assessments and handouts. 36 PD Videos.

** For educators who teach multiple grades, such as music, art, special education and counseling teachers.



\$99 Second Grade

18 lessons, powerpoints, assessments and handouts. 36 PD Videos.

KEY STANDARDS	Lesson Objective:	Vocabulary
CONTRACT ARTS	Students will solidify their	Ben-Day Dots
CCSS: MEDIA: ELA.UL.RL.S.2. MA:Cr1.1.5	understanding of theme and main idea through the creation of Pop Art style comic strips.	Roy Lichtenstein Theme Main Idea
PACING	21st Century Skills:	
	Communication Creativity	
DAY Pages 1 - 2	Content Standards:	Arts Standards:
ASSESSMENT TYPE Summative Assessment/ There vs. Main Idea Rubrics ELEMENTS OF MEDIA • One • Une MATERIALS LIST	COSE BLANT READ Determine at Henne of a story, drama, or poen from details in the text, including here characters in a story or drama report of to bidingen or here upon a topic. Summarise the text, it ys angloring themes and main ideas of simplified with here includes and simplified with here includes and simplified with here includes the challenges. Students will Visually summarize a text.	MA.Cr.1.5. Envision original ideas and inconations for media experiences and/or the work of others. Students will use inspiration from familiar children's torcies to create their own unique and/a artworks in the style of Pop Art.
	Essential Questions:	
Five computers with Flash Player updated	How can students explore them visual media?	e and main idea through

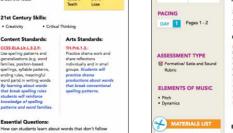
18 lessons, powerpoints, assessments and handouts. 36 PD Videos.

Need to use a purchase order or have a team?

Use this link to fill out the purchase order request form:

https://educationcloset.com/ integrated-curriculum/purchaseorders/

18 lessons, powerpoints, 18 lessons, powerpoints, assessments and handouts. 36 PD assessments and handouts. 36 PD Videos. Videos. 3 Rebel Words 8 KEY STANDARDS



\$99

Third Grade

18 lessons, powerpoints, assessments and handouts. 36 PD Videos.

SECONDARY CURRICULUM



15 lessons, powerpoints,

Videos.

assessments and handouts. 36 PD

<page-header><section-header><section-header><section-header><section-header><section-header>

\$99

\$99

<u>Seventh Grade</u>

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.



HS E/LA

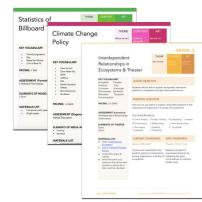
15 lessons, powerpoints, assessments and handouts. 36 PD Videos.

\$99



HS STEAM

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.

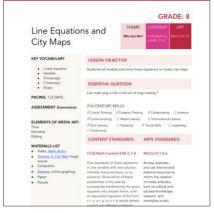


<u>6-12 Multi-Grade Teacher</u>

\$199

90 lessons, powerpoints, assessments and handouts. 36 PD Videos.

** For educators who teach multiple grades, such as music, art, special education and counseling teachers.



Eighth Grade \$99

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.



HS Social Studies \$99

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.

Need to use a purchase order or have a team?

Use this link to fill out the purchase order request form:

https://educationcloset.com/ integrated-curriculum/purchaseorders/

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	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
KINDERGARTEN											
Quarter 1											
The Art of Artifacts	CCSS.ELA-LITERACY.SL.K.4 / TH:Pr6.1.K.				•				•		
Petrographs	CCSS: ELA.Lit.L.K.5.C. / VA:Cn11.1.Ka.	•					•				
Prehistoric Soundscapes	NGSS.ESS3-1 / MU:Pr5.1.K.b					•		•			
Quarter 2											
Art Shapes Us	CCSS: MATH.CONT.G.A.3 / DA:Cr1.1.K.a:		•							•	
Cultural Comparisons	CCSS: ELA-Lit. SL.K.5 / VA.Cr2.3.Ka				•		•				
Mesopotamian Myths	CCSS: ELA.Lit.L.K.1.F / TH.Cr2.K.a.			•						•	
Power of the Sun	NGSS.K.PS3.2 / TH:Cr2.K.					•			•		
Moving with Hieroglyphics	CCSS.ELA.L.K.1: / DA:Re.7.1.K.			•						•	
Comparison of Weight, Length and Capacity	CCSS.MATH.C.K.MD.A.1. / VA:Cn11.1.Ka		•				•				
Quarter 3											
Counting the Bata BLACK HISTORY LESSON!	CCSS: MATH.C.K.C.A.2 / DA:Pr.4.1.K.b		•							•	
Puppetry of the Folk Tale BLACK HISTORY LESSON!	CCSS: ELA:L.K.5.B / TH:Pr6.1.K.A.			•					•		
Visual Timelines BLACK HISTORY LESSON!	CCSS: ELA:L.RL.K.3. / VA:Cr.1.1.K.A				•		•				
Wondrous Waterworks	NGSS: K.ESS3.1. / VA:Re.7.1.Ka					•	•				
Greek Superheroes	CCSS: ELA.Lit.L.K.1.D. / TH:PR5.1.K.				•				•		
Mosaic Mathematics	CCSS: MATH.CONT.K.OA.A.1 / VA:Cr2.1.Ka		•				•				
Quarter 4											
Roman Festivals	CCSS: ELA.Lit.RI.K.3. / DA:Re.7.1.K.	•								•	
Building with Shapes	CCSS: MATH.CONTK.G.A.2 / VA:Cr2.1.Ka		•				•				
Describe in Mime	CCSS: ELA.Lit.SL.K.4 / TH:PCr1.1.K.a:			•					•		

	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
1ST GRADE											
Quarter 1											
Music and Measurement	CCSS:Math.1.MD.A.1 / MU:Re7.2.1		•					•			
Ukiyo-E and Superflats	CCSS:ELA.Lit.Rl.1.10:/ VA:Cn11.1.1a.	•					•				
Why Words Matter	CCSS:ELA.Lit.SL.1.4/ Th:Pr4.1.1.	•							•		
Quarter 2											
Byzantine Art and Adjectives	CCSS:ELA-Lit.L.1.1.F:/ VA:Cr1.2.1a			•			•				
Byzantine Chanting and Dance	CCSS:ELA.Lit.SL.1.2. / MU:Re7.2.1.				•			•			
Carpet Weaving Design	CCSS:Math.1.G.A.1./ VA:Cr2.1.1a		•				•				
Composite Compositions	CCSS:MATH.C.1.G.A.2: / VA:Cr2.1.1.		•				•				
Over in the Meadow	CCSS:ELA.L.SL.1.1. / DA:Cr2.1.1.:	•								•	
Inventions of the Middle Ages	NGSS.K.2.ETS.1.2. / TH:Cr1.1.1.c.:					•			•		
Quarter 3											
Two Ways BLACK HISTORY LESSON!	CCSS.M.C.1.O.A.5.: / DA:Cn.1.0.1.1.b.		•							•	
Starting with Style BLACK HISTORY LESSON!	CCSS ELA.L.RI.1.10: / VA:Cr1.2.1a				•		•				
Drumming with Civil Rights Leaders BLACK HISTORY LESSON!	CCSS ELA.L.RF.1.2.B: / MU:Cr1.1.1.	•						•			
Instruments of the Renaissance	NGSS.1.PS4.1. / MU:Pr4.3.1.					•		•			
Modern Day Mona Lisa	CCSS.ELA.LIT.SL.1.4. / VA:Cr3.1.1a.:			•			•				
Printing Shapes	CCSS.Math.C.1.G.A.3. / VA:Cr2.1.1a		•				•				
Quarter 4											
Venetian Masks	CCSS.ELA.Lit.L.1.5: / TH:Cr1.1.1.b.	•							•		
Lines of Architecture	CCSS:Math:C.1.G.A.2 / VA:Re8.1.1a.					•	•				
Slowly Sinking City	NGSS:2-ETS1-2 / VA:Cr2.3.1a		•				•				

LESSONS-AI-A-GLANCE				1							
	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
2ND GRADE											
Quarter 1											
Human Beans	NGSS:2.PS1.3: / VA:Cr1.1.2a					•	•				
Lunettes and Mathematical Sets	CCSS:MATH.2.OA.C.3 / VA:Cr1.2.1a		•				٠				
Musical Voices	CCSS:ELA-lit.SL.2.1.A. / MU:Cn.11.0.2			•				•			
Quarter 2											
Contrapposto Choreography	CCSS.ELA.Lit.W.2.3 / DA:Pr5.1.2			•						•	
Symbolizing Sebastian	CCSS:ELA.Lit.SL.2.4.: / VA:Cr1.2.2a				•		•				
Time for Music	CCSS:Math.C2.MD.C. 7 / MU:Re7.2.1		•					•			
Calculating Composition	CCSS:Math.2.NBT.A.4 / VA:Re.7.1.2a.		•				•				
In Other Words	CCSS: ELA.L.2.5 / DA:Re8.1.2	•								•	
The Musical of 1812	CCSS.ELA.L.W.2.2 / TH:Cn.11.2.2			•					•		
Quarter 3											
Action Leads to Change BLACK HISTORY LESSON!	CCSS.ELA:L.RI.2.3 / VA:Cn.11.1.2a	•					•				
Bee the Difference BLACK HISTORY LESSON!	NGSSL2-LS2-2 / DA:Pr6.1.2					•				•	
History of Hip Hop BLACK HISTORY LESSON!	CCSS.Math.C.2.G.A.3 / MU:Re.8.1.2		•					•			
Biodiverse Beats	NGSS:2-LS4-1 / MU:Cr.1.1.2					•		•			
Daffodil Dance	CCSS.ELA:L.RL.2.10 / DA:Pr5.1.2.a	•								•	
Place Value Picnic	CCSS.Math.2.NBT.A.1. / VA:Cr1.1.2a		•				•				
Quarter 4											
Hopscotch by Tens	CCSS:Math.C.2.NBT.B.8/ DA:Cr1.1.2		•							•	
America the Beautiful	CCSS:ELA-lit.RL.2.7 / MU:Cr1.1.2a				•			•			
Reading Realism	CCSS.ELA.Lit.RL.2.7 / VA:Re.7.1.2a	•					•				

	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
3RD GRADE											
Quarter 1											
Arrays and Pointillism	CCSS.MATH.3.OA.A.3. / VA.Cr1.1.3a.		•				•				
Musical Emotions	CCSS.ELA.LIT.RL.3.3 / MU:Pr6.1.3				•			•			
Rodin Design Challenge	NGSS.3.5.ETS1.1 / VA:Cr1.2.3a					•	•				
Quarter 2											
Three Dances of Government	CCSS:ELA-Lit.RI.3.3. / DA:Cn10.1.3				•					•	
Adverbs and Actions	CCSS:ELA-Lit.L.3.1.A. / TH:Pr6.1.3	•							•		
Dancing Shapes	CCSS:MATH.3.G.A.1. / DA:Pr5.1.3.		•							•	
Biome Survivor	NGSS.3-LS4-3. / TH:Pr.6.1.3.					•			•		
Collaboration Drawing	CCSS MATH 3.MD.C.5B / VA:Cr.3,1.3a		•				•				
The Basics of Swing	CCSS ELA L.W.3.2 / DA:Cr3.1.3			•						•	
Quarter 3											
African American Architects BLACK HISTORY LESSON!	CCSS.MATH.3MD.C.7.D / VA:Cr1.2.3a		•				٠				
Separate but Equal BLACK HISTORY LESSON!	CCSS.ELA-LIT.SL.3.4. / TH:Re8.1.3	•							•		
Songs of Protest BLACK HISTORY LESSON!	CCSS.ELA.Lit.RI.3.2 / MU:Cr1.1.3.a				•			•			
Cardinal Colors	CCSS.ELA.LIT.W.3.2. / VA:Cr1.1.3a					•	•				
Movement Shapes	CCSS.MATH.C3.G.A.1. / DA:Re.7.1.3.		•							•	
Rebel Words	CCSS.ELA.Lit.L.3.2.F / TH.Pr6.1.3			•					•		
Quarter 4											
Cubism and Geometry	CCSS.MATH.C.3.G.A.1. / VA:Cr1.1.3a		•				•				
Ragtime Forces	NGSS:3.PS2.1. / DA:Cr2.1.4.a					•				•	
Two-Faced	CCSS.ELA.LIT.W.3.3. / MU:Pr4.3.3.			•				•			

	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
4TH GRADE											
Quarter 1											
Circuit Study	SCI- 4-PS3-2. / DA:Cn10.1.4.b.					•				•	
Define through Line	ELA-LITERACY.L.4.5.C / VA.Cr.2.1.4.A	•					•				
Metropolis Soundscapes	ELA- LITW.4.1.A / MU.Cr.2.1.4.A				•			•			
Quarter 2											
Constructing a Cleaner Future	NGSS:4.ESS3-1 / VA:Cr2.1.4.a.:					•	•				
Language of Color	ELA-LITERACY.L.4.5. / DA.Pr6.1.4.	•								•	
Musical Decomposition	CCSS.Math:4.NF.B.3.b. / MU:Cr2.1.4.b		•					•			
Graphing Art	CCSS.Math.4.G.A.1 / VA:Cr2.1.4.a		•				٠				
Regional Sculptures	CCSS.ELA.W.4.2.A. / VA:Cr.2.3.4.A.				•		٠			•	
Mondrian Monologues	ELA-LITERACY.W.4.10 / TH:Cn.11.1.4			•					•		
Quarter 3											
Bessie Blount Griffen BLACK HISTORY LESSON!	NGSS 3-5-ETS1-3. / MA:Cr2.1.4					•					•
Lowriders BLACK HISTORY LESSON!	ELA-LITERACY.SL.4.3 / TH:Cn.11.1.4				•			•			
Patterns and Portraits BLACK HISTORY LESSON!	ELA- LITERACY.4.7: / VA.Cr.2.1.4.A	•					•				
Dali's Optical Illusions	CCSS.MATH.4.MD.A.1. / VA:Cr2.1.4.a.		٠				•				
Satie and Sound	NGSS 4-PS3-2 / MU:Cr.1.1.4.					•		•			
Surrealist Games	CCSS.ELA.L.W.4.3 / VA:Cr2.1.4.a			•			•				
Quarter 4											
Color Field Comparisons	CCSS.Math.C.4.NF.A.2: / VA:Re9.1.4a.		•				•				
Population Saturation	CCSS.ELA.LIT.W.4.2. / VA:R.7.2.4a				•		•				
Norman Lewis and Narrative	CCSS.ELA-L.W.4.3 / TH:Cr.2.4.			•					•		

LESSONS-AT-A-GLANCE				14/515-1-0						D.41-07	
	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
5TH GRADE											
Quarter 1											
Atmosphere Attributes	5-ESS2-1 / DA:Cr2.1.5.a.					•				•	
Light Sculptures	NGSS: 5-LS1-1. / VA:Cr2.1.5.a.					•	٠				
Roll Sound	CCSS:ELA.Lit.L.5.4. / TH:Re8.1.5	•							•		
Quarter 2											
Cause and Effect	CCSS.ELA.LIT.L.5.4.A. / DTH:Pr6.1.5	•							•		
Look Closely	CCSS.MATH.G.A.1. / VA:Cr2.1.5a		•				٠				
Wax Statues	CCSS.ELA.Lit.RL.5.3 / DA:Pr5.1.5				•					•	
Artful Erosions	NGSS.5-PS2-1 / VA:Cr2.1.5a					•	•				
Earth Dance	ELA.RL.5.4 / DA:Cr1.1.5.	•								•	
Probability Report	CCSS: MATH.5.G.A.2 / TH:Cr2.5.		٠						٠		
Quarter 3											
Collaboration Equations BLACK HISTORY LESSON!	CCSS.MATH.5.OA.A.2 / VA:Cr1.1.5a.		•				٠				
Music Matters BLACK HISTORY LESSON!	NGSS.5.PS1.1. / MU:Re8.1.5.					•		•			
Radio Drama ^{BLACK HISTORY LESSON!}	CCSS.ELA-Lit.SL.5.1.B / TH:Cr3.1.5.a	•							•		
Civil War	CCSS.ELA.LIT.SL.5.2: / TH.Cr.1.1.5				•				•		
Drawing by Numbers	CCSS.MATH.5.G.A.1 / VA:Cr1.1.5a.		•				•				
Theme vs. Main Idea	CCSS.ELA.LIT.RL.5.2 / MA.Cr1.1.5	•									•
Quarter 4											
Ecosystem Dance	NGSS:5-LS2-1 / DA:Cr1.1.5.					•				•	
Form and Volume	CCSS.MATH.5.MD.C.3: / VA:Cr1.1.5a		•				٠				
Inferences and Animation	CCSS.ELA.Lit.RL.5.7 / MA:Re7.1.5	•									•



KEY STANDARDS

CONTENT	ARTS
NGSS:	Music:
4-PS3-2.	MU:Cr1.1.4

PACING

DAY 1 Pages 1 - 2

ASSESSMENT TYPE

Formative/ Satie and Sound Rubric

ELEMENTS OF MUSIC

- Pitch
- Dynamics

MATERIALS LIST

- Percussion Box Instruments
- Graph Paper and pencil

pg. 1 | MARCH | Lesson 3

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Lesson Objective:

Students will explore the conversion of mechanical energy to sound through surrealist music.

21st Century Skills:

- Creativity
- Flexibility
- Critical Thinking

Content Standards:

NGSS 4-PS3-2:

Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves cause objects to move. Students will create and chart wave amplitude while writing music to develop a relationship between the sound and wavelength.

Vocabulary

Juxtaposition Wavelength Dynamics Pitch

Arts Standards:

MU:Cr.1.1.4.:

Demonstrate selected and organized musical ideas for an improvisation, arrangement, or composition to express intent, and explain connection to purpose and context. By juxtaposing music of different pitch and dynamics, students organize an original composition in the context of Surrealist music.

Essential Questions:

How can we graph the dynamics of an original musical composition?

Warm-Up Options - 10 Min

Pick from any of the warm-ups below. Directions for the warm-ups are in the back of this lesson packet.

- 24- 1,2,3 Echo Me
 - Me 28-
- 25- Animal Sounds
 26 Chawing Words
- 26- Chewing Words
- 27-Dynamics
- 28- Finger
 Stretching
- 29- Listening to Rhythm
- 30- Solfege
- 31- Voice Shapes
- 32- Watch the Ball



Lesson Sequence:

Surrealist music combines existing works, styles, and types of music, interlacing them together to form unexpected juxtapositions. In this lesson students will learn about how amplitude can be recorded through graphing.



STEP 1

Define the term *juxtapose* and inform students that surrealist music involved placing two dissimilar sounds (in rhythm, pitch, or dynamics) next to each other in a song.

Use the Artful Thinking Routine listed below to introduce the work of Erik Satie, a composer who inspired the Surrealist movement.

Discuss ways in which we can record sound waves (electronically, through musical notation, and written form).

Ask: What type of dynamics would you expect to hear at a rock concert? What about at a classical concert?

Artful Thinking Routine

I Hear, I Think, I Wonder Routine. Listen to the first minute of Erik Satie's <u>Gymnopedie</u> and answer the following questions.

- What do you hear?
- What does it make you think?
- What does it make you wonder?

Artful Thinking by Project Zero is licensed under a Creative Commons AttributionNonCommercial 4.0 International License. Routine found here: http://pzartfulthinking.org/

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STEP 2

Use the Amplitude Resource page to provide direct instruction regarding the relationship pitch, dynamics, and wave amplitude.

Play some examples of sounds and have students create approximate graphs of the sounds they hear. Explain that the louder the music the farther from the x axis the wave will rise. The higher the pitch, the closer together the wave lengths will be.

Review the results of the students graphs as a class.

STEP 3: Main Activity/Project

Divide students into small groups and instruct each group to create a 3-part song that juxtaposes sounds of different pitch and dynamics.

Each song will be 24 beats total, or 6 measures long.

Have students use graph paper and pencils to chart their song by recording the approximate wavelength and height of the different parts of their song on the Satie and Sound worksheet page.

Estimated Time: 25 minutes

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STEP 4

Have students create an artist's reflection by responding to the following idea: Satie referred to himself as a phonometrician, or "someone who measures sounds."

How is that an appropriate title for a composer?

Teacher To Teacher



Students need to be able to create pitch so be sure to include instruments in their percussion boxes that will allow this to occur.

- Chimes
- Xylophones
- Hand bells

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TEACHER SCORING GUIDE

Use this scoring guide to provide consistency in assessing student compositions.

Criteria	Distinguished (Level 4)	Excelled (Level 3)	Adequate (Level 2)	Basic (Level 1)
The student composition juxtaposes music of different pitch and dynamics.	The students demonstrate thoughtful juxtaposition of 3 pieces of music with different pitch and dynamics to create a unified composition.	The students mainly demonstrate thoughtful juxtaposition of 3 pieces of music with different pitch and dynamics to create a composition.	The students demonstrate some thoughtful juxtaposition of 3 pieces of music with some different pitch and dynamics to create a composition.	The students demonstrate little to no thoughtful juxtaposition of pitch and dynamics to create a composition.
The students are able to accurately measure pitch through graphing approximate wavelength.	The students demonstrate approximate representation of pitch by drawing wavelengths that correlate with their composition.	The students mainly demonstrate approximate representation of pitch by drawing wavelengths that correlate with their composition.	The students demonstrate pitch somewhat correctly by drawing wavelengths that correlate with the composition.	The students do not accurately approximate the pitch of their composition.
The students are able to accurately measure dynamics through graphing approximate wave height.	Students approximate the dynamics of our music correctly by drawing shallow and deep waves on each graph that correlate with their composition.	Students mainly approximate the dynamics of our music correctly by drawing shallow and deep waves on each graph that correlate with their composition.	Students approximate some of the dynamics of our music correctly by drawing shallow and deep waves on each graph that correlate with their composition.	Students do not accurately approximate the dynamics of their composition.
The students worked together to create and graph their composition.	The student team shared active roles in the creation and graphing of their piece.	The student team mainly shared active roles in the creation and graphing of their piece.	The student team shared some of the tasks in the creation and graphing of their piece.	The student team neglected to share active roles in the creation and graphing of their piece.

Scoring Guide

Name:

Date:

Class:

STUDENT SCORING GUIDE

Use this rubric to help guide your work and to reflect on your completed compositions and graphs.

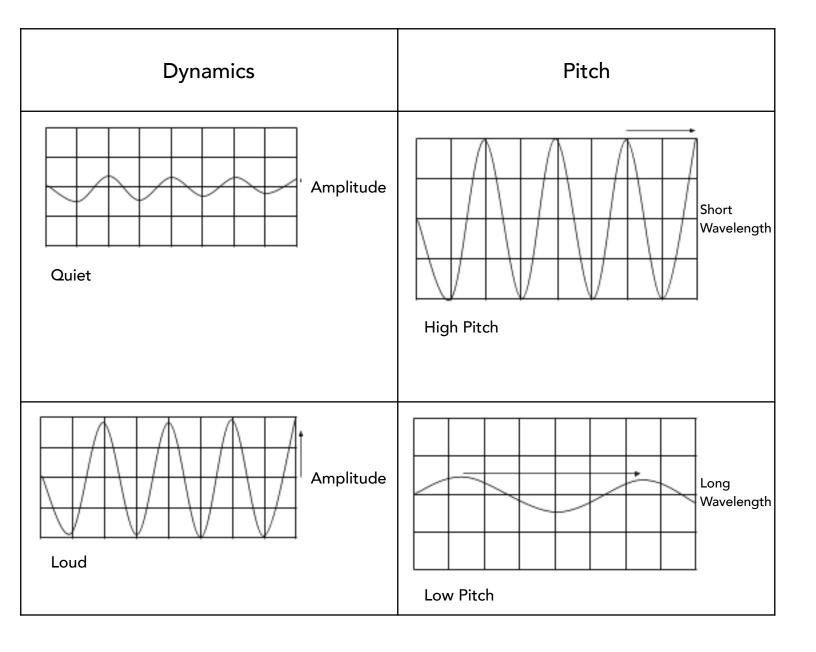
Criteria	Distinguished (Level 4)	Excelled (Level 3)	Adequate (Level 2)	Basic (Level 1)
My composition juxtaposes music of different pitch and dynamics.	We demonstrate thoughtful juxtaposition of 3 pieces of music with different pitch and dynamics to create a unified composition.	We mainly demonstrate thoughtful juxtaposition of 3 pieces of music with different pitch and dynamics to create a composition.	We demonstrate some thoughtful juxtaposition of 3 pieces of music with some different pitch and dynamics to create a composition.	We demonstrate little to no thoughtful juxtaposition of pitch and dynamics to create a composition.
We am able to accurately measure pitch through graphing approximate wavelength.	We demonstrate approximate representation of pitch by drawing wavelengths that correlate with our composition.	We mainly demonstrate accurate representation of pitch by drawing wavelengths that correlate with our composition.	We demonstrate some of the pitch by correctly drawing wavelengths that correlate with our composition.	We do not accurately approximate the pitch of our composition.
We are able to accurately measure dynamics through graphing approximate wave height.	We approximate the dynamics of our music correctly by drawing shallow and deep waves on each graph that correlate with our composition.	We mainly approximate the dynamics of our music correctly by drawing shallow and deep waves on each graph that correlate with our composition.	We approximate some of the dynamics of our music correctly by drawing shallow and deep waves on each graph that correlate with our composition.	We do not accurately approximate the dynamics of our composition.
We worked together to create and graph our composition.	My team and I shared active roles in the creation and graphing of our piece.	My team and I mainly shared active roles in the creation and graphing of our piece.	My team and I shared some of the tasks in the creation and graphing of our piece.	My team and I neglected to share active roles in the creation and graphing of our piece.

pg. 6 | MARCH | Lesson 3



Amplitude Resource Page

Name:	Date:	Class:



delete

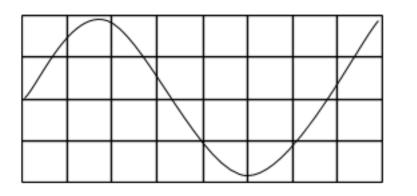
Sound Worksheet



Name:	
-------	--

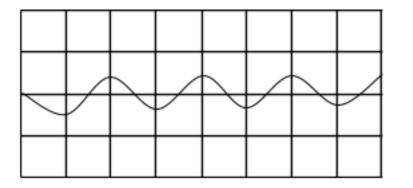
Date: _____ Class: _____

Identify the graphs below as having quiet, medium, or loud dynamics. Then decide if each graph is high, medium or low pitch.



Dynamics:

Pitch:



Dynamics:

Pitch:

GRAPHING COMPOSITIONS

Name:	Date:	Class:

Part 1: Pitch/Dynamics

Instrument:

8 count	measure			

Part 2: Pitch/Dynamics

Instrument:

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GRAPHING COMPOSITIONS

Name:	Date:	Class:

Part 3: Pitch/Dynamics

Instrument:



SECONDARY CURRICULUM



<section-header>

 Bus and Perspective
 Term
 Order A
 Art of the state of

GRADE 7

<u>Seventh Grade</u>

Statistics of

KEY VOCABULARY

PACING: 1 DAY

ASSESSMENT (For

ELEMENTS OF MUSIC

GERIALS LIST

Computers Draph paper

Videos.

HS STEAM

15 lessons, powerpoints,

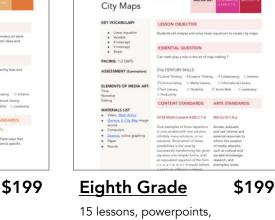
Key Beats Per Minute Line of Beat Fit

Billboard Top Hits

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.

21st CENTURY SKILLS

\$199



Line Equations and

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.

GRADE: 8



HS Social Studies \$199

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.

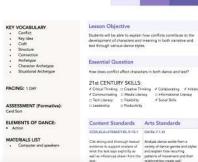
Need to use a purchase order or have a team?

Use this link to fill out the purchase order request form:

<u>https://educationcloset.com/</u> integrated-curriculum/purchaseorders/

assessments and handouts. 36 PD Videos. The Necessity of Conflict CONTENT ART Conflict CONTENT CONTENT CONTENT ART

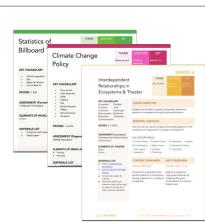
15 lessons, powerpoints,



HS E/LA

15 lessons, powerpoints, assessments and handouts. 36 PD Videos.

\$199



6-12 Multi-Grade Teacher

assessments and handouts. 36 PD

\$299

90 lessons, powerpoints, assessments and handouts. 36 PD Videos.

** For educators who teach multiple grades, such as music, art, special education and counseling teachers.

1 INTEGRATED	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
6TH GRADE											
Quarter 1											
Character Trait Portraits	CCSS.ELA-LITERACY.RL.6.1 / VA:Cr1.1.6a	•					•				
Personal Cartouche Exhibit	CCSS: ELA.Lit.RH.6-8.7 / VA:Cn10.1.6a				•		•				
Interdependent Relationships in Ecosystems	NGSS.MS-LS2-2 / TH:Cr1.1.6					•			•		
Quarter 2											
Transitions	CCSS.ELA-LITERACY.W.6.2 / DA:Cr1.1.6			•						•	
Children of War	CCSS: ELA.Lit.RH.6-8.7 / MA:Cr3.1.6				•						٠
Musical Waves	NGSS: MSPS4-1 / MU:Pr4.1.6a					•		•			
Quarter 3											
Comparative Music	CCSS.ELA-LITERACY.RL.6.17 / MU:Re8.1.6	•						•			
Islamic Architecture and Tessellations	CCSS: ELA.Lit.RH.6-8.7 / VA:Re.7.2.6a				•		•				
Moon Phase Dance	NGSS: MS-ESS1-1 / DA:Cr1.1.6					•				•	
Thematic Theater	CCSS: ELA.Lit.S.L.6.4 / TH:Pr5.1.6	•							•		
Point of View Music	CCSS: ELA.Lit.RH.6-8.6 / MU:Re.8.1.6				•			•			
Climate Change and Media Arts	NGSS: MS-ESS2-6 / MA:Cr.3.1.6					•					•
Quarter 4	Quarter 4										
Contextual Comics	CCSS: ELA.Lit.L.6.4 / MA:Cr2.1.6	•									•
How Text Presents Information	CCSS: ELA.Lit.RH.6-8.5 / MA:Re.8.1.6				•						•
Composite Figure Compositions	CCSS: Math.Content.6.G.A.1 / VA:Cr1.1.6a		•				•				

	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
7TH GRADE											
Quarter 1											
Portrait Prompts	CCSS.ELA-LITERACY.RL.7.3 / VA:Cn11.1.7a	•					٠				
Bias and Perspective	CCSS: ELA.Lit.RH.6-8.2 / VA:Re.7.2.7a				•		•				
Matter, Energy and Molas	NGSS.MS-LS1-7 / VA:Cr2.3.7a					•	٠				
Quarter 2											
Poetic Form	CCSS.ELA-LITERACY.RL.7.5 / MA:Cr.3.1.7	•									•
How a Bill Becomes a Law Video Game	CCSS: ELA.Lit.RH.6-8.3 / MA:Cr2.1.7				•						•
Probability Game Design	CCSS: Math.Content.7.SPC.7 / MA:Cr3.a.6		٠								•
Quarter 3											
Descriptive Choreography	CCSS.ELA-LITERACY.W.7.3.C / DA:Cr.2.1.7			•						•	
Dance of Colliding Cultures	CCSS: ELA.Lit.RH.6-8.6 / MA:Cr2.1.7				•						•
Elements Dance	NGSS: MS-ESS2-6 / DA:Cr1.1.7					•				٠	
Riding in the Car	CCSS: ELA.Lit.S.L.7.1.D / TH:Cr3.1.7	•							•		
Historical Figure Debate	CCSS: ELA.Lit.RH.6-8.1 / TH:Cr.1.1.7				•				•		
Space Systems and Music Compositions	NGSS: MS-ESS1-1 / MU:Cr1.1.7					•		•			
Quarter 4	Quarter 4										
Composition Organization	CCSS: ELA.Lit.RI.7.5 / MU:Cn11.0.7	•						•			
Mapping Cyberspace	CCSS: ELA.Lit.RH.6-8.7 / MA:Cr1.1.7				•						•
Math Mandalas	CCSS: Math.Content.7.G.B.4 / VA:Cr2.3.7a		•				•				

	CONNECTED STANDARDS	READING	MATH	WRITING	SOCIAL STUDIES	SCIENCE	ART	MUSIC	THEATER	DANCE	MEDIA ARTS
8TH GRADE											
Quarter 1											
Sherald and Symbolism	CCSS.ELA-LITERACY.W.8.2 / VA:Cr2.1.8a			٠			٠				
Fact vs. Opinion News Reports	CCSS: ELA.Lit.RH.6-8.6 / TH:Cr1.1.8				•				•		
Line Equations and City Maps	CCSS: Math.Content.8.EE.C.7.A / MA:Cn10.1.8		•								•
Quarter 2						1					
Variations of a Theme	CCSS.ELA-LITERACY.RL.8.9 / TH:Cn11.2.8	•							•		
Preamble Visual Essay	CCSS: ELA.Lit.RH.6-8.7 / VA:Cr2.3.8a				•		•				
Mondrian-Inspired Linear Equations	CCSS: Math.Content.8.EE.C.8 / VA:Re8.1.8a		•				•				
Quarter 3											
Narrative Remixes	CCSS.ELA-LITERACY.W.8.3.B / MU:Cr2.1.8			•				•			
Soundtracking the Constitution	CCSS: ELA.Lit.RH.6-8.4 / MU:Re.7.1.8				•			•			
Music and Functions	CCSS: Math.Content.8.F.A.3 / MU:Pr4.2.8		•					•			
Informational Rhetoric	CCSS: ELA.Lit.W.8.1 / MA:Cr3.1.8			•							•
Interactive Multimedia Theatre	CCSS: ELA.Lit.RH.6-8.4 / MA:Pr4.1.8				•						•
Kandinsky, Abstract Art & Linear Functions	CCSS: Math.Content.8.FA.3 / VA:Cr1.2.8a		•			•					
Quarter 4											
Character Sculpting	CCSS: ELA.Lit.RL.8.3 / DA:Pr4.1.8	•								•	
Loaded Language	CCSS: ELA.Lit.RH.6-8.4 / DA:Pr4.1.8				•					•	
Information Processing Dance	NGSS:MSLS1-8 / DA:Cr2.1.8					•				•	

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GRADE: 8

Line Equations and City Maps

THEME	CONTENT	ART
Who Are We?	CCSS.Math.Co nt.8.EE.C.7.A	MA:Cn10.1.8.

KEY VOCABULARY

- Linear equation
- Variable
- X Intercept
- Y Intercept
- Slope

PACING: 1-2 DAYS

ASSESSMENT (Summative):

ELEMENTS OF MEDIA ART:

Time Narrative Editing

MATERIALS LIST

- Video, <u>Math Antics</u>
- <u>Geneva, IL City Map</u> image source
- Computers
- <u>Desmos</u>, online graphing
- Paper
- Pencils

LESSON OBJECTIVE

Students will analyze and solve linear equations to create city maps.

ESSENTIAL QUESTION

Can math play a role in the art of map making ?

21st CENTURY SKILLS:

\checkmark Critical Thinking	\checkmark Creative Thinking	✓Collaborating	g 🗆 Initiative
✓Communicating	🗆 Media Literacy	□ Informationa	l Literacy
✓ Tech Literacy	🗆 Flexibility 🗸	Social Skills	🗆 Leadership
Productivity			

CONTENT STANDARDS:

ARTS STANDARDS:

CCSS.Math.Content.8.EE.C.7.A

Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).

MA:Cn10.1.8.a.

Access, evaluate, and use internal and external resources to inform the creation of media artworks, such as cultural and societal knowledge, research, and exemplary works.

WARM-UP OPTIONS (10 MIN)

- 20- GIF
- 21- Keyboard Shortcuts
- 22- Memes
- 23- Mood Post

LESSON OVERVIEW

A linear equation is an equation between two variables that provides a straight line when plotted on a graph. In this lesson, students will work with partners or individually to create a city map (of an imagined place). Students should demonstrate understanding of both solving and graphing linear equations. Students should be able to locate the y-intercept on the graph and plot the point and use the slope to find a second point and plot that. Students will need to connect the two points by using a ruler to draw a line.

ENGAGEMENT

City Planning

Build background knowledge of city maps by projecting googlemaps.com. First look at the cities of Windermere, Florida and Sapporo, Japan. Note how both of these cities have what is called a "grid plan" of streets. Explain that a grid plan is a city street plan where the majority of the streets run at right angles to each other (forming a grid). Then explain that city planning is actually an ancient art and that grid plans for city streets date all the way back to Roman times!

Take a moment to compare to some cities that struggle with traffic problems, such as Dubai, UAE and <u>Atlanta, Georgia</u>. Ask students why planning a city is so important to the flow of traffic and record some responses on the board. Why might it be important to limit the amount of traffic?

pg 2 | SEPTEMBER

STEP 1

Linear Equations

Review and instruct if needed the vocabulary and processes for solving linear equations. Show students <u>this video</u> to help review concepts. Be sure that students have a firm understanding of how to translate a linear equation to a graph by plotting a point and finding the slope.

ARTFUL THINKING ROUTINE

Colors, Shapes, and Lines Routine. Have students analyze this City Map of Geneva, Illinois.

- What colors do you see?
- What shapes do you see?
- What lines do you see?

Artful Thinking by Project Zero is licensed under a Creative Commons AttributionNonCommercial 4.0 International License. Routine found here: http://pzartfulthinking.org/

STEP 2

Interpreting and Analyzing Artwork

Now that students have an understanding of analyzing and solving linear equations, it is time to get them ready to interpret and analyze some art.

Teacher-to-Teacher

If computers are not available have graph paper for students to use to graph their equations.

If students need to be given more direction you can assign the building locations and have them determine the coordinates instead of allowing them to determine the building locations on their own.

To expand this lesson have students work "backward"- drawing city maps on graph paper and then determining the linear equation for each street.

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MAIN ACTIVITY/PROJECT

Allow students the opportunity to work independently or with a partner. Explain that they will need to complete the Input-Output tables included on their City Planning resource pages. They will need to use the values from their input-output tables to graph each of the linear equations. They will use the online linear equation graph maker <u>Desmos</u> to create and print out their graph. Then students should utilize colored pencils to add detail to their city map.

The graphed lines should represent roads. Vertical lines (lines with a slope of 0) will be "streets." Horizontal lines (lines with an undefined slope) will be "avenues." These roads should be labeled according to their x or y intercepts. **Example:** 8th Avenue, 2nd Street, etc. Roads with a diagonal slope, can be named whatever students choose. Students should then add and label points that represent building locations and record their coordinates. Students will write and present as a partner pair their city along with the linear equations, graph and an analysis of their equations.

ESTIMATED TIME: 1 hour

CLOSURE

Reflection

Students should trade maps with another group and answer the following questions:

What are the coordinates of the library on this map? Are all roads labeled? What could be done to improve this map? Would this be a good road plan for a city?

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GRADE: 8

TEACHER ASSESSMENT

THEME	CONTENT	ART
Who Are We?	CCSS.Math.Co nt.8.EE.C.7.A	MA:Cn10.1.8.

	3	2	1	0
Ability to analyze and solve linear equations as evidenced in the input and output resource page.	More than six linear equations were correctly created and solved to graph. Graph includes all necessary labels.	Four to six linear equations were correctly created and solved to graph. Graph includes most of the necessary labels.	Two or three equations were created and solved. There are no labels on the graph.	No equations were solved or graphed.
City plan designed using linear equations.	City Plan includes more than six linear equations that distinctly represent city streets and are labeled accordingly. All required city buildings are added and their coordinates are labeled.	City Plan includes between four and six linear equations that clearly represent and City Streets.	City Plan includes less than four linear equations. Some roads do not accurately represent the linear equations.	City Plan was not completed.
Written Analysis of a partner group's city plan.	Analysis accurately solves the linear equations used to create their city map with no mistakes. And provides thoughtful commentary on city design.	Analysis accurately solves most of the linear equations used to create their city map.	Analysis accurately solves a few of the linear equations used to create their city map.	No analysis was completed.

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City Planning

Name: _____

Date: _____

Period: _____

	3	2	1	0
Ability to analyze and solve linear equations as evidenced in the input and output resource page.	More than six linear equations were correctly created and solved to graph. Graph includes all necessary labels.	Four to six linear equations were correctly created and solved to graph. Graph includes most of the necessary labels.	Two or three equations were created and solved. There are no labels on the graph.	No equations were solved or graphed.
City plan designed using linear equations.	City Plan includes more than six linear equations that distinctly represent city streets and are labeled accordingly. All required city buildings are added and their coordinates are labeled.	City Plan includes between four and six linear equations that clearly represent and City Streets.	City Plan includes less than four linear equations. Some roads do not accurately represent the linear equations.	City Plan was not completed.
Written Analysis of a partner group's city plan.	Analysis accurately solves the linear equations used to create their city map with no mistakes. And provides thoughtful commentary on city design.	Analysis accurately solves most of the linear equations used to create their city map.	Analysis accurately solves a few of the linear equations used to create their city map.	No analysis was completed.

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Vocabulary

Linear Equations and City Planning

Name: _____

Date: _____

Period: _____

Linear Equations - the equation for a straight line **Example:** y=2x+1

Slope - the measure of the steepness of a line. Reading at a slope from left to right, slopes that "go up" are positive and slopes that "go down" are negative.

Y Intercept - in a linear equation this is the location where the line crosses the vertical access.

Slope-Intercept Form - the most common form of a linear equation.

Example: y=mx+b Slope Y Intercept

City Planning Warm-Up

Linear Equations and City Planning

Name: _____

Period: _____

Date: _____

Linear Equations Worksheet

Linear Equations and City Planning

Name: _____

Date: _____

Period: _____

Use the input and output tables below to solve the seven equations below.

1. y=2x +1

x	Work	у	(x,y)
		6	
10			

2. y=2x+4

x	Work	У	(x,y)
		18	

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3. y=1/2x-3

x	Work	у	(x,y)
-14			
		6	

4. y=x-18

x	Work	У	(x,y)
		-3	
-12			

5. y=-4x+19

x	Work	У	(x,y)
4			
		9	

6. y=15

x	Work	У	(x,y)
-9			



x	Work	У	(x,y)
		-12	
		12	

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Using <u>Desmos</u>, graph each linear equation listed above. The graphed lines should represent roads. Vertical lines (lines with a slope of 0) will be "streets." Horizontal lines (lines with an undefined slope) will be "avenues." These roads should be labeled according to their x or y intercepts. (Example: 8th Avenue, 2nd Street, etc.) Roads with a diagonal slope, can be named whatever you choose. Add and label points that represent building locations and record their coordinates.

Your City Map should include the following buildings:

- Library
- Town Hall
- Post Office
- Grocery Store
- School
- Community Center

Reflection

Linear Equations and City Planning

Name: _____

Date: _____

Period: _____

Trade city planning maps with another partner group. Fill out this reflection page based on their city map.

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What are the coordinates of the library on this map?

Are all roads labeled?

What could be done to improve this map?

Would this be a good road plan for a city?

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