Art Mini Lesson Overview

Lesson Information	
Overview	Mini lessons are created for quick access to the challenge. The information is provided in various formats to suit facilitators' needs. These include challenge overview sheets, mini presentation slides (about 15 slides), and a video playlist resource. Viewing the presentation or video playlist is not necessary to complete the challenge.
Review	Time recommendations and possible modifications are provided to support effective planning.
Materials	Refer to the materials guide for recommended items, estimated quantities, and ready-to-shop links.
Preview	The lesson presentation is available in slide or video playlist form. The presentation does not need to be viewed by students. All of the information is also included on the student sheets. Student examples are provided to support student creation. Student examples are not intended for student use; instead, they are a resource for facilitators to anticipate student struggles and guide student creation.
Print	Review resources such as student sheet(s), research, and inspiration pages. Print the necessary resources.

Presentation Links
Click the emblem to view.

Canva	**Canva Link** This link provides access to a public view version of the mini presentation. You must have internet access to use this version. Click the Canva emblem to view the presentation. If you want to project an overview of the lesson on a digital board, the final slide works well.
Canva	**Marketing Link** Planning a STEAM Event? Check out our marketing flyers and passports for easy customization.
▶	**YouTube Playlist** A playlist of all Dakota STEAM videos created for this lesson has been compiled for quick reference. Click the YouTube emblem to view the playlist.

Art

Color Theory

Explore how colors can be made and how colors evoke emotions.

STEAM Mini Lesson

STEAM Category	Art
Time Recommendations	Working independently (Student reads sheet or watches video playlist independently then creates): 25-40 Lesson taught whole group (Read the sheet together, review the presentation slides or use the QR code to watch video version of the lesson, then students create): 40-55
Materials	• Materials listed on next pages. • Prepping materials before the event helps the flow of the lesson, ideas include: Organizing dauber paints into color sets—one of each color per set. • Please note the following specialty items may need to be ordered ahead of time: dauber paints.
Possible Modifications	The following modification can be made to the lesson: • Other art mediums like paint, watercolor, or markers can be used instead of daubers. This will slightly change the lesson, and dry time might mean the lesson needs to be spread over several days.

Print	Print Recommendations:
	• Student Sheets
	  ○ Essential—Available on the following pages. Several options are provided. Print one sheet per participant.
	• Student Circles Sheet
	  ○ Essential-Found in lesson plan. Need 1 one per participant. Recommend printing on cardstock. A larger 8.5" x 14" version can be found HERE.
	• Resource Sheets
	  ○ Optional
	  ▪ You may print a few to use as resources for participants.

NOTES

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Art STEAM Material Guide

What art materials should I have available?

Individual Use Materials

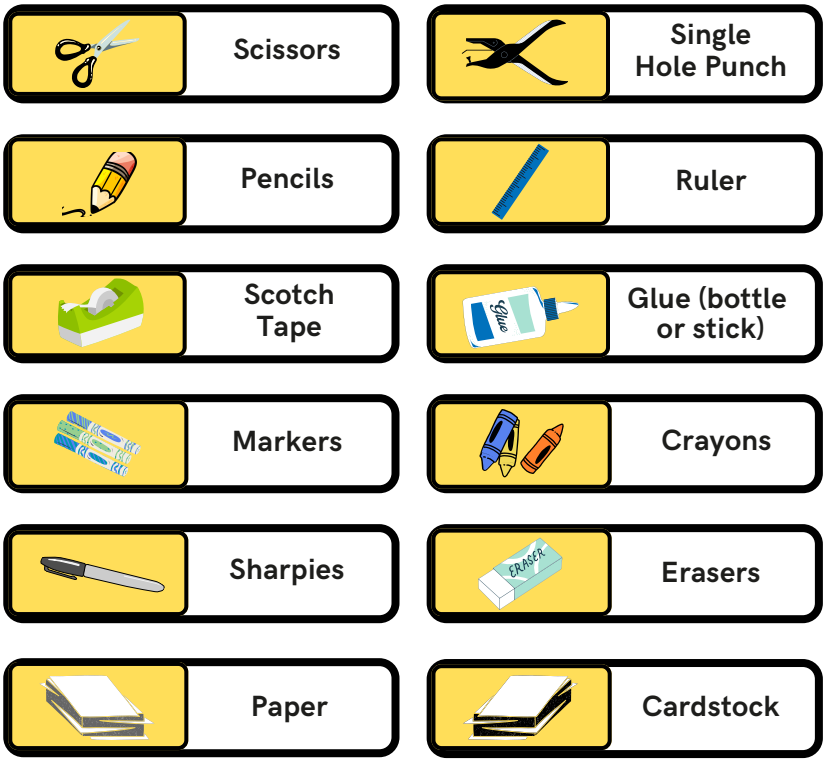
Individual-use materials are used independently while creating STEAM artwork. It is recommended to provide enough for each student.

Shared Materials

Shared materials are typically provided for two to four students to use collectively during a STEAM project. For example, students might share water cups for cleaning paintbrushes.

Optional Specialty Materials

Optional specialty materials are items used to enhance the art creation but are not necessary for success. These items can be provided when available.



These are recommended general materials for STEAM art projects. A more specific material list is provided below. Not all items listed may be required.

PRINT RECOMMENDATIONS

These are the recommended print materials for the project.

STEAM Journal | **Art History and Research** | **Rubrics and Sheets**

MATERIAL NEED TIPS & TRICKS

- Dakota STEAM Learning LLC does not guaranty any particular result in connection with the Activities and specifically that participation in the Activities does not guaranty any level of academic success for Minor Children or the attainment of any particular skill set.
- Material need estimates are based on Dakota STEAM Learning's experiences with the content. They are not guarantees but best estimates.
- If you do not have the necessary materials available, you can always modify your material list to reflect what you have.
- You can have participants work in small groups instead of individually to cut down on the amount of materials necessary.
- Art materials may need to be prepared in advance.
- Art is inherently messy; prepare classroom accordingly, especially when using acrylic paint. We suggest giving parents advanced notice of all STEAM art projects with a recommendation to bring a paint shirt!

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Color Theory

Please note that the links provided in our material lists are affiliate links, which means we may earn a commission if you make a purchase through them. These links are offered for inspiration purposes only; you are not required to use these exact products and can choose alternatives that best suit your needs and budget.

Materials & Links	Individual, Shared, or Optional	Amount	Notes	Calculations
Pencil	Individual	1/student		
Markers	Shared	1/table		
Dauber Paints	Shared	1 set/table	Other mediums can be used as an alternative to dauber paints. Watercolor, tempera paint, or markers are all effective choices.	
Black Marker	Individual	1/student	Any black markers can be used.	
Cardstock Paper	Optional	1+/student	This can be used instead of providing students with the preprinted circle sheet.	
Table Cloths	Optional	1/table	Optional- Can use if area needs to be protected when completing the project.	
Baby Wipes	Optional	2+/student	Used to clean students/tables.	

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Art STEAM Challenge

Color Theory

Use colors to depict your emotions.

Follow the steps below to complete your beautiful emotion-filled artwork!

Materials

- Pencil
- Markers (optional)
- Dauber Paints
- Black Marker
- Circles Sheet

Scan here for additional details and resource videos!

SCAN ME

Step Overview

Follow the steps below to create your masterpiece!

Step 1

- Rough Draft (on the back of this sheet)
  - Using your markers or daubers, fill in each circle with a different color.
    - Make sure to pay attention to where circles overlap.
- A new color should be created where two colors overlap.
  - You can color the overlapping areas with both markers or think critically to predict the resulting color and then color with that marker.

Step 2

- Rough Draft
  - Draw an emotion that represents each color that you chose or created.

Step 3

- Using your Step 1 creation as inspiration, use dauber paints to fill in the circle outlines on your large sheet.
  - Be sure to overlap colors so new colors can form in the spaces where two circles meet.

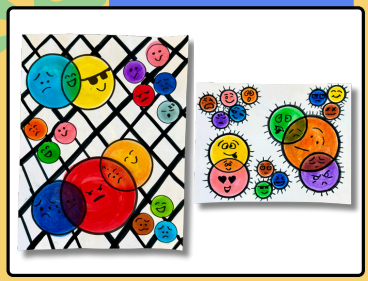
Step 4

- Using a black marker, add an emotion that each color chosen or created represents.
  - Remember, certain colors may evoke different emotions in different people.

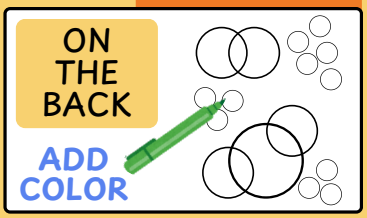
Step 5

- Add any other details inside the colored bubbles or in the background to personalize your art piece.
- Ideas include:
  - Patterned background
  - Additional images
  - Adding a border

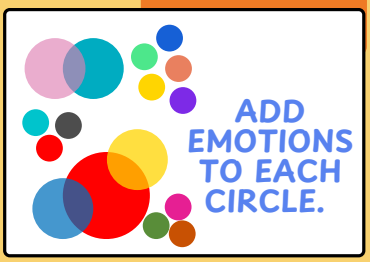
Inspiration



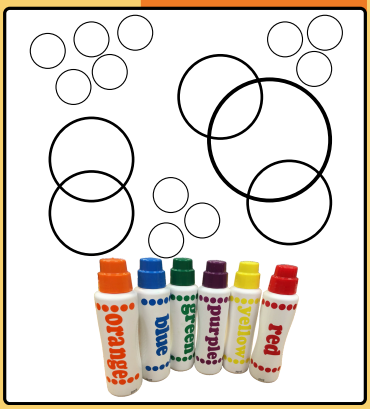
STEP 1



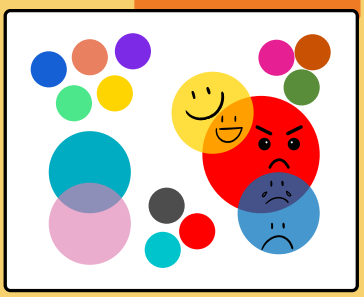
STEP 2



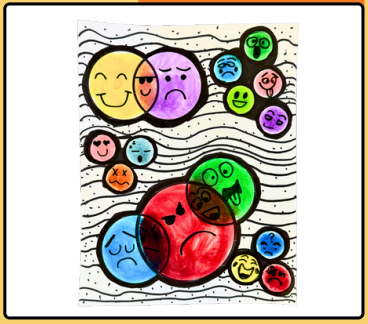
STEP 3



STEP 4



STEP 5



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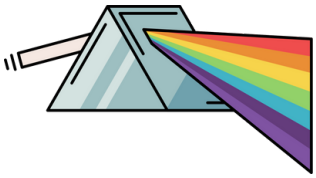
Color Theory

Use colors to depict your emotions.
Create your first draft below.

Art Challenge

Where's the STEAM?

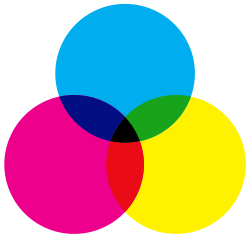


Colors are made by light. When light shines on an object, some colors in the light are absorbed by the object, and other colors bounce off. The colors that bounce off are the ones we see. For example, a red apple looks red because it reflects red light and absorbs the other colors. White light, like sunlight, is made up of all the colors mixed together. When light passes through a prism, it can be split into a rainbow of colors, showing all the colors that make up white light.

SCIENCE

Inspired by Johann Wolfgang von Goethe's "Theory of Colors," psychologists study how colors affect people. Findings have led to certain colors being associated with specific emotions or traits. Everyone is different, and people can respond to colors in various ways.

MATH



Artists can create custom shades of colors by mixing different amounts of colors together. By adjusting the quantity of each color, artists can make a color lighter, darker, or different in tone. Math assists with this mixing because artists often use proportions or percentages to measure the correct amount of each color.

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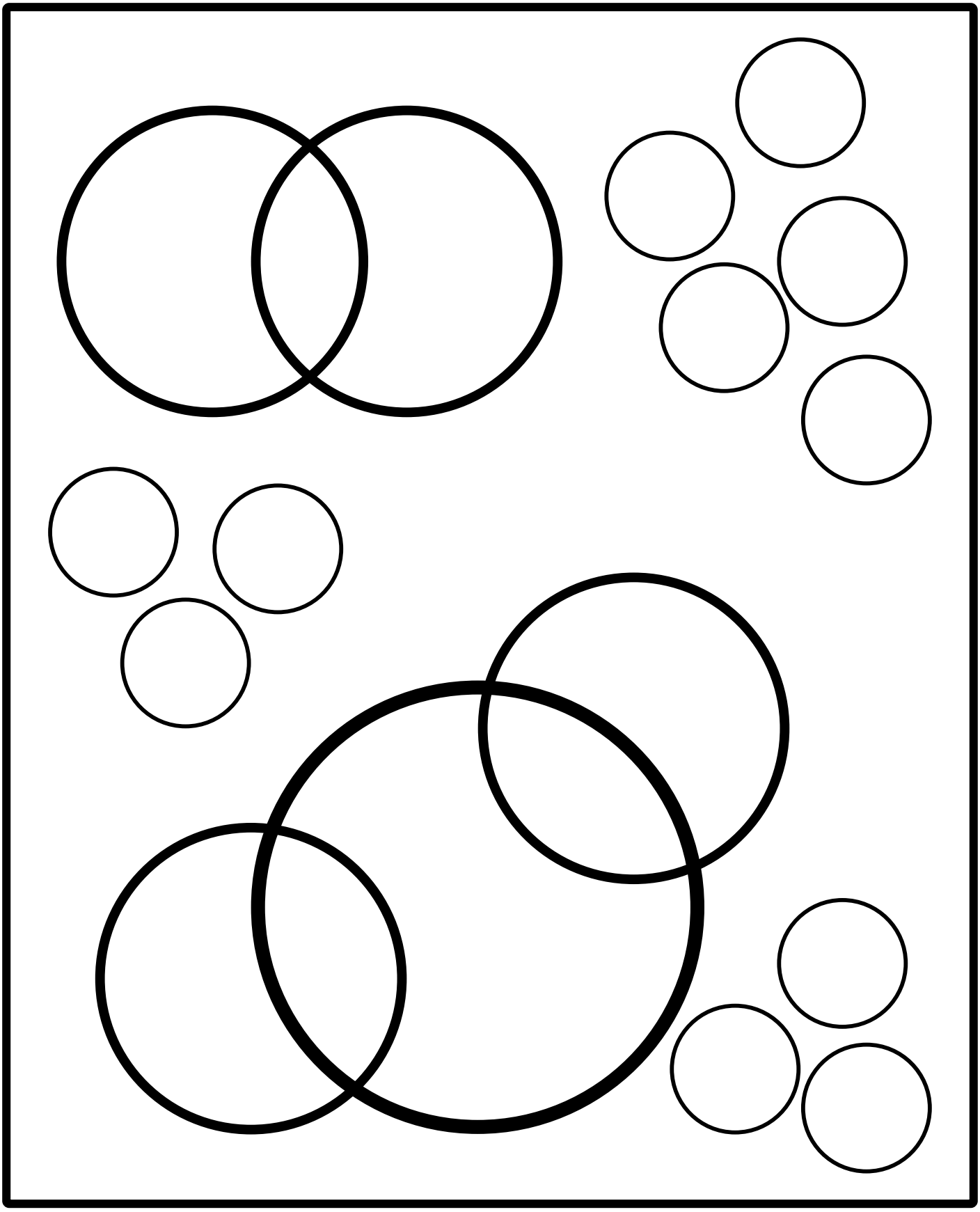
STEP #4: CREATE

Follow the process to make your art rough draft.



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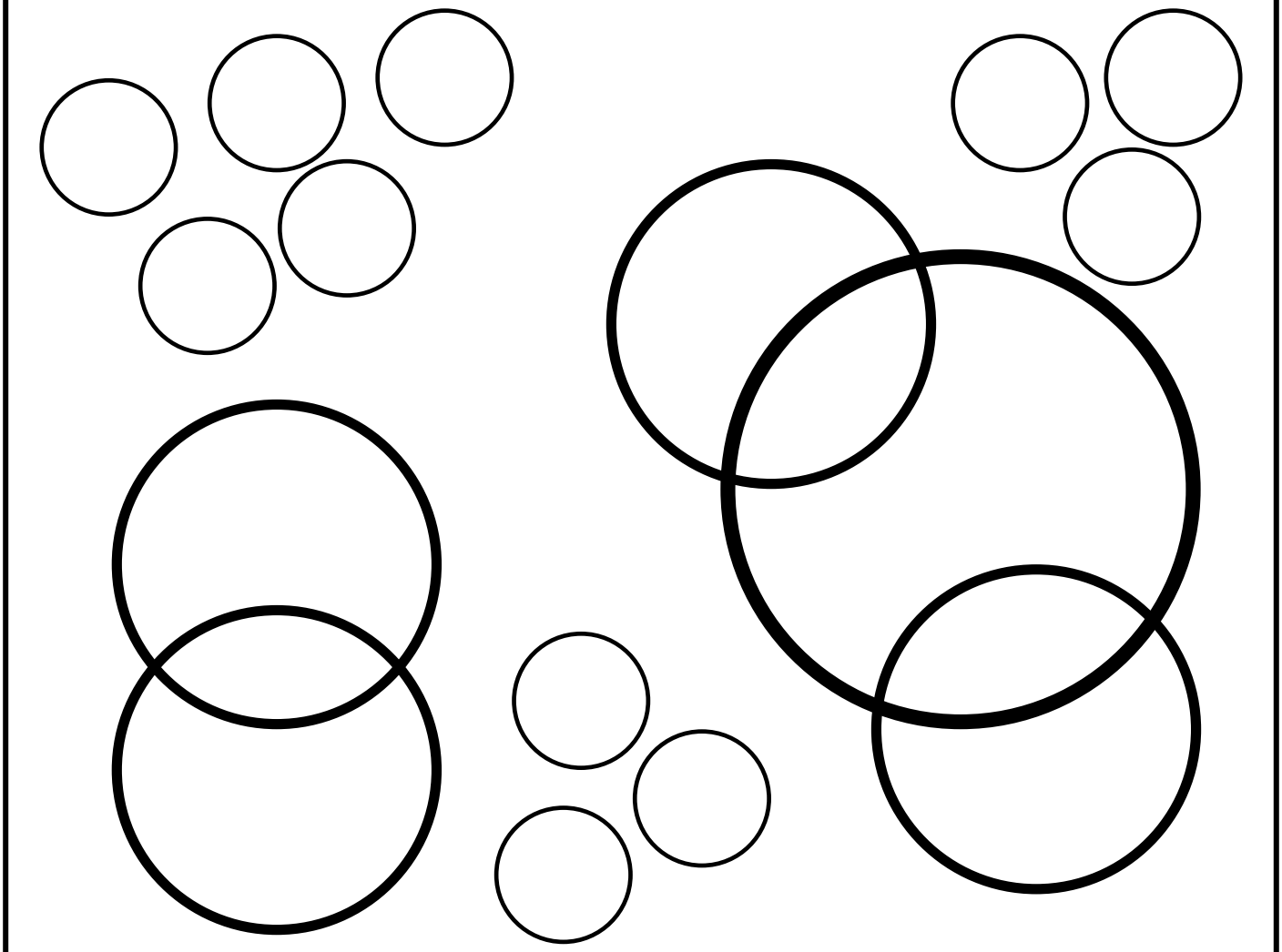
Mini STEAM Journal

What type of art will we be making?

Color Mixing

CREATE

Follow the process to make your own art rough draft.



REFLECTION

Think about this art style and reflect on your final creation.

Results

Is this an art style you would like to create again? Why? or Why not?

Reflect

What would you like to do differently next time?

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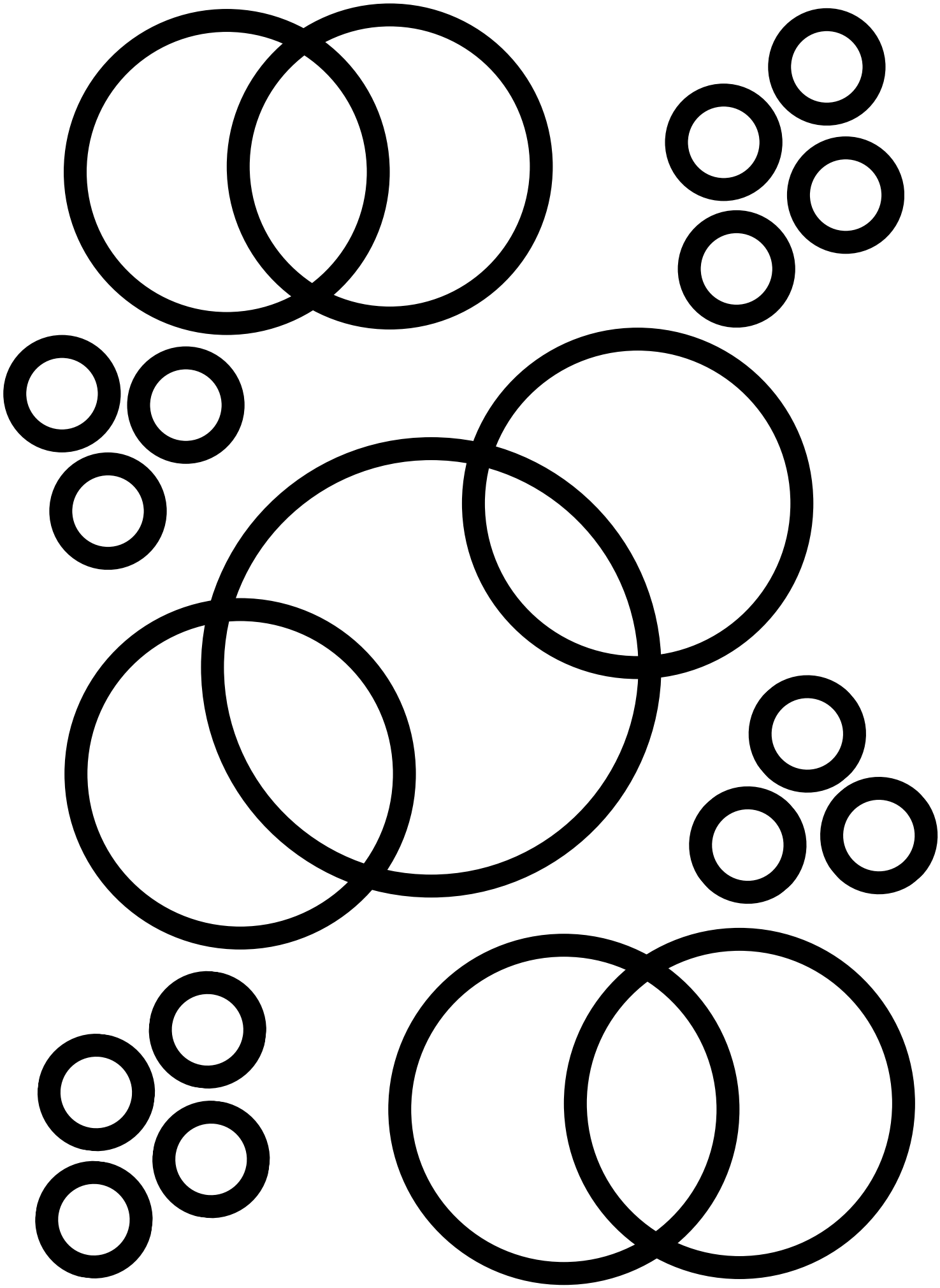
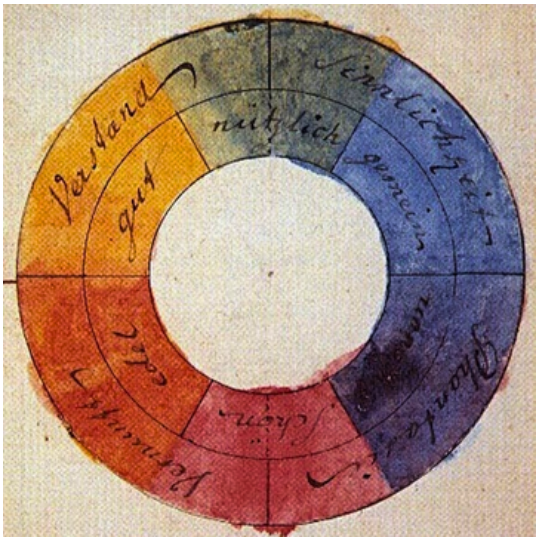


Color Theory

JOHANN WOLFGANG VON GOETHE

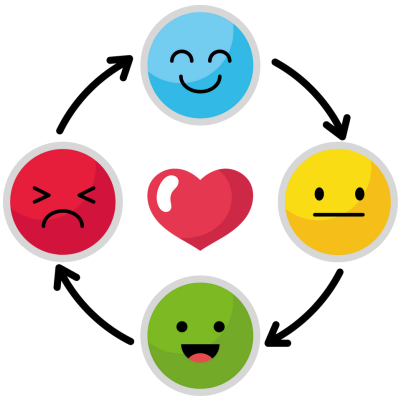
Johann Wolfgang von Goethe was born in Germany in 1749. He was a renowned writer, poet, and scientist who enjoyed studying a wide range of subjects, including art and science.



"THE THEORY OF COLORS"

Goethe studied how colors work and wrote a book called "Theory of Colors." In his book, he explained that colors are not just seen with our eyes but can also create certain emotions. Goethe designed a special color wheel and demonstrated how colors like blue and yellow blend to produce other colors. He believed that light and dark work together to form the colors we see and that each color has its own feeling or mood.

MODERN DAY EXAMPLES



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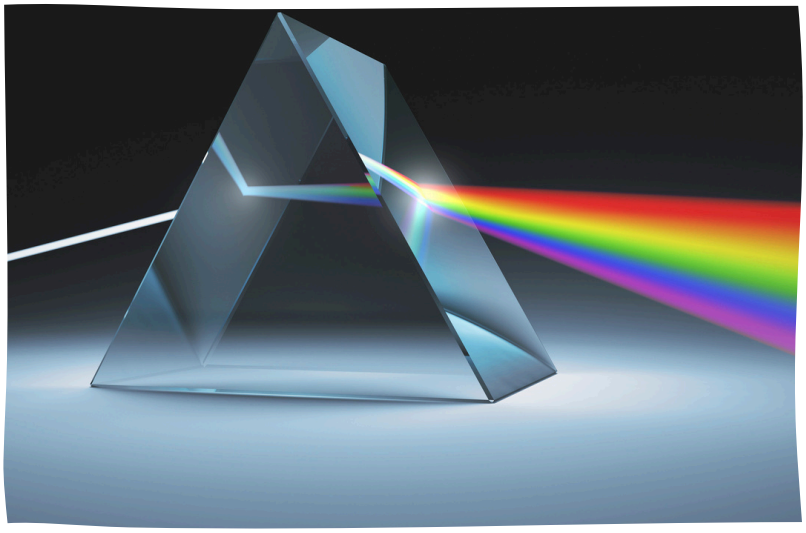
STEAM Research

LIGHT

Colors are created by light. When light hits an object, some colors within the light are absorbed by the object, while other colors reflect off. The colors that reflect are the ones we see.



PRIMARY COLORS

Primary colors are special colors that cannot be created by mixing other colors. The primary colors are red, blue, and yellow. When artists mix two of these primary colors, they can produce new colors called secondary colors.

COLOR MIXING

Artists can create custom shades by mixing different amounts of colors. By adjusting the quantity of each color, they can make a shade lighter, darker, or change its tone. Math helps with this process because artists often use ratios or percentages to measure the right amount of each color.

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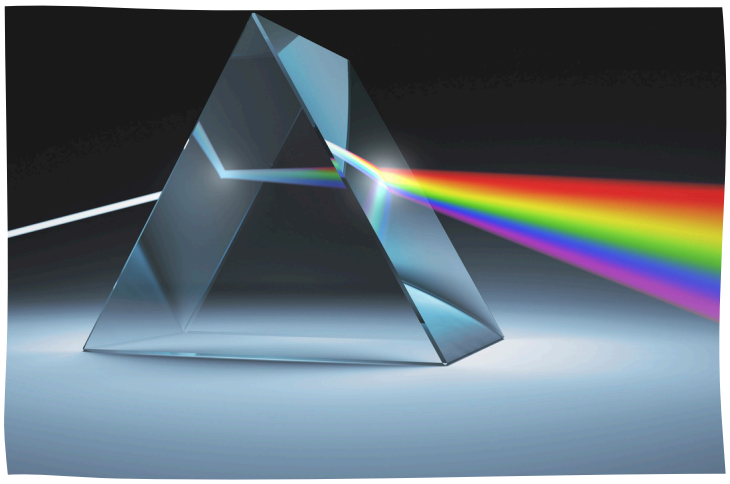
STEAM Research Recap



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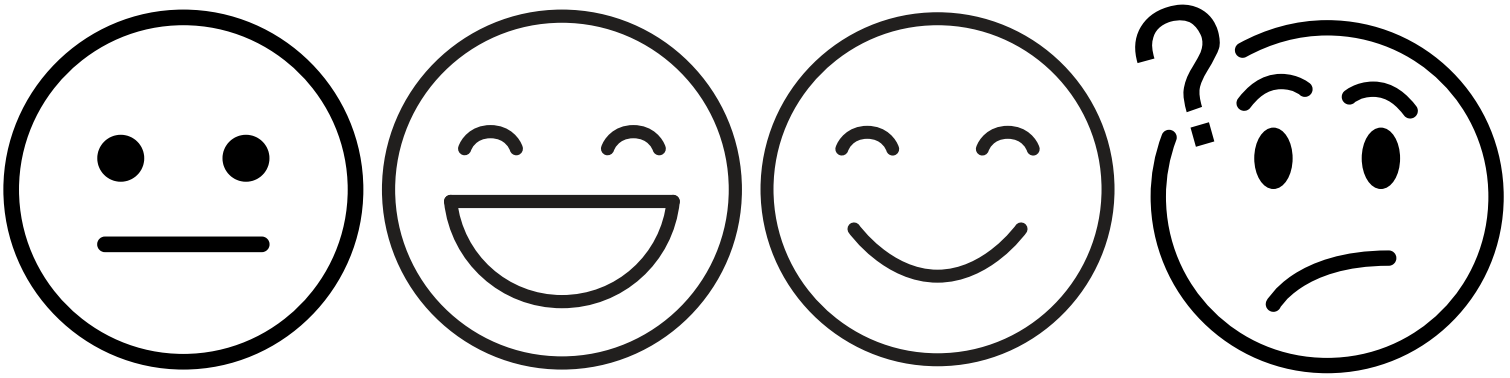
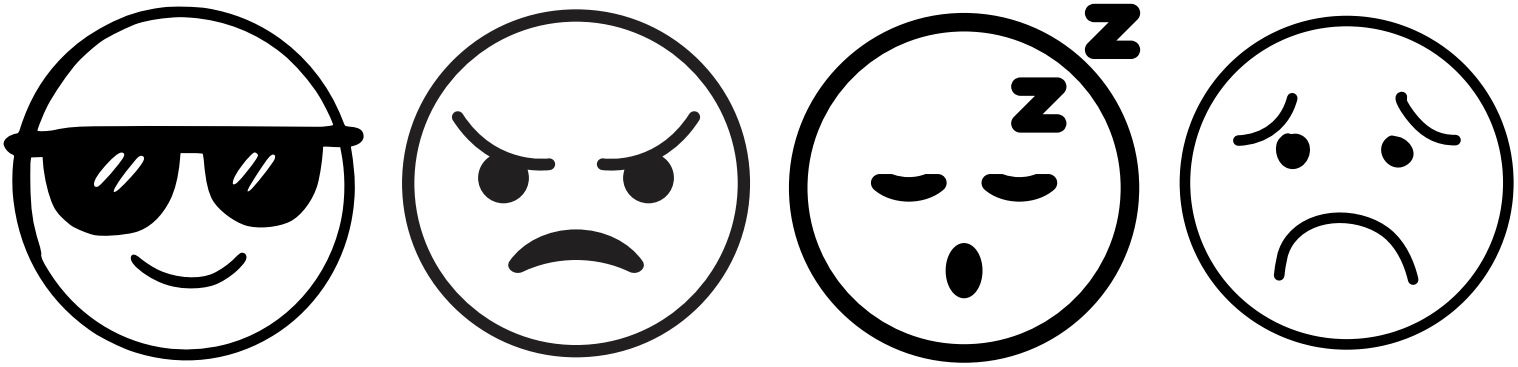
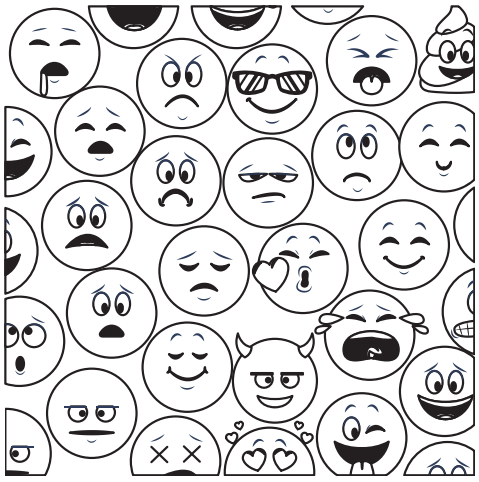
Emotions Resource Page







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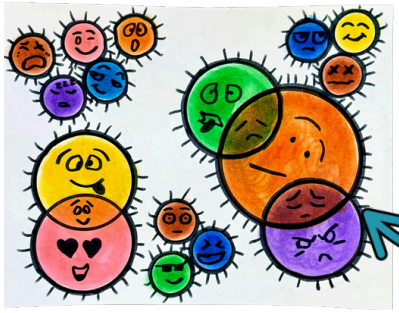
Art Student Examples

Met the Criteria

Clear emotions assigned to each color. The detailed background enhances the overall design without drawing attention away from the colors.

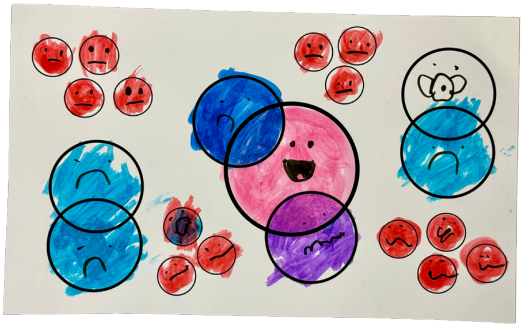


Details added give the piece a fun tone.

Detailed background with abundant patterning adds dimension without distracting from the circles being the focus.

Did Not Meet the Criteria

Bright background and effective large circles. The small circles did not get fully filled or emotions added.



The circles should be filled with different colors to produce new colors where they overlap.

Used the circles as a way to make different images. Super creative but did not show mastery of color mixing or emotion identification.

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