

# Student-Centered Learning with Jamboard

## Full Course Content - Middle School



### Overview

This document contains the full course content for the [Student Centered Learning with Jamboard program, which is hosted on Workbench](#). While we strongly recommend using Workbench to deliver this content to students, we also recognize that some educators might prefer to access the content in this format.

**Note:** the content in this .pdf is slightly different than that found on Workbench. The examples in this .pdf have been changed throughout to reflect Middle School-specific content.

To make an editable copy of this document, click [HERE](#).

[Click here for a doc that outlines this entire program on Workbench](#), including links to every project. There are also links throughout this document that will take you to the content on Workbench.

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### 1 - Introduction for Teachers

1-2 Hours

7 to 12+

**Supplies:** This program is designed to be facilitated using the Jamboard kiosk and accompanying app. While it is preferable to have a physical Jamboard kiosk in your classroom, this program can also be adapted to work with only the Jamboard app on student's devices. Most of the activities in this program are designed for each student to have access to a touchscreen device with the Jamboard app installed. Activities can be modified for students without touchscreen devices by using the web editor version of Jamboard, or devices could be shared although these experiences are not ideal. For more details on Jamboard, technical requirements for the app, and G Suite Admin Panel settings, visit the Jamboard help center.

### Description

Jamboard and the Jamboard App are powerful tools that can transform teaching and learning to build student's communication, critical thinking, creativity and collaboration skills. In these interactive lessons, students will work together to solve a driving question that connects to your learning goals and standards.

The program is divided into five projects, each containing several lessons. This first project is meant to be used by teachers only. The following four projects will be assigned to students to complete.

By the end of this teacher-facing project, you will:

KNOW:

- The basic functions of Jamboard

UNDERSTAND:

- That you can build student competencies while also covering important content standards to create an engaging learning experience for students.
- That student-centered learning starts with a driving question that is rooted in the real world.

DO:

- Brainstorm ideas for how you might leverage Jamboard to build your student's critical thinking, creativity, collaboration and communication.
- Use the Jamboard to determine learning goals.
- Create a driving question to launch your students into inquiry.

### Preparation: Why Student-Centered Learning?

This program is designed to help educators launch a student-centered project in your classroom. You will develop a driving question to pose to students, and consider how you might leverage Jamboard to facilitate the experience.

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[Click here for a doc that outlines this entire program](#), including links to every project.

### VIDEO

#### **Assessment**

What is one challenge that might prevent you from using a student-centered approach in your classroom? What is one idea you have for overcoming that challenge?

#### **Preparation: Get Started with Jamboard**

Jamboard is a new tool that encourages collaboration, critical thinking, communication and creativity. Watch this short video to learn about how educators from both K12 and higher education are using Jamboard to transform teaching and learning in their schools.

If you are new to Jamboard, start by visiting the Google for Education Teacher Center and review the First Day of Jamboard resources. Here, you'll find videos with tips and more specific instructions on how to use Jamboard.

### VIDEO

#### **INSTRUCTOR TIP:**

Jamboard is part of G Suite for Education's core services, so any teacher or student can access Jamboard via the app or web. However, you might need your G Suite Administrator to turn on Jamboard access in the admin panel.

Once access is turned on, you can access Jamboard through the Jamboard kiosk, the Jamboard App on any iOS or Android touch-screen device (including Android enabled Chromebooks), or through your Chrome browser at [jamboard.google.com](https://jamboard.google.com)

Jamboard files live in your Google Drive just like any other Google Doc, Slides, or other files. You can find them, share them, move them into different folders, and even assign them to students using Google Classroom.

#### **Preparation: Practice Using Jamboard**

Now that you know a little bit about Jamboard, let's give it a try!

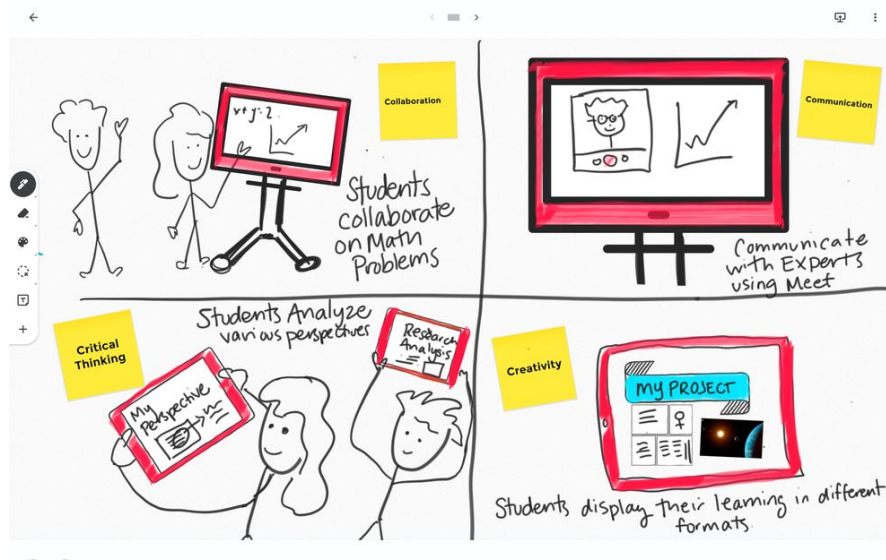
1. Create a new jam either in the Jamboard app, or on a Jamboard kiosk. If you need help starting a jam, consult the [Jamboard Help Center](#) for instructions.
2. In your new jam, divide the first frame into four quadrants. Use four sticky notes to label each quadrant: collaboration, communication, critical thinking and creativity.
3. In each quadrant, draw one idea for how you might use Jamboard to build these four competencies in your students.
4. Write down any ideas that come to mind. If you're stuck, check out the Google for Education Teacher Center [First Day of Jamboard](#) resource and scroll down to the Teachers Lounge to see how other educators are using Jamboard.
5. When you're done, use the Google Drive Upload function below to find the Jamboard file in your Drive and upload it. This will be similar to the process that your students will

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use to submit Jamboard files as they work through the student-facing lessons of this program.



### INSTRUCTOR TIP

Don't be afraid to just jump in and start using the Jamboard and/or the Jamboard app. Jamboard is highly intuitive, so think about your first experiences with Jamboard as play!

If you're stuck, there are how-to videos built right into the Jamboard and the Jamboard app. Simply click on Menu then tap Help, and then tap a video to watch it.

### Preparation: Start with Standards

Before you can launch an inquiry with students, you'll need to create a driving question that is connected to your learning goals.

#### Instructions

1. Open a new Jam and divide the frame into three columns. Label each column with the titles: know, understand and do.
2. Then, open the document that contains your learning goals, standards or expectations for the course you are teaching.
3. Take your learning goals/standards and divide them into the three categories on your jam:
  - **KNOW:** What facts, vocabulary, definitions, people, places, dates, terms, etc will students know by the end of this learning experience?
  - **UNDERSTAND:** What big ideas, concepts, generalizations, etc. do you want students to understand by the end of this learning experience?
  - **DO:** What skills, behaviours, outcomes do you want students to be able to do by the end of this learning experience

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In the example below, we have used the [NY State Common Core Social Studies Framework K-8](#) and the Common Core [English Language Arts Standards » History/Social Studies » Grades 6-8](#) to group the learning outcomes into the categories of know, understand, and do.

Use Jamboard to sort your learning goals into these three categories, and upload your Jamboard file below.



### INSTRUCTOR TIP:

For more examples of categorised learning goals from different subjects, check out this [document](#), that includes examples from math, science, geography, language arts, and foreign languages.

### Preparation: Create Driving Question

In this activity, you'll find a challenge or opportunity from beyond the classroom walls that connects to your learning goals, and then create a driving question to launch your students into inquiry.

### Instructions:

1. Open your jam file from the last activity. Review your goals, and create a new frame in the jam.
2. Divide this new frame into half and label each column with: Issues/Events and Questions.

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3. Under the Issues/Events title, record issues, topics, events, or opportunities from the real world that connect back to your learning goals.
4. In the Questions column, write questions that connect to both your learning goals and your issues/events.

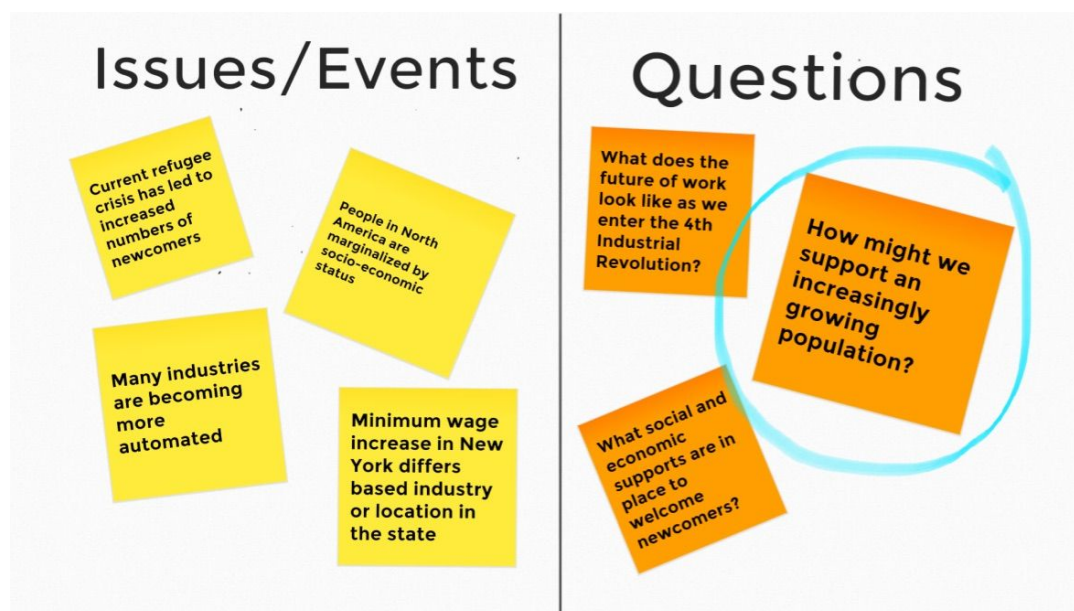
### Tips for writing good questions:

- Use open-ended questions that don't have a single correct answer.
- The goal is for this one question to lead to other questions.
- Try starting your question with "How might we..." This is a great phrase to not only spark inquiry, but also action.
- Answering your question should require students to think critically and creatively, and support their opinions and ideas with evidence. They should not be able to look up an answer to the question.

In the image below, you will see the issues and questions that we developed from the 8th Grade Social Studies example.

You will notice that the questions are all higher-order questions that require students to make comparisons between the historical events and present-day situations. Connecting to present-day issues shows students the relevance of the topic they are studying and how it affects their world.

After you have several questions, you might want to choose one to launch your inquiry!



### INSTRUCTOR TIP:

For more examples and ideas for questions from other subject such as math, English, Science, Geography and Visual Art, click [here](#).



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You might also choose to develop these questions and complete this process with the students. Consider starting your project by showing students your learning goals, and asking them to develop issues/topics and questions that relate to your goals.

Similarly, if you are teaching a skills-driven course such as English or Foreign Languages, you might allow students to choose any challenge that is meaningful for them, and focus on applying their subject-related skills in solving that problem. This is a great way to increase student-buy in by giving them ownership and autonomy in their learning.

### Launch: Introduce The Challenge to Students

Now that you have developed an inquiry question, it's time to introduce the project to students. Before you give students their first project in workbench, we recommend completing this teacher-directed lesson with students to set up the project.

[Click here to view the lesson plan and resources.](#)

#### INSTRUCTOR TIP:

Before students can jump into the next project, which focuses on working collaboratively to develop ideas to solve the challenge, they will need to learn more about the topic. This could be a general introduction lesson, or a series of more in-depth lessons to give them a baseline understanding of facts, vocabulary, events, concepts, etc. There will be opportunities to uncover some of this content as they complete the lessons, but we recommend getting the project started using resources and lessons that are related to your specific subject area and topic.

This program is designed to scaffold students through the inquiry process using Jamboard and structured activities, but it does not contain subject-specific content. However, you might find other great resources on the [Workbench](#) platform for teaching your subject-specific content.

The first activity for students is [2.0 - What is Collaboration?](#)

### 2.0 - What is Collaboration?

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

#### Description

Teamwork isn't easy, but it's essential for success in life, and it's also a skill that can be practised. By the end of this project, you will know your own strengths and opportunities for growth in collaborating with others.

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### Introduction

Watch the video below and answer the question.

### [VIDEO](#)

#### INSTRUCTOR TIP:

Note: In order for students to successfully participate in the next activities, it is expected that they have done some work to learn baseline information about the question. Before launching this section of the project, you should have students complete some activities in order to develop some prior knowledge of your content. For example, history students might read some articles or watch videos on the causes and consequences of WWII.

If you have not yet completed the first project of this series, [Introduction for Teachers](#), please go back and review Project 1 for context. That project will set you up as the instructor to run Projects 2-5 of this Student-Centered Learning with Jamboard program.

#### ASSESSMENT

How would you define effective teamwork?

### What is effective collaboration?

1. This activity will be done individually.
2. After watching the video, open a new Jamboard file and in the first frame add three sticky notes as shown below. On one sticky note write "What does effective collaboration look like?" On the next, write "What does effective collaboration sound like?" and on the final note write "What does effective collaboration feel like?"
3. Then, record your ideas under those headings about what makes effective collaboration. You can write your ideas on sticky notes, or use images and even try the auto draw feature to explain collaboration.





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### INSTRUCTOR TIP:

Your students will each be completing their own individual Jamboard files for this activity, so it is best for them to use the Jamboard app on their own devices, or [jamboard.google.com](https://jamboard.google.com) to edit.

### What is my collaboration style?

1. Add a new frame to your jam from the last step by clicking on the arrow at the top of the screen
2. In the next frame, answer the questions: What is one strength that you have when it comes to working on a team? What is one area that you could improve on in relation to collaborating with others?
3. Submit your Jamboard file using the box below.

### INSTRUCTOR TIP:

You might want to review student answers to the second question and use that to inform your groupings for the project to make balanced teams.

The next project in this series is [2.1 Blossom of Ideas](#).

## 2.1 - Blossom of Ideas

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

Many brains are always better than one when it comes to solving a problem. In this project, you will work together to build initial ideas for answering a driving question.

### Prepare Your Team

Effective teams build each other up, rather than tearing down each other's ideas. In this activity, your goal is to come up with as many ideas as you possibly can for how you might develop the best possible answer to your driving question.

Here's how the game works:

1. In your team, create a new Jamboard file called "Blossom of Ideas" and ensure that it is shared with all team members.
2. Assign one person on your team to be the time keeper who will set a timer for each round. Stick to the timer and keep coming up with ideas until the very last second!
3. Brainstorming for each round should be done silently, with each team member adding sticky notes with their ideas to the same frame in the jam.
4. Each round uses a different color of sticky note.
5. Play the rounds as follows:

### Round 1:

color: Pink Sticky Notes

Time: 3 minutes

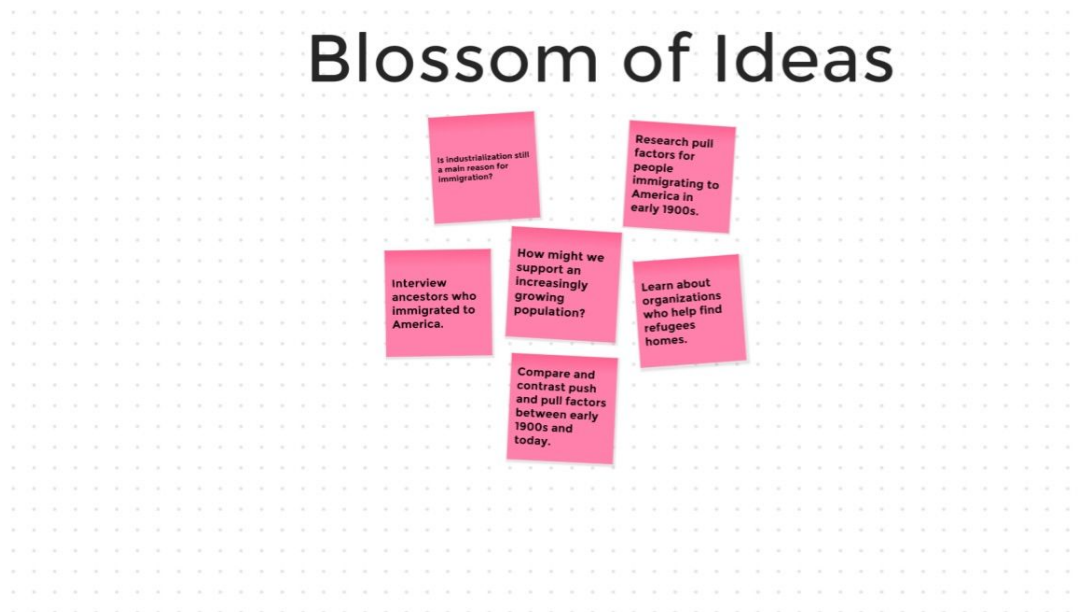
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- Your goal in this round is to come up with as many ideas as possible for how you are going to answer your driving question. In order to answer that driving question, you're going to have to learn a lot about the topic, so part of this brainstorming is coming up with ideas for how you will learn about the topic.
- Don't worry about the actual answer to the question right now - we will get to that later!
- Be specific about your ideas - don't write down things like "research on the internet." Instead, write down things like "research the pull factors for people immigrating to America in the early 1900s."
- Each person will write down their own ideas - as many as you can think of! No talking during this round. Put one idea on each sticky note.

At the end of the round, read through all of the ideas that have been placed on the Jamboard. If more than one person put down the same idea, delete one by swiping it down to the bottom of the frame. Then, organize all of your ideas around the framing question in the middle like this:



### Round 2

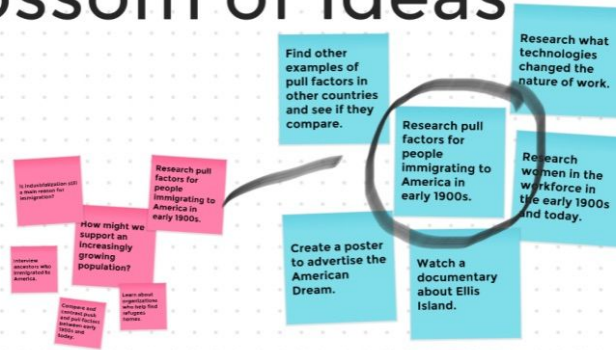
Time: 3 minutes

Sticky Note Color: Blue

- As a team, choose one idea from round 1 that you find interesting. Copy this sticky note and change the color to blue.
- You will now brainstorm ideas related to that topic.
- Each person will write down their own ideas - no talking! One idea per sticky note.

After three minutes is up, discuss the new ideas, and organize them, like in the example below.

## Blossom of Ideas



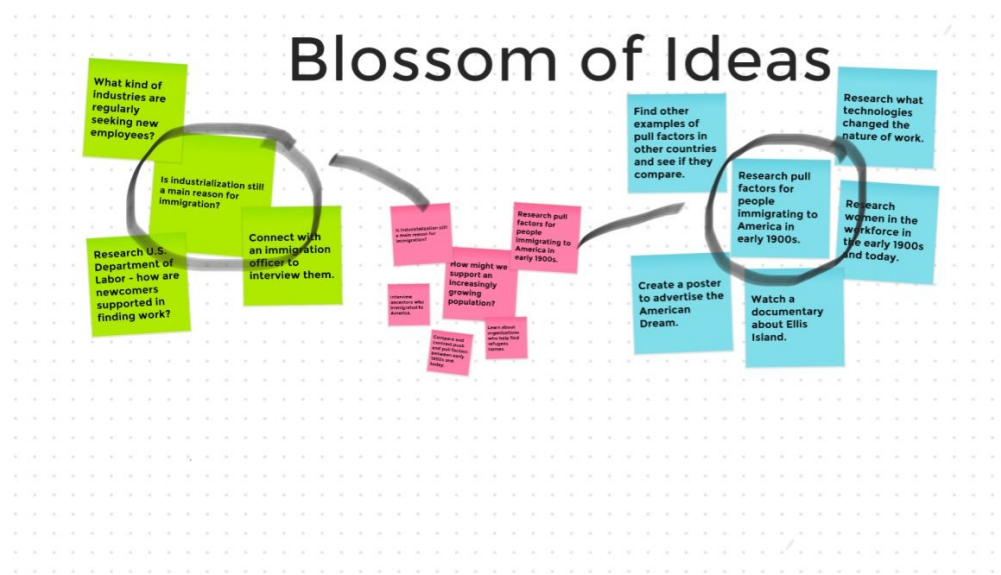
### Round 3

Time: 3 minutes

Sticky Note color: Green

- In this round, you will choose a different idea from round 1 of brainstorming and add sticky notes that relate to the idea.
- Choose one sticky note from round 1, copy it, and change the color to green.
- Brainstorm more ideas using green sticky notes. You can either add in questions, information that you need to uncover or ways of sharing what you learn.
- This is still an individual activity! Everyone should try to create as many ideas on sticky notes as possible.

After three minutes, stop and discuss the ideas. Rearrange the sticky notes so that they form a new blossom around starting idea.



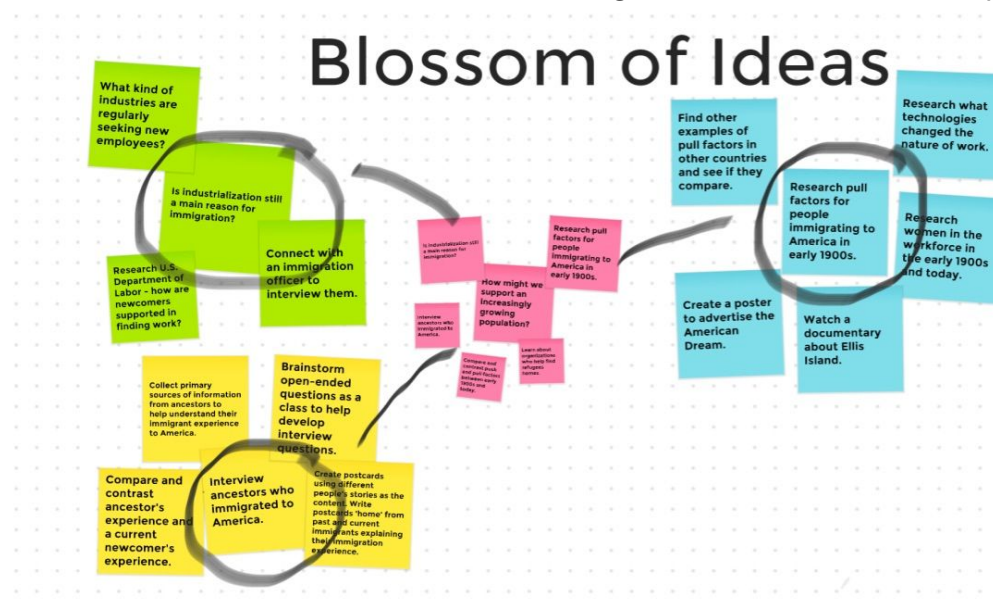
### Round 4

Time: 3 minutes

Sticky note color: Yellow

- You know the drill! You have three minutes to continue to build on your blossom of ideas.
- Your yellow sticky notes will relate to one of the ideas uncovered in the first round (pink sticky notes). Continue to add on to each others ideas, as quickly as possible.
- Still, no talking during the brainstorm!

After three minutes, discuss ideas and rearrange into a blossom. Delete any duplicate ideas.



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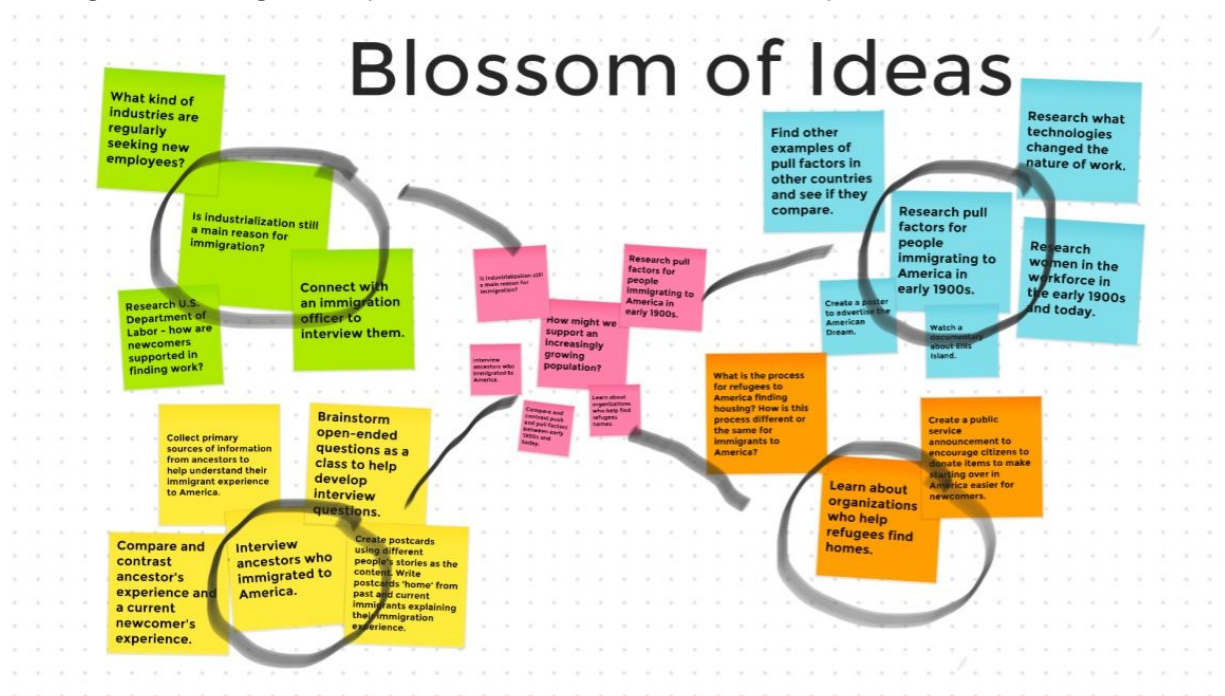
### Round 5

Time: 3 minutes

Sticky note color: Orange

- This is your final round for ideas.
- Using orange sticky notes, brainstorm new ideas or questions that build off of one of the ideas from the pink sticky note blossom.
- You are still silently brainstorming.

After three minutes, discuss the ideas that you have added and ensure they still link back to the original How Might We question that is in the center of the pink blossom.



### Wrap Up

As you can see from this activity, many brains working together are always more powerful than just one brain working alone. That's the great thing about collaboration - it's like pooling your brain power together to create a super brain!

### INSTRUCTOR TIP:

*\*\*Note: We have provided an example here that relates to the How Might We question we created for 8th Grade Social Studies. It is important that you explain to students that this is just an example and they should be developing ideas for the subject you are learning about.*

### RE-GROUPING STUDENTS

This is a good opportunity to re-group students based on similar interest. You could collect all of the themes and that came up in this activity and send out a Google Form for students to rank the topics that they are most interested in and form groups based on that information.



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In the next activity, [2.2 - Build Your Team](#), students will be forming teams that they will stick with for the rest of the project.

### 2.2 - Build Your Team!

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

#### Description

Building a team isn't as simple as being assigned to a group. By the end of this project, you will develop a sense of trust in your team, co-create goals and objectives, and establish norms.

#### Goals and Objectives

1. Have one person on your team create a new Jamboard file and call it "Team Building - Team Name"
2. Share it with the other team members. You can share using the code, or by entering their email addresses. You will complete this activity as a team.
3. Divide the first frame in half. Label one side Goals and the other side Objectives.
4. Goals are meant to be big, aspirational accomplishments. Consider your driving question, and think about what your ideal goal would be for solving this challenge. Write down at least two goals for your group.
5. Objectives are more specific, tangible results. Considering your goals, what exactly can you do to achieve each goal?

For example, if you were studying the urbanization of America in Social Studies and your driving question is 'How might we support an increasingly growing population?', your goals and outcomes may look like this:

Goals	Outcomes
<ul style="list-style-type: none"><li>-to help new immigrants and refugees feel at home in America</li><li>-to help new immigrants and refugees find homes and jobs upon arrival</li></ul>	<ul style="list-style-type: none"><li>-host a town hall meeting with local residents to raise awareness about items and services newcomers need upon arrival in the country</li></ul>



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### INSTRUCTOR TIP:

Prior to starting this activity, students should complete project [2.1 - Towering Ideas](#).

We recommend coming back to these goals throughout the project and updating them as necessary, or using them to reorient groups in the right direction.

### Success Criteria

In order to help your team create a shared vision of what success will look like on this project, the next step is to create success criteria.

1. Create a new frame in your team jam from the last activity.
2. Write your success criteria using “We can...” statements. For the social studies project example, our success criteria are shown below.



### INSTRUCTOR TIP:

This is a great opportunity to talk about assessment with students. After students create their success criteria, you can have a class conversation about measuring success, and decide on success criteria for the project as a whole. Then, use this to create a rubric that you can use for formative feedback and summative assessment.

### Establish Expectations

The final step in setting the stage for a positive collaborative experience is to establish team expectations. Expectations are standards that are agreed upon as the rules for working together.

1. Create a third frame in your Jamboard file.

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2. Write the title "Group Expectations" at the top of the frame.
3. Have a discussion as a team: What expectations do you have for working together? Record your ideas on sticky notes and then have each team member sign their name in agreement with the norms. An example is shown below.

When you have completed this step of the project, upload your Jamboard file for your team using the box below.



#### INSTRUCTOR TIP:

The next project in this series is [2.3 - Meet with Experts](#).

### 2.3 - Meet with Experts

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

#### Description

Jamboard allows us to collaborate with real experts, right from our classroom. In this project, you will talk to and collaborate in real time with a guest speaker to learn more about your topic.

#### Collaborate with Experts

Your teacher is going to set up a meeting with an expert in your subject area. During the meeting, you are going to be using Jamboard to collaborate with the expert in real time.

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### INSTRUCTOR TIP:

**Prior to starting this project, students should complete [2.2 - Build Your Team](#).**

In order for this activity to be successful, preparations must be made in advance to arrange for an expert on your subject matter to join your class. Keep in mind that an “expert” does not need to be someone with a Ph.D. An expert could be a local community member, college students, even parents of students. For example, if you are studying social studies, an expert could be someone who works for your local municipality, an urban planner, or a college-level geography student.

If you are looking for ways to connect with experts in your area, there are several places where you could start. Here are some tips:

- Try contacting your municipal offices, such as your local museum, cultural institution or public works.
- Leverage your parent or school alumni organizations to find people who are already connected to your school
- Ask colleagues and friends who might have spouses or other friends who work in the field that you are studying

After you have identified your expert for your Hangouts Meet, we recommend scheduling a call in advance to walk your guest speaker through the main features of Jamboard. They will need to either download the Jamboard app on their device, or they can use the web-based Jamboard editor found at [jamboard.google.com](https://jamboard.google.com). Note that if they use the web-based Jamboard editor they will need to logon to the Hangout Meet from [meet.google.com](https://meet.google.com) or use the link to the meet in the calendar event that you share with them. For full instructions on how to use the Hangout Meet integration on Jamboard, click [here](#).

### Writing Questions

1. Open the Jamboard file that your teacher has shared with you called Questions for the Expert.
2. Each team will have their own frame within this jam. Write your team name at the top of the frame.
3. Your teacher will walk you through an activity designed to help you generate high quality questions.



#### INSTRUCTOR TIP:

Activity Preparation:

1. Create a Jamboard file called Questions for the Expert and share with all of the students in your class (if you are using Classroom, share so that all students have the ability to edit the same file).
2. Use [this slide deck](#) to scaffold the question-writing process (speaker's notes provided in the slides).
3. Have students join the Questions for the Expert jam and start to develop questions, with each team working in their own frame within the jam.

#### Refining Questions

1. Narrow your list of questions to 3-5 questions that you have for the expert.
2. Each team will have the opportunity to ask at least one question to the expert, so you should rank your questions in order of priority.

#### Meet With Your Expert

Today, you will meet with your expert!

Your expert will be collaborating with you using Jamboard, so they will see all of the questions that you created in the Questions for the Expert Jamboard file. You can also pull in clips from the web or other images that you would like your expert to discuss with you.

At the end of the discussion with the expert, answer the question below as an exit ticket from class.

#### INSTRUCTOR TIP:

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On the day of the meeting with your expert, ensure that students are in the Questions for the Expert jam, and also invite your expert to collaborate on this jam. The jam will serve as both the notes from the conversation as well as a tool for the students and the expert to work together to share ideas during the call.

Encourage your guest speaker to interact with the Jamboard during the call, if they feel comfortable doing so. They will be able to pull in content from the web, from Google Drive, or simply write and draw in the jam. This will make the process more collaborative and visual for students.

After the meeting, have students reflect using the prompt provided below.

**After this activity, your students can move on to [3.0 - What is Critical Thinking?](#)**

### ASSESSMENT

Three things that I learned in today's call... Two facts that will help me move forward with solving our driving question... One question I still have...

### 3.0 - What is Critical Thinking?

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

#### Description

What does it mean to be a critical thinker? And how might we develop this skill? By the end of this project you will understand that we all have unconscious bias, which can affect the way we see the world.

#### What is Critical Thinking?

In today's world where we are constantly consuming and producing media, making choices, sorting through various debates and arguments, and working in cooperation with others, critical thinking is more important than ever.

Watch this video and answer the question below.

#### VIDEO

#### INSTRUCTOR TIP:

This project is designed to be started after the completion of modules 1 and 2 in the [Student-Centered Learning with Jamboard program](#).

#### ASSESSMENT:

Describe a time when you had to think critically about something. Explain why.



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### What is My Perspective?

In this activity, we'll spend time thinking about our own experiences in relation to our driving question and also consider the bias in other information.

1. Start by opening your own Jamboard file on the app. Title it "My Perspective -- Your Name". You won't be sharing this with any of your peers.
2. Divide the first frame into three columns, and label them: My identity and beliefs; My previous understanding of the problem; and So what?
3. In the first column, under "My identity and beliefs", jot down some words that you would use to describe yourself. Consider what is important to you, and what makes you, you.

### INSTRUCTOR TIP:

You should introduce this activity with a classroom discussion about bias. Introduce students to the concept of bias and how it might influence their decision making, interactions with other people, and how they view the world.

Help your students understand that whenever they are solving a problem, they should consider how their bias might affect their decisions.

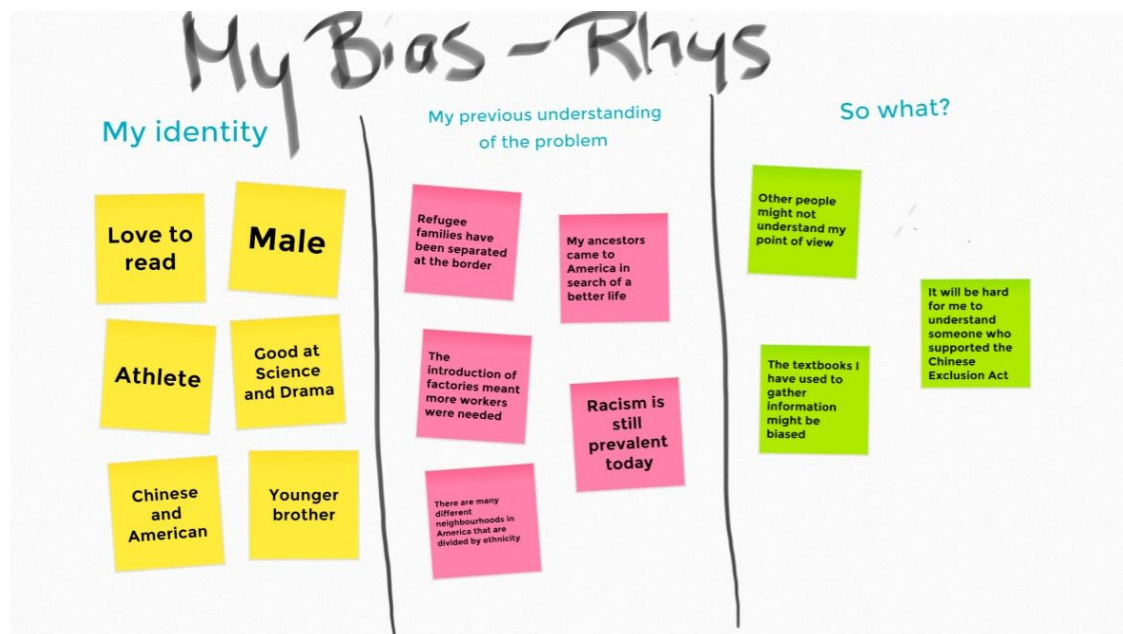
### What Do I Already Know?

1. In the second column, under "My previous understanding of the problem" write down anything that you already know about your driving question topic.
2. Include pre-existing ideas or experiences that might change the way you think about your driving question.
3. Include both things you have learned in school, and things that you have learned from other places, like videos, from family, etc.

### How Will My Perspective Affect My Work?

1. Finally, in the column labeled "So what?" consider how your prior knowledge, identity and beliefs could influence your perspective on the driving question topic.





**INSTRUCTOR TIP:**

The next step in this program is [3.1 - Look Again](#).

**ASSESSMENT**

Based on this reflection, what do you need to consider about how your perspective might be different than other students in your class? Or other people in the real world that you interact with? What are some biases that you might bring to the challenge topic?

### 3.1 - Look Again

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

**Description**

An important skill to develop critical thinking is the ability to deconstruct the images to decipher meaning, recognize bias, and understand intent. In this activity, we'll use Jamboard to analyze images and develop a better understanding of our driving question.

**What's In An Image?**

In 2017 people uploaded an average of [1.8 billion digital images](#) every single day. Today, media literacy is as important as reading text.

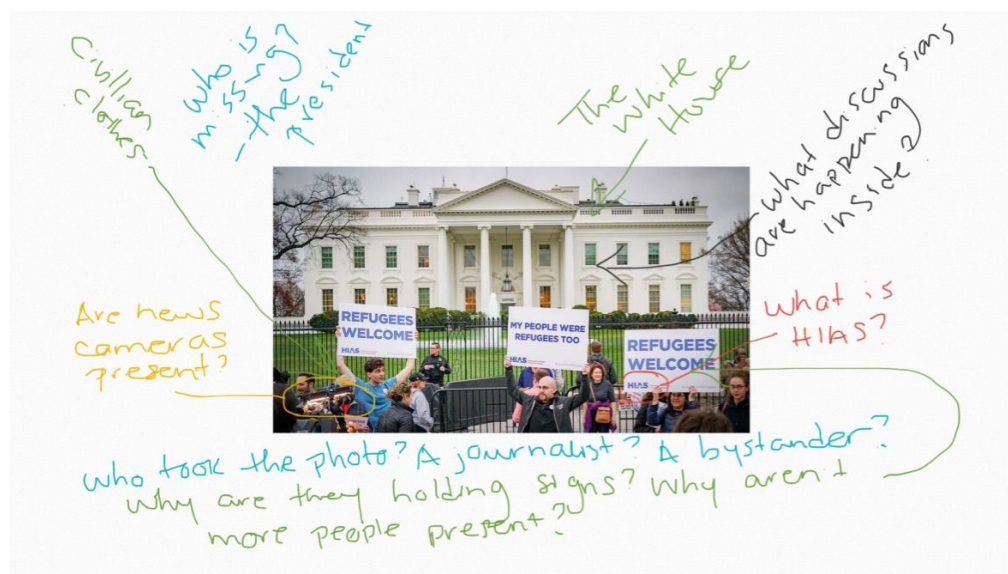
Your teacher has shared a Jamboard file with your team. In this jam, you'll find an image. Your task is to work together as a team to analyze and annotate the image by considering these questions:

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- What is happening in this image? What event or information is being portrayed?
- Who created this image? Look for and circle clues in the image that might help you understand what person or group of people made this image.
- Why did they create it? Hypothesize why someone would make this image. What message were they trying to convey?
- What bias might be inherent in this image? Consider who you think created the image, and what was their intent.
- What has the author of the image chosen to include and exclude? How might that affect the message?

As you discuss each of these questions, use different colors to circle clues or call out specific information.



### INSTRUCTOR TIP:

Prior to starting this activity, students should complete [3.0 - What is Critical Thinking?](#)

To prepare for this activity:

- Find an image that relates to your driving question. The image could be a photograph, a chart, an illustration, or a diagram. Ideally, you will find an image that portrays a specific perspective and includes hints as to when/where/why it was created.
- Drop the image into a Jamboard file using the Google Drive upload function.
- Share the Jamboard with each team, giving each team their own copy of the Jamboard. You can use Google Classroom to do this, or create one jam in Jamboard and duplicate the jam to make a copy for each team and share directly from the Jamboard app or from Google Drive.
- Introduce the activity by discussing with students the importance of recognizing bias in images and developing the ability to critically read images, just like we do text.
- Give each team approximately 15 minutes to analyze their image.

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### Compare Notes

After you have analyzed your image, partner up with someone from another team. Compare and contrast your team's notes. Did different teams decipher the image differently? Answer the reflection question below.

#### INSTRUCTOR TIP:

- Instruct students to partner up with someone from another group to compare notes for 5-10 minutes.
- Wrap up the class by having a discussion about the image. Reveal the real author of the image, the source of the image. Then have a class discussion about the intent of the image and how it might reveal bias.
- Ask students what new questions they have about the driving question after completing this activity. Add these questions to the "All the Questions" Jamboard file from [the lesson in Activity 1](#).
- The Jamboard files should already be shared with you, so you can review student work and provide formative assessment.

The next project in this program is [3.2 - Flip the Facts](#).

### ASSESSMENT

How did your interpretation of the image differ from your peers? How was it similar? Why is it always important to think critically about images that we see? What did you learn about our driving question from this activity? What new questions do you have?

## 3.2 - Flip the Facts

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

Critical thinkers identify, analyse and solve problems systematically, using evidence and reason to back up their ideas. In this activity, you will find sources of information about your issue or topic, and then work together to debate the merits and arguments of each source.

### Read Your Source

Instructions:

1. For this activity, you will work in pairs. Each partner has been provided a different source of information that makes a specific argument about your driving question. The arguments in your article and your partner's article might not share the same point of view.
2. Read the source that you have been provided by your teacher

#### INSTRUCTOR TIP:

This activity should be completed after students have finished [3.1 - Look Again](#).

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For this activity, you will need to find two sources of information about your driving question, each with differing opinions or points of view on the topic.

These sources could be scholarly articles or popular sources. They could be reliable, or they could be questionable. The goal of the activity is for students to determine which article they agree with most, and support that decision with facts and evidence. It will also encourage them to identify reliable sources, and to understand that facts can be interpreted differently to support differing opinions.

### Annotate Your Source

1. Create a new jam that is shared with both you and your partner. Name the jam "Flip the Facts"
2. Each partner will work on a separate frame.
3. On the Jamboard app, use the insert from Google Drive feature to pull in screen shots of the source that you read.
4. Using the pen tool, annotate your source, indicating:
  - What is the main argument/thesis of the source you read
  - Where is this source from? Is it a reliable source?
  - Circle specific evidence that the authors uses to support their argument
  - Determine if this evidence is valid.
  - For the purposes of this activity, you are going to pretend that you agree with the author's argument, even if you really don't. Highlight the points in the source that you think are the most convincing.

A screenshot of a Jamboard session showing a document from the New American Economy Research Fund. The document title is "From Struggle to Resilience: The Economic Impact of Refugees in America" with a date of June 19, 2017. The first paragraph states that refugees earn more than \$77 billion in household income and paid almost \$21 billion in taxes in 2015. Handwritten annotations in green and blue ink are present: "Source: New American Economy" at the top right, "earned substantial household income &amp; paid state taxes" in green with an arrow pointing to the \$77 billion figure, and "refugees in USA make significant economic contributions" in blue with an arrow pointing to the paragraph. The text "of a small and often misunderstood segment of the foreign-born population" is underlined in the original image.

### INSTRUCTOR TIP:

Share the sources you have chosen with students using Google Drive (or Google Classroom) so they can use the Drive integration on Jamboard to pull in the files and make annotations.

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You should assign each partner one of the two sources.

You should also create a driving question for the debate. For example, “The number of refugees seeking asylum in USA will have a negative impact on the economy. Share this question with the students when you introduce the activity.

### Debate - Round 1

After you and your partner have both annotated your articles, you are going to have a short debate. You will take the stance of arguing in favour of the opinion presented in your source. Your partner will be taking the stance of their article.

1. Determine who is partner 1 and who is partner 2.
2. Set a three minute timer. Partner 1 will have three minutes to make their case for why the point of view in their article is valid. Use the notes from your annotated article to highlight your points.

### INSTRUCTOR TIP:

You might want to be the time keeper for this activity to ensure that everyone stays on track.

### Debate - Round 2

1. Set the three minute timer again. Now partner 2 will have three minutes to make their case, in favour of the article that they read.

### Debate - Round 3

1. Set a two minute timer. Each partner will have two minutes to rebut -- or argue against -- their partners facts. Again, use points in your source to back up your opinions.
2. When you are done, upload your Jamboard file below.

### Reflect

Discuss -- which point of view do you really agree with most? Why?

### INSTRUCTOR TIP:

Students can submit their Jamboard files for formative assessment, in addition to answering the question below.

The next activity in this program is [3.3 - Question Everything](#).

### ASSESSMENT

Which argument were you in agreement with most at the end of this activity? Why? How were facts and evidence influential in making your decision?

## 3.3 - Question Everything

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)



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### Description

Critical thinkers tend to ask a lot of questions. This helps us gain a better understanding of the topic we're learning about. In this activity, you will use Jamboard to play a fun game that will require you to become question masters. You will also need to think about answering questions from different perspectives or points-of-view. This is a team challenge, so have fun!

### Preparation

1. Your team will pair up with another team. Decide who will be team 1 and who will be team 2.
2. Each team will create their own jam.
3. Name the jam "Question Everything - Your Team Name". Ensure that all members of your team have access to the Jam.

### INSTRUCTOR TIP:

**This activity should be completed after students have finished [3.2 - Flip the Facts](#)**

You can set this activity up for students by discussing how critical thinkers analyze problems based on evidence. But, the quality of that evidence is important. Also, evidence can be interpreted in different ways, so it's always important to question evidence. The more questions we ask, the more we will be able to understand our issue!

If you have not already helped your students to learn about sourcing information on the internet, we recommend you work with students to build their skills in searching and in identifying reliable sources prior to this activity.

### Round 1

1. Set a timer for 5 minutes.
2. Each team will have five minutes to write as many questions as possible in relation to your driving question that they would like the other team to try to answer. Work together on the Jamboard app to develop your questions. The questions should not be simple to answer - open ended questions that require an opinion will make the game more fun.
3. After 5 minutes of question writing, each team will choose ONE question that they would like to pose to the other team.
4. Tell your question to the other team.



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### INSTRUCTOR TIP:

This activity can be done on student's devices. If you have a Jamboard kiosk in your classroom, allow students to rotate through taking turns using the kiosk for each round.

### Round 2

1. Each team will start a new frame in the jam and write the question that they have been given by their opposing team at the top of the frame.
2. Set a 15 minute timer. Team members will work together to try and gather as much factual evidence as possible in response to the questions that the other team posed.
3. Use the internet search feature in Jamboard to pull snippets from the web that provide answers to the questions. Remember that you are looking for facts and evidence - not other people's opinions.
4. Note: Simply Googling the question is not an effective search strategy. Use keywords and your prior knowledge of the subject to answer the question.

# Student-Centered Learning with Jamboard

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**What are some of the main reasons for people immigrating to the US?**

**27 metropolitan areas with the largest number of immigrants in 2018**

PUSH	PULL
Persecution Violence War	Safety and Stability Freedom
Poor wages Lack of jobs	Higher wages Job prospects
Crop failure and famine Pollution Natural disaster	Food availability Better environment
Limited opportunities Lack of services Family separation	Family Reunification Better quality of life Availability of services

**Why make this perilous journey? Here, immigration experts explain that many Central American migrants are what's called forced migrants. They are escaping conflict, generalized violence and targeted persecution – not traveling by choice.**

**1. Record-High Homicide Rates**

"An increasing number of individuals are now arriving at the U.S. southwest border because of crime, violence and insecurity in Central America," says Jonathan Hiskey of Vanderbilt University.

Hiskey's research shows that pure fear drives many migrants to leave home.

With 60 murders per 100,000 people in 2017, El Salvador was the deadliest place in the world that

Immigration has long supported the growth and dynamism of the U.S. economy. Immigrants and refugees are entrepreneurs, job creators, taxpayers, and consumers.<sup>1</sup> They add trillions of dollars to the U.S. gross domestic product, or GDP, and their economic importance will only increase in the coming decades as America's largest generation—the baby boomers—retires en masse, spurring labor demand and placing an unprecedented burden on the social safety net.<sup>2</sup> Still, additional benefits to the U.S. economy and society more broadly could be obtained through legislative reforms designed to modernize the U.S. immigration system and provide unauthorized immigrants in the country today with a path to citizenship.<sup>3</sup>

### Round 3

1. Each team will now share their jam with the members of the opposite team so that both teams are collaborating on both jams.
2. Now, each team will have 5 minutes to present their evidence to the opposing team. Use the facts and information you have found to try to build an argument in response to the question you were given.

### Round 4

1. Set another 5 minute timer. Now, you will ask questions that relate to the evidence that the opposing team found in response to your original question. For example, "Is this a reliable source?" "How could this information be biased?" and "What else do we need to know about X?"

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**27 metropolitan areas with the largest number of immigrants in 2018**

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*Handwritten notes:*

- How are these people feeling after living in the US?
- What do we know about this?
- Have these factors changed over time?

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### Round 5

1. Both teams will now review Team 1's Jamboard file. As a whole group, review the new questions posed about the evidence. Choose one of these new questions that you find most interesting, and have a discussion about that question as a whole group.
2. Now switch and have both teams review Team 2's jam. As a whole group, review the new questions posed about the evidence. Choose one of these new questions that you find most interesting, and have a discussion about that question as a whole group.

### INSTRUCTOR TIP:

The next activity in this program is project [4.0 - What is Creativity?](#)

### ASSESSMENT:

How did you know if sources were reliable when you found them on the internet? Was it hard to find evidence to back up your answers? What have you learned about asking questions from this activity? What have you learned about your driving question from this activity?

## 4.0 - What is Creativity?

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

Creativity is not about being able to draw or play music or be artistic. Creativity is about ideas. In this project, we'll use Jamboard to do some fun activities that will stretch your creative muscles, and reflect on your own creative confidence.

### Preparation

Watch the video above, and answer the question below.

### [VIDEO](#)

### INSTRUCTOR TIP:

Prior to starting this activity, students should have completed the activities in modules 2 and 3 of the [Student-Centered Learning with Jamboard program](#).

### ASSESSMENT:

Can you think of a time when you were creative in solving a problem or inventing something new? What helped you to think creatively?

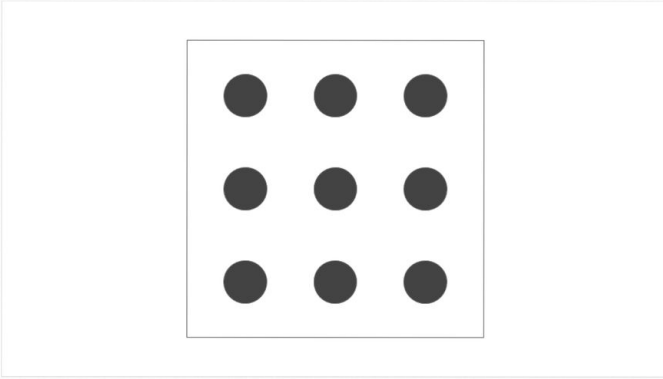
### Connect the Dots

1. Open the Jamboard file called "Creativity Introduction" that your teacher has shared with you.
2. In the jam, you will find that the first four or five frames have the same image on them. Assign each one of these frames to a member of your team.
3. You will start by working independently

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4. Your goal is to try to connect all nine dots with one continuous line, without lifting your pen from the screen. You cannot re-trace any lines, and you cannot go backwards. You can only draw four lines total.
5. After five minutes, if you cannot figure out the puzzle individually, work as a group.



### INSTRUCTOR TIP:

Use this [slide deck](#) to introduce the activity to students, and to facilitate the conversations after each exercise. (Speakers notes are in the deck)

### Preparation:

1. Create a Jamboard file for the students to use for the dot connecting activity.
2. Pull in slide 2 from the deck into the Jamboard file.
3. Copy this frame four or five times so that each team member will be able to work individually on their own frame.
4. Then, share the Jamboard file with students using Google Drive or Google Classroom. Ensure that each group has their own copy of jam template.

### Class discussion:

- Use the slide deck provided above to help structure the whole-class discussion after each activity.
- For the connecting the dots activity, highlight that in order to be successful, you had to “think outside the box.” Most people assume that their lines have to stay within the box, but actually they don’t.

### Think Divergently

1. Go back to the Jamboard file from the last step and add a new frame at the end.
2. Your goal is to work together as a team to come up with as many possible uses for a paperclip that you can think of.
3. Work together to put down ideas as quickly as you can. The team with the most ideas at the end of three minutes wins! There are no rules for what you can and can’t do with the paperclip!
4. After three minutes, discuss your ideas as a group and count how many different ideas you developed.



**INSTRUCTOR TIP:**

For the paperclip activity, point out that the teams that came up with the most ideas probably started by each coming up with their own ideas before coming together and sharing. Explain how many brains working together can come up with more creative ideas! Also, explain that in order to come up with many ideas for a paperclip, you have to think beyond what might be the more obvious or traditional ideas.

The next activity in this series is project [4.1 - Divergent Thinking](#).

**ASSESSMENT**

What is one way that you can improve your ability to think creatively?

**4.1 - Divergent Thinking**

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

**Description**

Divergent thinking is the ability to generate many possible ideas for any given question. It's not about finding the right answer, but rather considering all of the possibilities in a given situation. In this activity, we will practice divergent thinking to come up with ideas for our project.

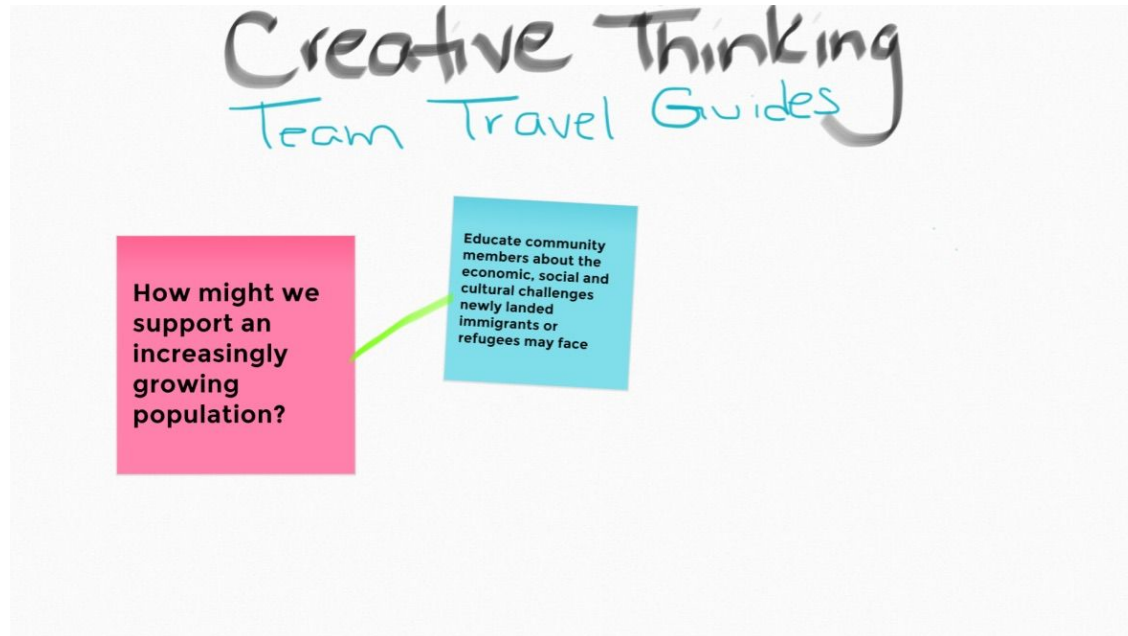
**Round 1**

1. Have one person on your team create a new Jam and invite the other team members to join.
2. Name the Jam "Creative Thinking - Team Name"
3. Write your driving question in a box on the far left of the first frame, as shown in the example.
4. Each person on your team will draw a line from the box and write one possible solution/answer/response to the driving question. These answers should be based on



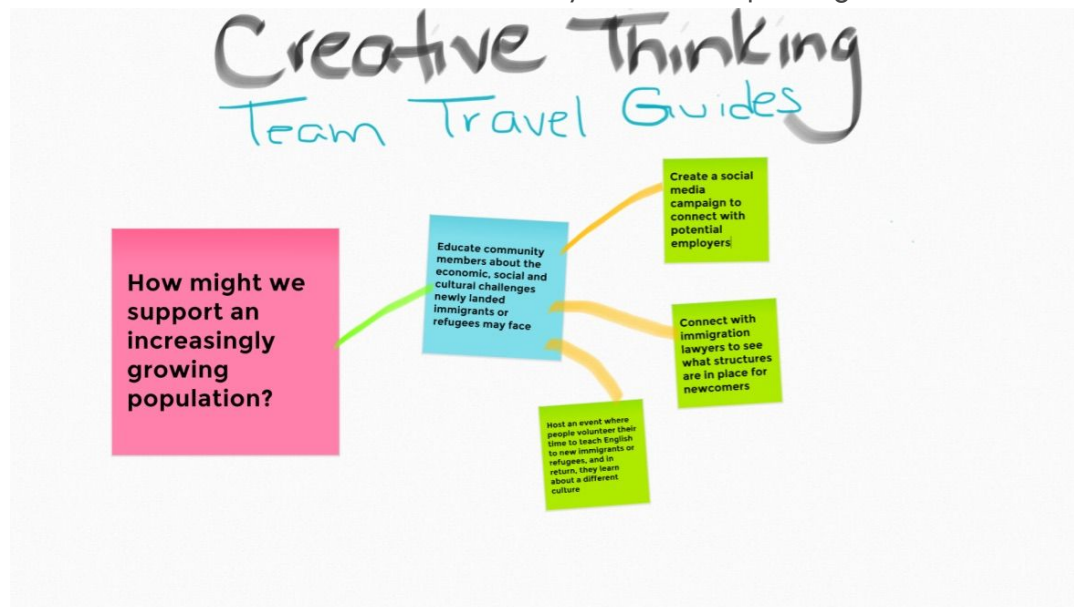
other activities that you have done to understand the problem. You should have some kind of evidence or reason as to why your solution/answer/response is valid.

5. Each person will share/explain their idea to the rest of the group.



## Round 2

1. The first round was completed independently. Now, you are going to use your collaboration skills to work together as team to expand on your ideas.
2. Assign a scribe for this round. The scribe will write down everyone's ideas.
3. Write down ideas for how you can expand on any of the ideas that you came up with in the first round.
4. Take a few minutes to discuss with your team, explaining each idea to the group.





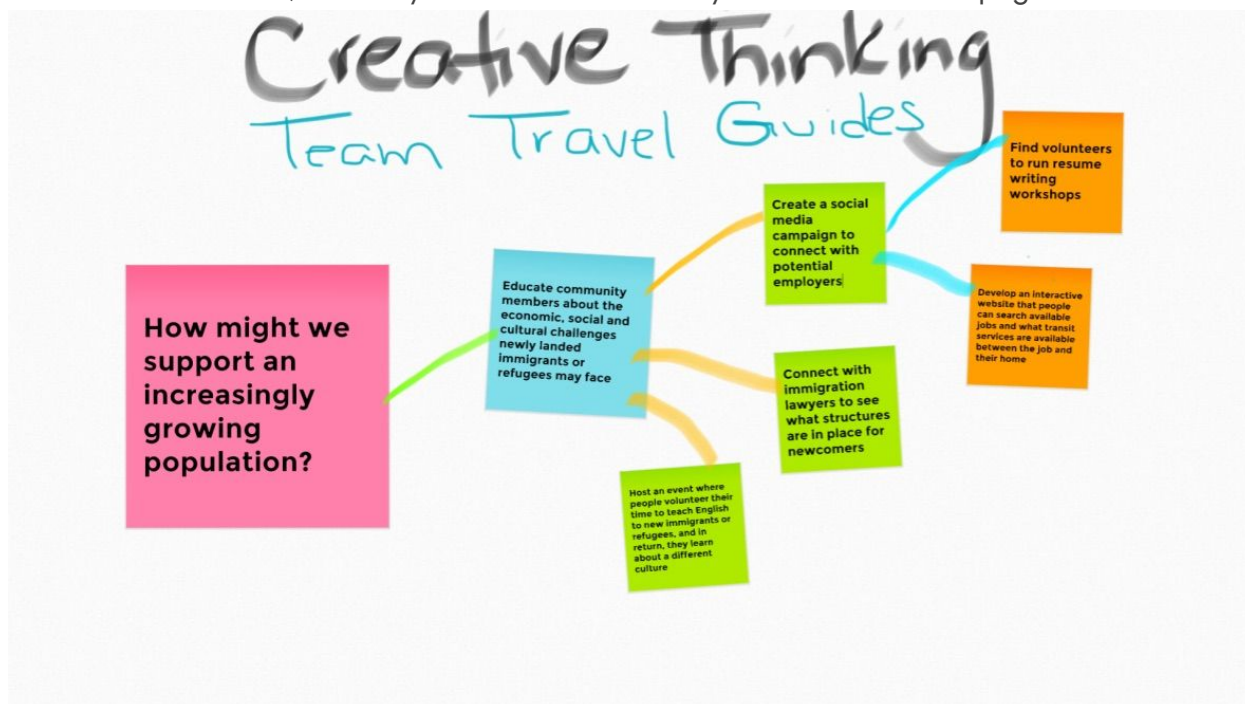
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### Round 3

1. In this round, you are going to continue to think outside the box to come up with even more ideas.
2. For each idea in round 2, work with your team to come up with two or three related ideas.
3. Your goal is to come up with at least two ideas for each of the previous ideas. Work together and build off each others ideas.
4. At this point, you're not worried about how you might complete these ideas. Right now, we are just focused on getting our ideas down.
5. When finished, discuss your ideas so that everyone is on the same page.



### Round 4

1. You now have a lot of ideas for solving/answering/responding to your driving question. Your next steps will be to make some decisions as a team about which ideas you'd like to move forward with and actually create.
2. Discuss which ideas you are most excited about. You may want to use another voting activity, like the stickers, to help you decide.
3. After voting, circle all the ideas your team is really excited about.
4. Now it's time to start building your ideas - taking them from a brainstorm to real life!
5. For example, if my group liked the idea of a website to showcase available jobs, in combination with resume writing workshops, we would actually start to research and build our website, and reach out to people who may be interested in running resume writing workshops.

When you are done, upload your Jamboard file using the box below.

#### INSTRUCTOR TIP:

The next activity is [4.2 - Creativity and Constraint](#)

## 4.2 - Creativity and Constraint

Up to 1 Hour

Grades: 7 to 12+

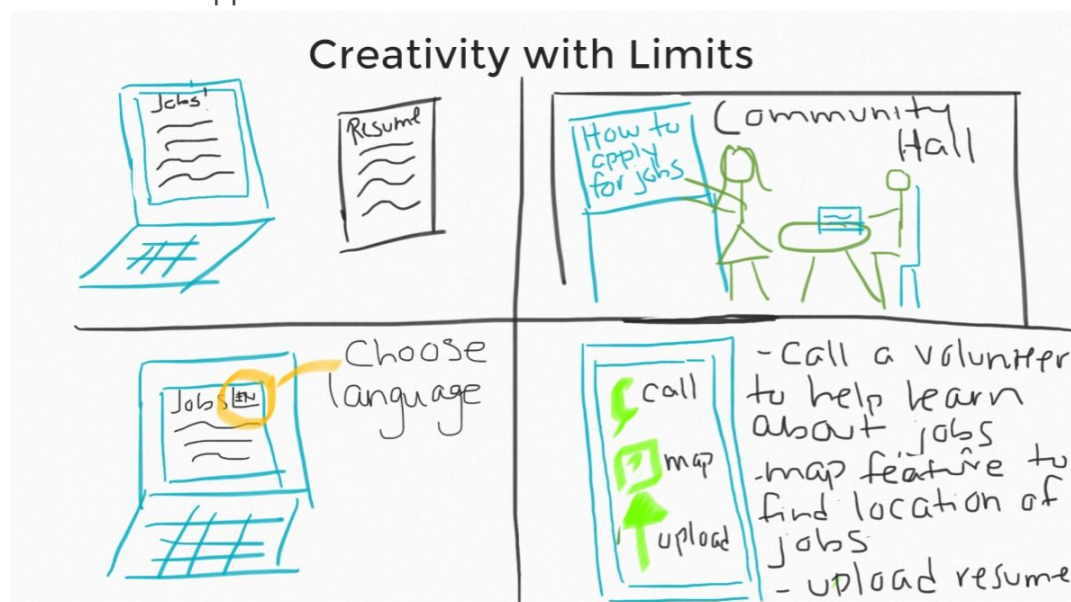
Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

One misconception about creativity is that you need to have “creative freedom” to develop the best ideas. In fact, the opposite is true: creativity often comes from constraint. In this activity, you will team up and use Jamboard to try to develop creative ideas for your projects, within the confines of very specific constraints.

### Work Within Constraints

1. Have one person on your team start a new jam and name the file “Creativity with Limits.” Invite all team members to join the jam.
2. In this activity, you’ll develop your ideas individually before coming together to share. Ensure that each team member has their own frame in the jam to work on.
3. You will use your ideas from the Divergent Thinking activity to start this activity.
4. Divide your frame into four quadrants. You will have three minutes for each quadrant to draw the following:
  - **Quadrant A** (top left): Your ideal solution for your driving question.
  - **Quadrant B** (top right): You only have \$500 to complete the project.
  - **Quadrant C** (bottom left): You have the constraint of needing to have your project reach people all over the world, which means that other languages must be considered.
  - **Quadrant D** (bottom right): What if your solution must include some type of app for a mobile device?



**INSTRUCTOR TIP:**

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Students should complete project [4.1 - Divergent Thinking](#) prior to this project.

You can modify the constraints that we have chosen for this activity, based on the challenge that your students are working on. To do that, simply copy this project in Workbench and change the prompts above. For more information on how to copy projects in Workbench, [click here](#).

For example, you might choose to give them constraints related to your subject area, such as “Your project must include at least three historical events that relate to your solution” or “You must use the pythagorean theorem in your solution.” This is a great way to guide students in a direction to ensure that their projects stay aligned with the learning goals for the project.

### Share

Now, each team member will have two minutes to share your ideas with your team members, explaining how your thinking changed when working under the constraints. Did you come up with any new ideas that might be feasible for moving forward?

When you are done, upload your Jamboard files below. Be sure that your name is on your frame!

### INSTRUCTOR TIP:

The next activity in this series is [4.3 - Yes, And...](#) In that activity, students will give each other feedback on their ideas from this activity.

### [4.3 - Yes, And](#)

Up to 1 Hour

Grades: 7 to 12+

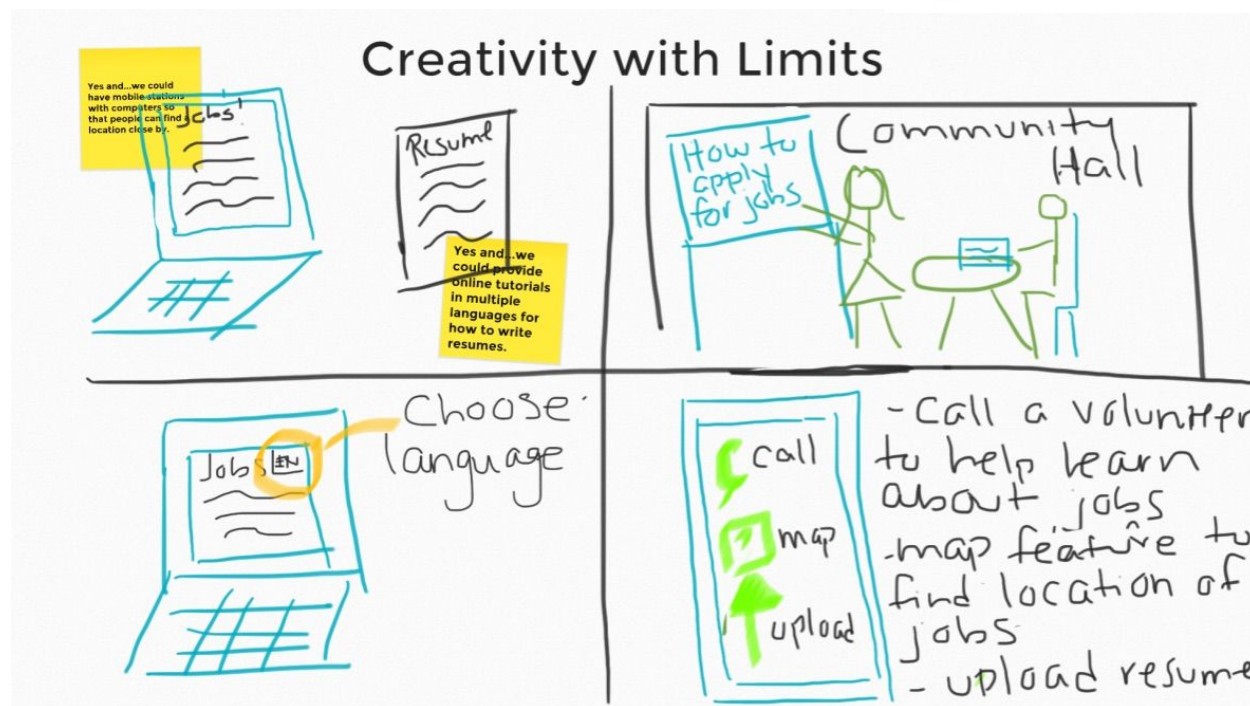
Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

Creativity never happens in isolation. The best ideas always come when we share our ideas with others and get feedback. In this you're going to use the phrase yes, and...to build on your ideas.

### Share Ideas

1. Open your jam called “Creativity with Limits” from the last project.
2. Pair up with someone else on your team. Number yourselves partner 1 and partner 2.
3. Start on the frame in the jam that belongs to partner 1.
4. Set a timer for one minute.
5. Partner 1 will have 1 minute to explain their idea in quadrant one to partner 2.



**INSTRUCTOR TIP:**

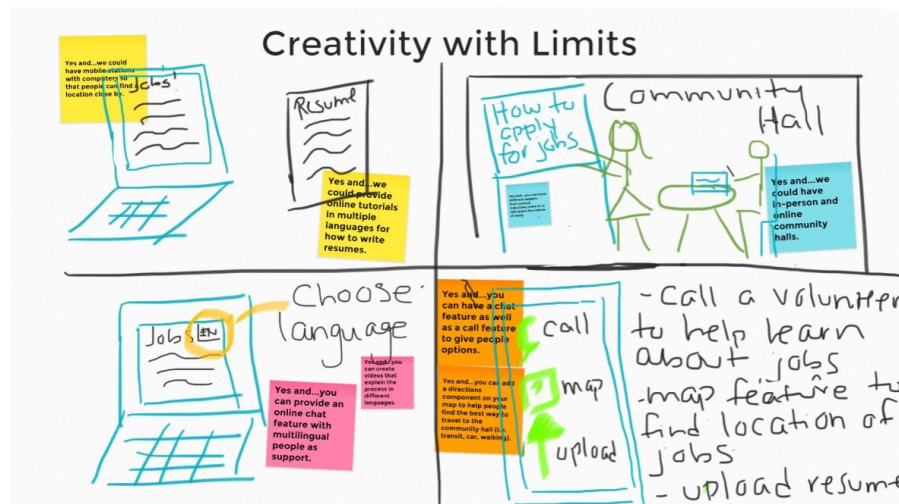
Students should have completed [4.2 - Creativity with Limits](#) prior to starting this activity.

**Yes, And...**

1. Partner 2 will respond to partner 1's idea using the phrase "Yes, and..." to build on the idea.
2. Partner 1 will then respond to partner 2's answer with another "Yes, and..." phrase.
3. You now have two new ideas for your project.
4. Jot them down on a sticky notes and add them to your frame.

**Repeat**

1. Repeat the steps above for the other four quadrants in partner 1's frame.



### Switch

1. Go back to step 1 and repeat the entire process for partner 2's four ideas.
2. When you are done, upload your Jamboard files using the box below.

You now have 16 new ideas for how you're going to answer your driving question. The next step will be to come together as a team and make some decisions about your plan for moving forward.

### INSTRUCTOR TIP:

After this exercise, you should have a conversation with students to set them up to start working on taking their ideas off the Jamboard and into real life. Depending on your subject area and the ideas of students, their projects could take different formats. Some students might develop websites or apps, others might come up with programs or campaigns, or design science experiments.

Moving forward, before you start the last project (Communication for Jamboard), give students some time to work on their projects, conduct research, and develop their ideas in more depth.

The next project in this series is [5.0 - Communication Styles](#)

## 5.0 - Communication Styles

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

Effective communication is the cornerstone to success on any project. By the end of this project, you will understand when to use different communication styles and reflect on your own communication style.



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### What is Effective Communication?

Watch the video above and answer the question below.

#### VIDEO

#### INSTRUCTOR TIP:

Your students could have completed activities in Modules 2, 3, and 4 of the [Student-Centered Learning with Jamboard program](#) prior to starting this activity. Or, you might choose to complete some of the communication focused activities earlier in the project.

The last module in this series was [Yes, And...](#)

#### ASSESSMENT:

What do you think active listening means?

### Direct and Indirect

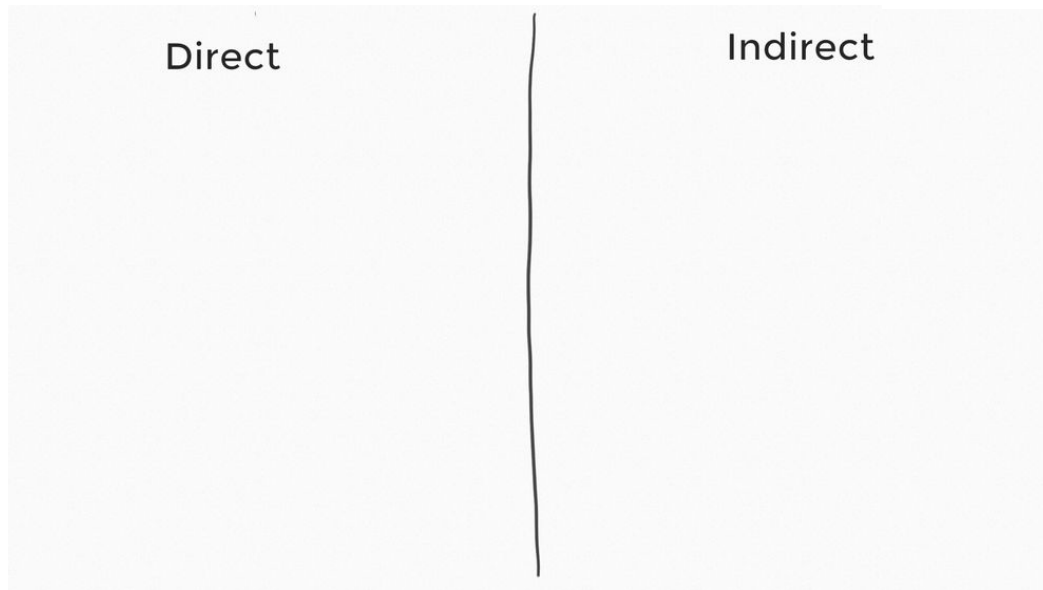
Researchers have broken down the way we communicate into different styles. A communication style refers to our habits and approaches when sharing information with others. Some people are direct in how they communicate. In this case, they will share their thoughts succinctly getting from point A to B clearly. Other people tend to be more indirect with their messages. In this case, they may offer additional details about the subject.

Different situations also call for different approaches to communication. Sometimes it is important to be very direct, while other situations call for a more indirect approach.

Instructions:

1. One person on your team should start a new jam and invite the other team members to join.
2. Name the jam "Communication Styles"
3. You will have five minutes for each round.
4. Divide the first frame of the Jamboard into two columns.
5. Label each column: Direct and Indirect
6. As a team, use sticky notes of one color to brainstorm. Make a list of all of the characteristics of direct communication vs. indirect communication.
7. Now consider *when* it would be effective to use each style. Add new sticky notes in a different color.





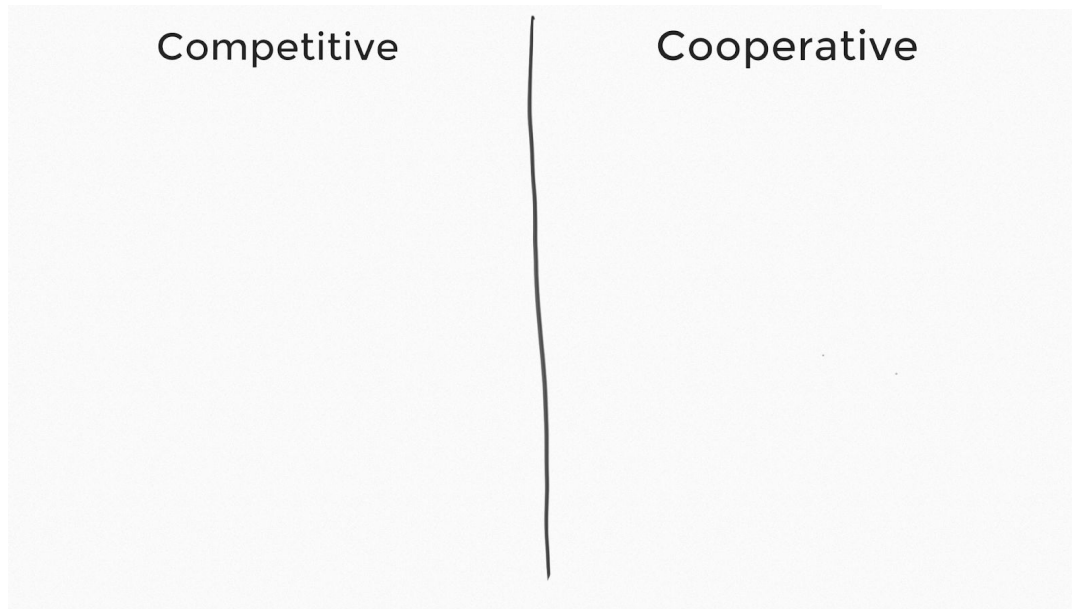
**INSTRUCTOR TIP:**

[Here is a sample completed activity](#), so that you can see what students are driving towards. We recommend having discussions with the students to guide them towards these answers, rather than showing them the example in advance. But, you could use this example to take up their answers at the end of the activity.

To complement this activity, you might search for and have students complete a communication style self-assessment. Many of these types of activities can be found on the internet.

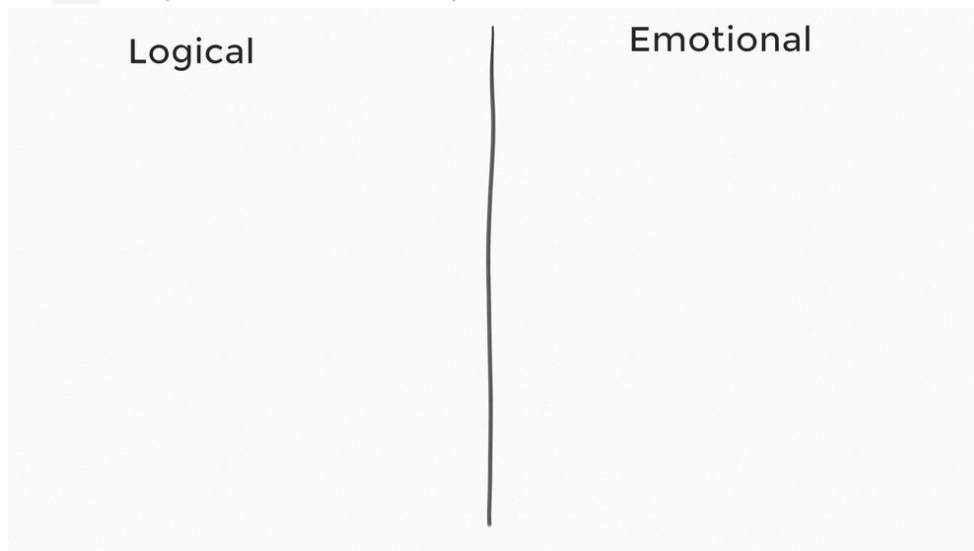
**Competitive and Cooperative**

1. Create a second frame in the jam
2. Divide the frame into two columns: Competitive and Cooperative
3. Complete the same activity as you did with Direct and Indirect



### Logical and Emotional

1. Create a third frame in the jam
2. Divide the frame into two columns: Logical and Emotional
3. Complete the same activity as above



As you can see from this activity, there are certain situations in which you might need to use different communication styles. If you are in a building and a fire alarm is going off, you are going to want to communicate in a direct, logical manner in order to get people out of the building. If you are speaking with someone about a sensitive topic, you might want to use a more emotional or empathetic approach. It's important to be aware of not just what we are communicating, but how we are communicating.

# Student-Centered Learning with Jamboard

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### INSTRUCTOR TIP:

The next activity in this series is [5.1 - Shape Recognition](#).

### ASSESSMENT:

Everyone has the ability to use different communication styles in different situations; however, we all also tend to use some styles more than others in our daily lives. Based on this activity, which terms would you use to describe your own natural communication style?

## 5.1 - Shape Recognition

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

Communicating directly and clearly will help us to work together as a group, and also help you to explain your learning and ideas to others. In this activity, we are going to use Jamboard to play a fun game to practice communicating effectively.

### Preparation

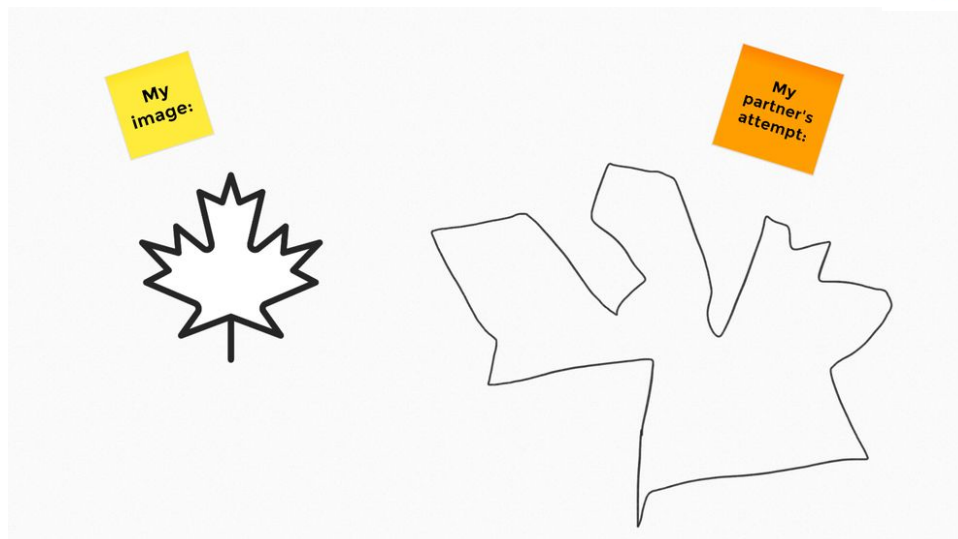
1. Partner up with one other person.
2. Determine who will be partner 1 and who will be partner 2.
3. Each partner will start a new jam on their Jamboard app.
4. Do not share your jams with each other.

### INSTRUCTOR TIP:

Students should complete project [5.0 - Communication Styles](#) prior to starting this project.

### Round 1

1. Partner 1 - use the autodraw or image search feature on Jamboard to find a relatively simple image, for example a computer, a flower, or a leaf. Do NOT let Partner 2 see the image that you have chosen.
2. Partner 2 - Get ready to draw on your own Jamboard App.
3. Partner 1 - Your goal is to instruct your partner to draw the image that you see in front of you. You cannot describe what the image is, you can only give them very precise directions such as "make a straight line in the middle of the page" or "make a circle on top of the line" or "draw a curve on a 45 degree angle from the bottom corner" etc.
4. Partner 2 - follow the directions given by your partner and see if you can draw the image they are describing.



**INSTRUCTOR TIP:**

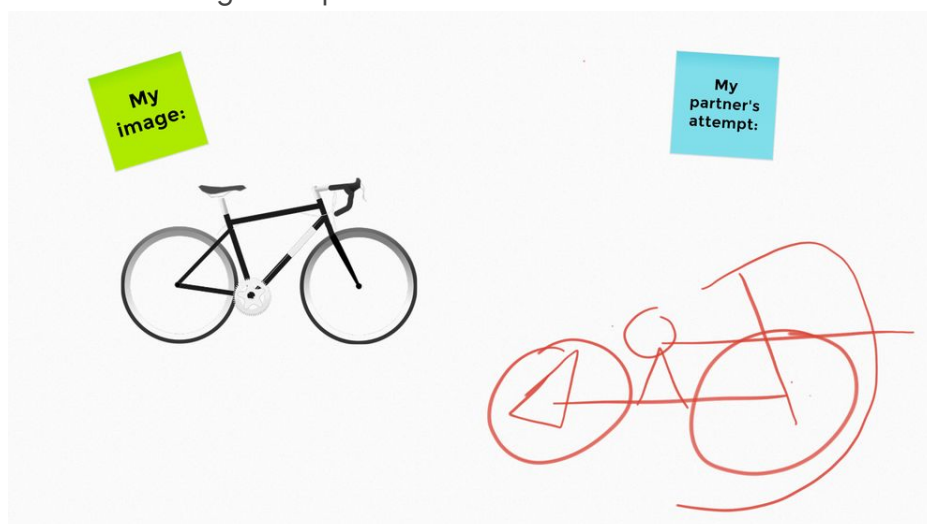
For this activity, each student will require their own touch screen device. You can also have one pair work at the Jamboard kiosk and switch the group who gets to use the kiosk for the second round.

**Reflect**

Discuss with your partner: what strategies worked best for giving instructions to your partner?

**Round 2**

1. Now you will switch roles and complete the same activity as above with the drawer becoming the explainer and vice versa.



**Reflect**

Discuss with your partner: Did you get any better at giving instructions in the second round?

# Student-Centered Learning with Jamboard

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### INSTRUCTOR TIP:

At the end of the activity, we recommend doing a debrief with the entire class asking questions such as:

- What were the best strategies for communicating your instructions?
- What styles of communication did you use in this activity?
- What is one thing that you learned about the importance of being precise when giving instructions?

The next project in this series is [5.2 - Tell Your Story](#)

### ASSESSMENT:

What can you take from this activity and apply to your project when it comes to communicating your ideas?

## 5.2 - Tell Your Story

1 - 2 Hours

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

In this activity, you'll learn a method for effective storytelling, and then use Jamboard to craft a story about your driving question.

### Preparation

The storyboard that you create in this activity will serve as part of your final project, you will be presenting your story to your teacher and/or to your peers and/or outside audiences.

1. This is an individual activity. You will come together with your team to share in the next activity.
2. Each person should start a new jam and call it "Project Story -- Your Name"
3. You are going to tell the story of your project in an seven frame story.

### INSTRUCTOR TIP:

Students should complete project [5.1 - Shape Recognition](#) prior to starting this project.

Before introducing this activity, we recommend going back to your initial [goals, objectives, and success criteria activity from Project 2](#), where you worked as a class to determine what you need to know in order to solve your challenge.

Revisit the goals for the project with students (their files should be named "Team Building - Team Name"). Explain to students that the Jamboard story they create in this activity should show that they are working towards those learning goals. That means that they will need to incorporate evidence, content knowledge and provide an analysis of events in the storyboard that they create.

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You should also provide a rubric or other assessment tool to students so that they all understand the expectations for the amount of detail and analysis they should include in this storyboard.

### Frame 1

1. On the first frame of your jam, draw a picture, or find an image that **explains the challenge or driving question**.
2. Add text, or pull content from your Google Drive, or the web, that explains the challenge/question.
3. Write a short description of the frame on a sticky note, explaining the challenge question in three sentences or less.

### Frame 2

1. On the second frame in your jam, draw a picture, or find an image that **explains why this challenge/question must be answered**.
2. Explain on a sticky note: How are people in the real world affected by this challenge?
3. Explain on a sticky note: Why is it important for us to address the issue?
4. Explain on a sticky note: Statistics and research will help to build your argument.
5. Write a short description of the frame on a sticky note, explaining the WHY behind the challenge/question in three sentences or less.

### Frame 3

1. On the third frame in your jam, draw a picture, or find an image that **explains your overall vision for answering your question**.
2. You might even just pull in a screenshot from your “Creativity and Constraint” jam from the last project to help explain your idea.
3. Write a short description of the frame on a sticky note, explaining your solution in three sentences or less.

### Frames 4, 5 and 6

1. On the fourth, fifth, and sixth frames, you are going to **explain your project in more detail**.
2. Show your solution/answer/response in a step-by-step process.
3. Ensure that you are using evidence to back up your ideas, and that you are building a strong answer to the driving question.

### Frame 7

1. On the seventh frame, create a **final summary of your idea**.
2. Explain the benefits of the answer/solution that you have developed and explain why this is the best solution for your driving question.
3. Again, use drawings, images, and information pulled from your Google Drive or the web to support your ideas.



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### Share

1. In the next activity, you will be sharing your ideas with your peers and getting feedback.
2. Upload your complete Story below.

### INSTRUCTOR TIP:

The next activity in this series is [5.3 - Active Listening](#).

## 5.3 - Active Listening

Up to 1 Hour

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

Speaking is only one piece of the communication equation. In order to really understand your driving question, you'll also need to be a great listener. In this lesson, you will use Jamboard to practice listening in order to give feedback to your peers, and then use the feedback that you receive in a meaningful way to improve your ideas.

### Preparation

1. Before we get started, your teacher will walk you through a short presentation about active listening.
2. In your teams, open your jam file from the last activity, called "Project Story - Your Name"
3. Partner up with another person.
4. Number yourselves partner 1 and partner 2.

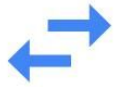
### INSTRUCTOR TIP:

Students should complete project [5.2 - Tell Your Story](#) prior to starting this project.

Use [these slides](#) to introduce the concept of active listening to students.

### Active Listening Round 1

1. Partner 1 will present their jam first.
2. After partner 1 explains the first frame, pause.
3. Partner 2 will now use an active listening strategy to reflect back to partner 1 what they heard. To do this, partner 2 will start with the phrase "So what I hear you saying is..." and repeat back to partner 1 what they heard.
4. Partner 1 will respond, filling in any gaps that partner 2 missed in their summary.
5. Partner 1, take a note of anything that you thought you explained clearly, but that partner 2 missed. Consider how you might explain these details more clearly in the future.



## Summarize and Paraphrase

Google for Education

### INSTRUCTOR TIP:

Students can either present at the Jamboard kiosk or they can use their devices and follow along by viewing each other's jam. You can rotate groups through using the kiosk during the activity.

### Repeat

1. Repeat the process above for each frame in partner 1's Project Story using this same format of pausing after each frame and having partner 2 reflect back what they heard.
2. At the end of the last frame, partner 2 will give feedback to partner 1 on how they might improve their project -- provide at least two ideas for how they can make their project better.

### Switch

1. Switch and repeat the activity for partner 2's Project Story, with partner 1 reflecting back after each frame using the phrase "So I hear you saying is..."
2. At the end, partner 1 will give partner 2 at least two ideas for how they can make their project better.

### Wrap Up

The goal of this exercise is to both get feedback on your ideas, and also to practice this active listening strategy. Active listening requires ongoing engagement in what the speaker is saying. Even though it might feel awkward repeating everything, eventually it becomes a habit and will help to ensure that you really understand what someone else is saying.

When you are done, upload your Jamboard story with your notes from your partner's feedback.

# Student-Centered Learning with Jamboard

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### INSTRUCTOR TIP:

The next, and final activity in this program is [5.4 - Share With The World!](#)

## 5.4 - Share With The World!

1 - 2 Hours

Grades: 7 to 12+

Jamboard and/or Jamboard App (best with Android or iOS touch screen devices)

### Description

You have creative ideas that you built in collaboration with your peers. You have thought critically about an important question, and now it's time to communicate your ideas. In this project, you will share your project with a real world audience.

### Preparation

1. Open your jam file called "Project Story - Your Name"
2. Review and refine each frame in your story based on the feedback that you received from your peer in the last activity
3. Make any changes that you'd like to your story before you present.
4. Rehearse your presentations. Remember that you can interact with the Jamboard during your presentation, moving objects around, or drawing to call out key points.

### INSTRUCTOR TIP:

Students should complete project [5.3 - Active Listening](#) prior to starting this project.

This activity is designed to help students share their learning with a real world audience. In order to achieve that, you will need to consider a few options for sharing:

- A live presentation in the classroom, either in person or on video: You could invite your original experts back in using Hangouts Meet, or invite new audience members to join a meeting. Parents, other experts in the field, or even other classes of students
- A recorded presentation: Students could record videos of them explaining their story boards, and share them on the internet, with parent communities, or with experts in the field.
- A fair: Students could present their ideas in a fair-style format to invited guests. Many schools already have showcase events that could be used for this purpose. Students could be scheduled at specific times to present using the Jamboard kiosk

The purpose of presenting to audiences outside of the classroom shows students that their ideas have value and are worth sharing. This authentic experience will also help them gain confidence in their communication skills and build their creative confidence.

You could leave the choice of presentation up to students, allowing them to either present live, or using video. Either way, they will use their Jamboard files called "Project Story - Your Name" to present.

# Student-Centered Learning with Jamboard

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### Present

It's time to share your ideas with the world! Your teacher has arranged a presentation for you to share what you have created.

Remember to embrace your creative confidence. You have thought critically about these ideas, and worked in collaboration with others to ensure they are the best they can be. Now it's time to use your communication skills to dazzle your audience!

Congratulations!

### INSTRUCTOR TIP:

Congratulations on completing the Student-Centered Learning with Jamboard program! We hope your students have grown in their ability to think creatively and critically, work collaboratively and communicate effectively, all while covering important learning goals for your course.