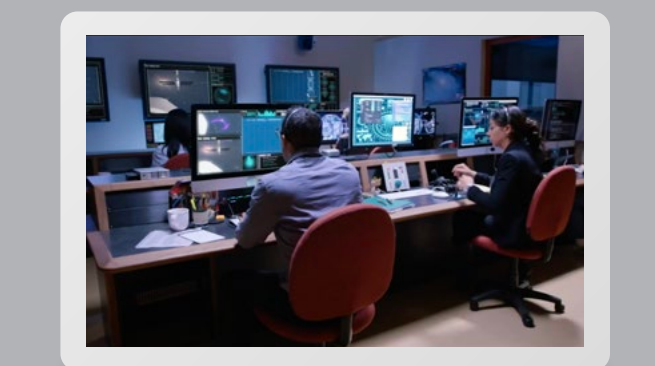
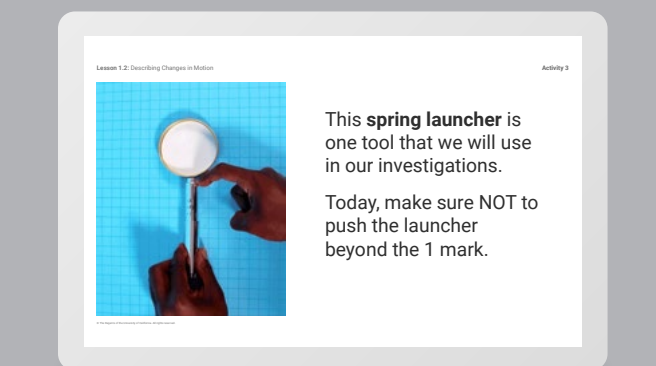
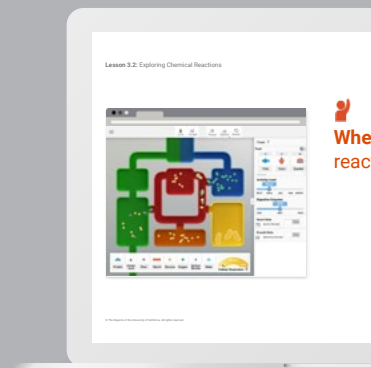
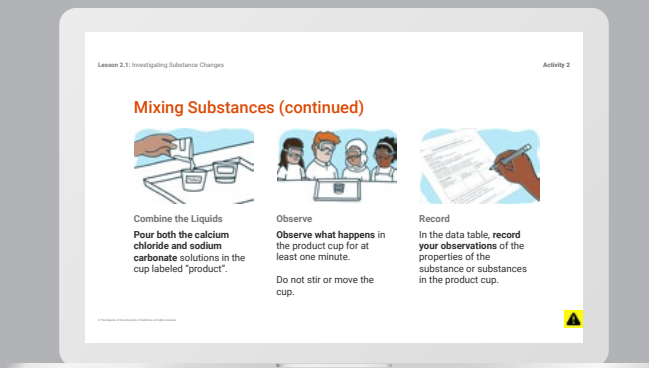
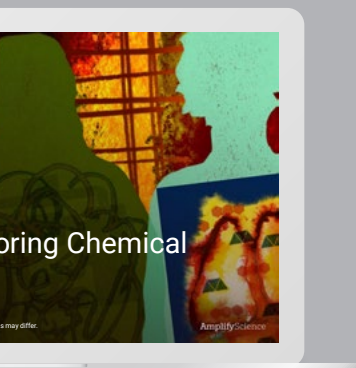


Classroom Slides





Amplify.



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HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

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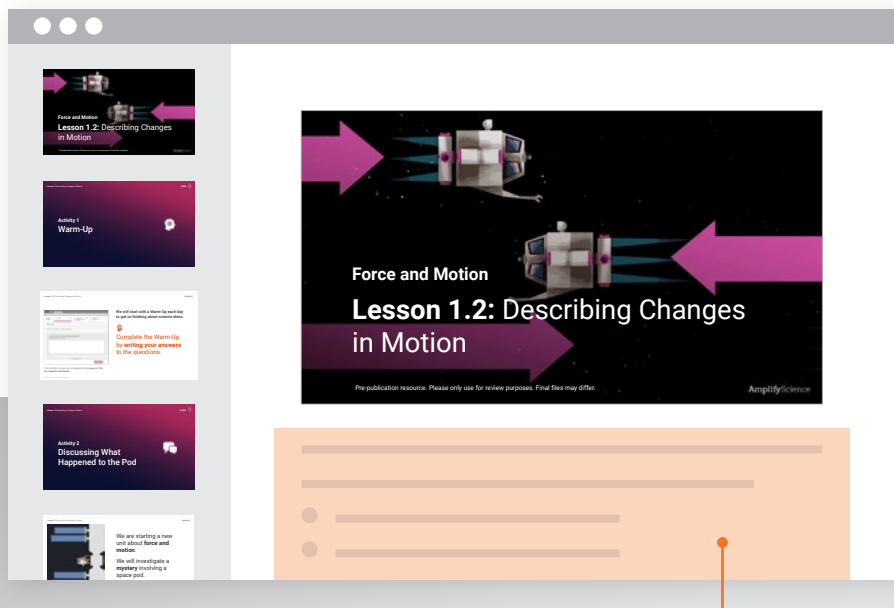
Classroom Slides

Spending time on science should be about the science.
Get there faster with Classroom Slides.

Classroom Slides are:

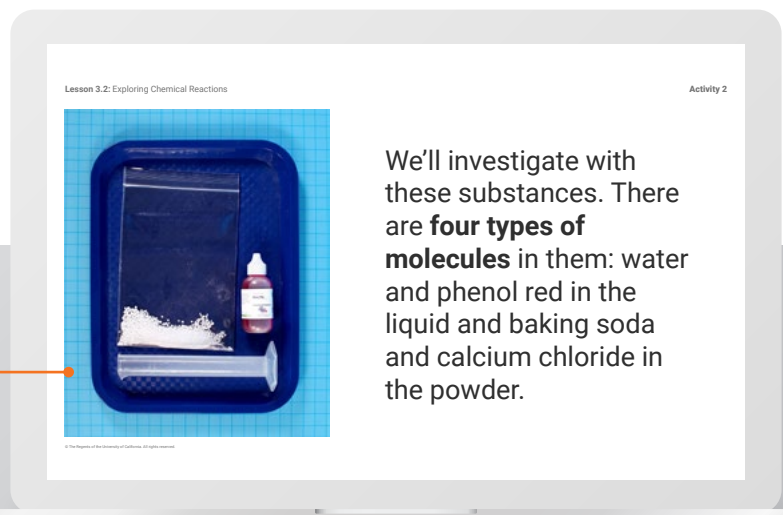
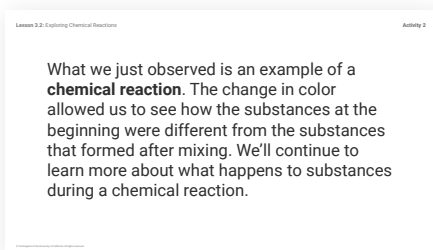
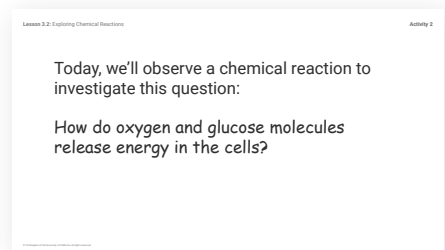
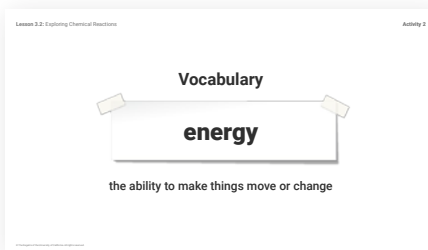
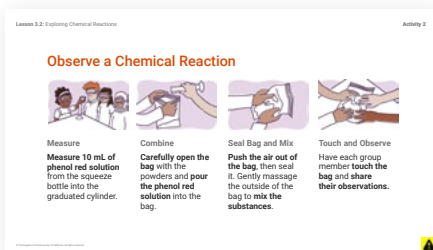
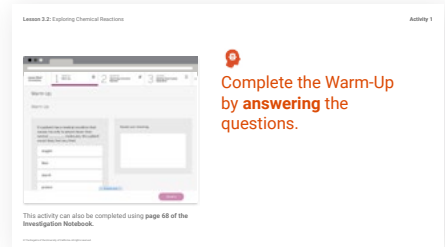
- **Downloadable and editable**, allowing you to save your modifications.
- **Clearly sequenced, engaging, and easy to follow** to help you bring the rich storylines and 3-D instruction to life.
- **Easy to use with time-saving supports** such as lesson visuals, activity instructions and transitions, animations, investigation setup videos, tech support, and more!

**6–8 Classroom Slides
start rolling out for
Back to School 2020!**



The Notes section of most slides includes suggested teacher talk, teacher actions, potential student responses, and assessment supports. The first slide of each file includes links to relevant resources in the digital Teacher's Guide.

Metabolism




Hands-on activity supports

Many slides give you and your students visual cues about how to work through a hands-on activity.

Lesson 3.2: Exploring Chemical Reactions

Activity 4


Observing Cellular Respiration in the Sim



Lesson 3.2: Exploring Chemical Reactions


Activity 3

Energy can also be released during chemical reactions.

 Was there evidence during this chemical reaction that suggests that **energy was released**?

Lesson 3.2: Exploring Chemical Reactions

Activity 4



The Sim is another model that shows how cellular respiration works.

Lesson 3.2: Exploring Chemical Reactions

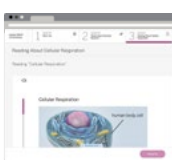
Activity 4




The chemical reaction in the plastic bag was a helpful model for understanding **what happens when energy is released inside our cells.**

Lesson 3.2: Exploring Chemical Reactions

Activity 3



 **Read and annotate the article.**

Lesson 3.2: Exploring Chemical Reactions

Activity 5

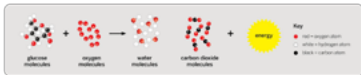
Key Concept

Inside the cell, the atoms that make up glucose and oxygen can be rearranged to make different molecules. This chemical reaction is called cellular respiration and releases energy.

Lesson 3.2: Exploring Chemical Reactions

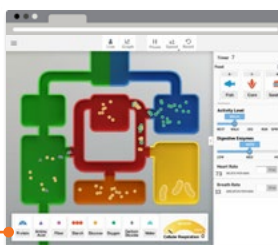
Activity 4


Let's take a look this diagram that shows **cellular respiration**. This diagram is another way of modeling how cellular respiration happens.



Lesson 3.2: Exploring Chemical Reactions

Activity 4



 **Where did the chemical reaction take place?**

Sims and digital modeling tools

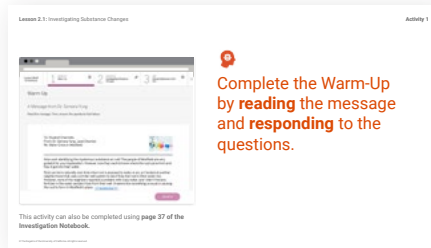
Support for using technology is included right where you need it most.

Chemical Reactions

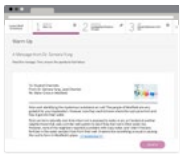


Chemical Reactions
Lesson 2.1: Investigating Substance Changes

Prepublication resource. Please do not use for review purposes. Final files may differ.

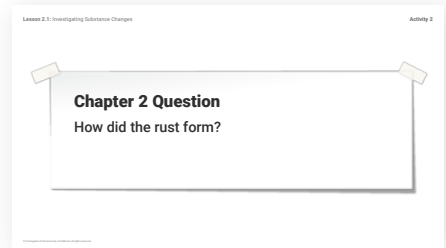


Lesson 2.1: Investigating Substance Changes Activity 1



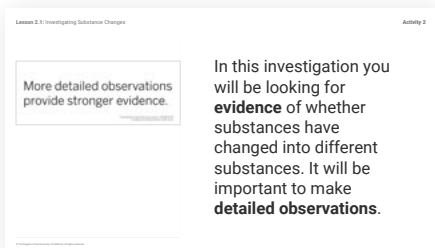
Complete the Warm-Up by **reading** the message and **responding** to the questions.

This activity can also be completed using page 37 of the Investigation Notebook.



Lesson 2.1: Investigating Substance Changes Activity 2

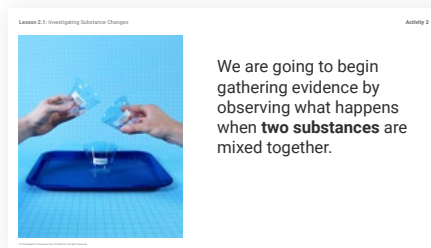
Chapter 2 Question
How did the rust form?




Lesson 2.1: Investigating Substance Changes Activity 2

More detailed observations provide stronger evidence.

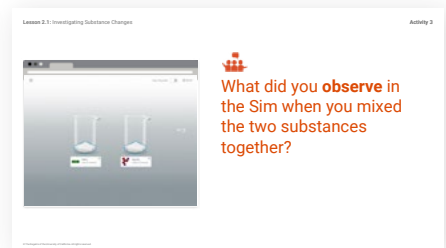
In this investigation you will be looking for **evidence** of whether substances have changed into different substances. It will be important to make **detailed observations**.




Lesson 2.1: Investigating Substance Changes Activity 2



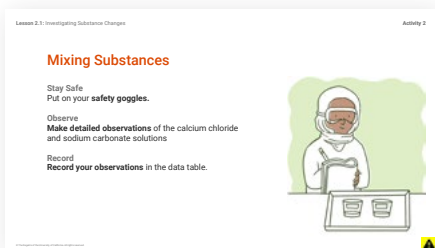
We are going to begin gathering evidence by observing what happens when **two substances** are mixed together.



Lesson 2.1: Investigating Substance Changes Activity 2



What did you **observe** in the Sim when you mixed the two substances together?



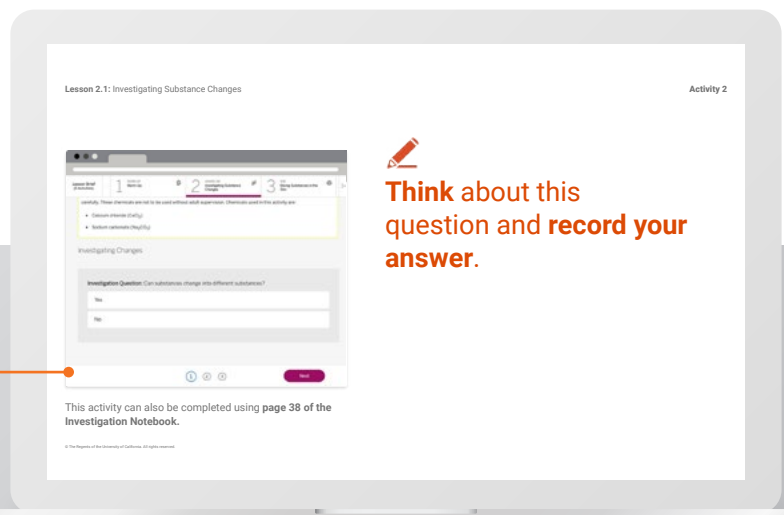

Lesson 2.1: Investigating Substance Changes Activity 2

Mixing Substances

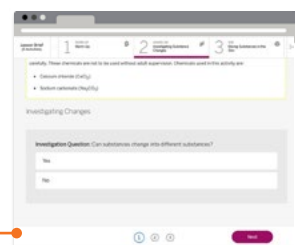
Stay Safe
Put on your **safety goggles**.

Observe
Make **detailed observations** of the calcium chloride and sodium carbonate solutions.

Record
Record **your observations** in the data table.



Lesson 2.1: Investigating Substance Changes Activity 2



Think about this question and **record your answer**.

This activity can also be completed using page 38 of the Investigation Notebook.

Student Investigation Notebook and student responses


Notebook pages and digital student response prompts are referenced on the slides, and students can clearly see where to focus.

Lesson 2.1: Investigating Substance Changes 3 Min

Activity 4

Reflecting on the Investigation Question

Lesson 2.1: Investigating Substance Changes Activity 2




Today, you will work with two different **substances** dissolved in water.

This is what the two substances looked like before they dissolved.

Lesson 2.1: Investigating Substance Changes Activity 2

Mixing Substances (continued)



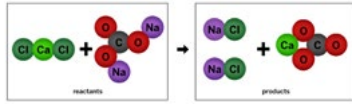
Combine the Liquids
Pour both the calcium chloride and sodium carbonate solutions in the cup labeled "product".

Observe
Observe what happens in the product cup for at least one minute.
Do not stir or move the cup.

Record
In the data table, record your observations of the properties of the substance or substances in the product cup.

Lesson 2.1: Investigating Substance Changes Activity 4

This diagram shows **reactants** and **products** in a chemical reaction. You start out with reactants and end up with products.



Lesson 2.1: Investigating Substance Changes Activity 4

Vocabulary

reactant


a starting substance that is part of a chemical reaction

Lesson 2.1: Investigating Substance Changes Activity 2

Chapter 2 Question: How did the rust form?

- **Claim 1:** The iron pipes changed into rust.
- **Claim 2:** The fertilizer changed into rust.
- **Claim 3:** The iron pipes and the fertilizer changed into rust.

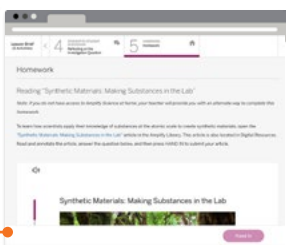
Lesson 2.1: Investigating Substance Changes Activity 2



Each group will have a tray with these **materials**.

Make sure not to mix any substances together until I tell you to do so.

Lesson 2.1: Investigating Substance Changes Activity 5



For homework, read the article and **annotate it.**

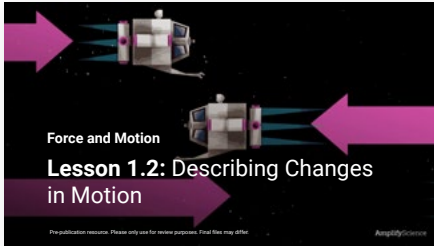
Then, respond to the questions.

This activity can also be completed using page 43 of the Investigation Notebook.

Classroom Wall


Classroom Wall materials are referenced, making it easier to understand when to post a chapter question, key concept, or vocabulary word.

Force and Motion



Force and Motion
Lesson 1.2: Describing Changes in Motion


Prepublication resource. Please only use for review purposes. Final files may differ. AmplifyScience



Lesson 1.2: Describing Changes in Motion Activity 4

If I hold a pencil as I walk around, from my **frame of reference**, the pencil is not moving.

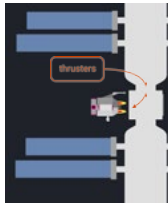
But from your frame of reference, the pencil is moving.



Lesson 1.2: Describing Changes in Motion Activity 3

This **spring launcher** is one tool that we will use in our investigations.

Today, make sure **NOT** to push the launcher beyond the 1 mark.



Lesson 1.2: Describing Changes in Motion Activity 2

The **thrusters**, or small engines, were supposed to fire and stop the pod as it reached the space station so it could dock.


Instead, this pod moved in the **opposite direction**.

Lesson 1.2: Describing Changes in Motion Activity 4

Vocabulary

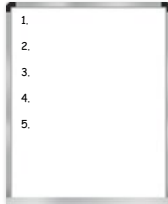
velocity

speed in a particular direction



Lesson 1.2: Describing Changes in Motion Activity 5

For homework, create a model to show your ideas about what happened to the pod.

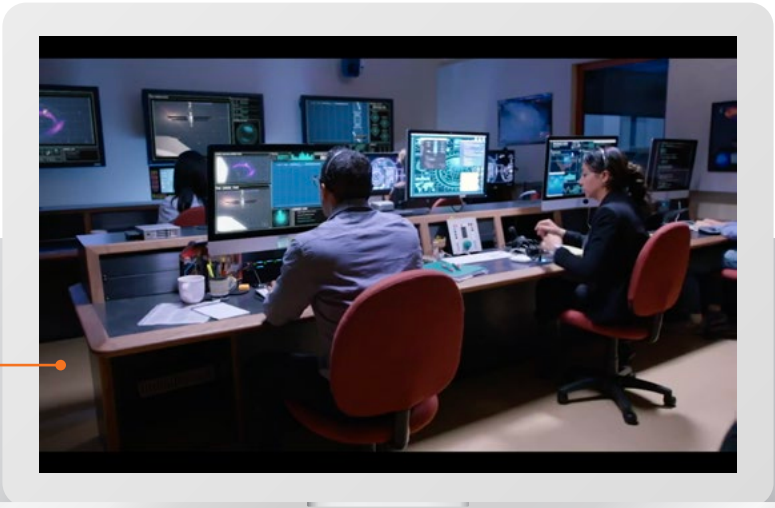


Lesson 1.2: Describing Changes in Motion Activity 4

- 1.
- 2.
- 3.
- 4.
- 5.

We identified **five ways** that motion can change.

Remember that a change in motion is the same thing as a **change in velocity**.



Videos

Many Classroom Slides include embedded videos.

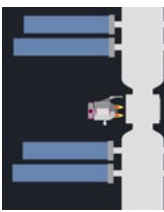
Lesson 1.2: Describing Changes in Motion

Activity 4

Discussing Changes in Motion

Lesson 1.2: Describing Changes in Motion

Activity 2



We are starting a new unit about **force and motion**. We will investigate a **mystery** involving a space pod.

Lesson 1.2: Describing Changes in Motion


Activity 3

Chapter 1 Question

What caused the pod to change direction?

Lesson 1.2: Describing Changes in Motion

Activity 4



Let's summarize the results as a class.

What are the five ways that motion can change?

Lesson 1.2: Describing Changes in Motion


Activity 4

Other units can be used to measure velocity as long as you describe the units.

Can you think of other examples of units that could describe velocity?

Lesson 1.2: Describing Changes in Motion

Activity 3



These are the **materials** you can use.

Remember that you are working with laboratory equipment, and it should stay within your work area.

Lesson 1.2: Describing Changes in Motion

Activity 4

Physicists also agree on the **units** they are using. The units for velocity help describe how fast the object is moving.

Throughout the unit, we will use centimeters as our measure for distance, and **centimeters per second** as the units for velocity.

Lesson 1.2: Describing Changes in Motion

Activity 2

Unit Question

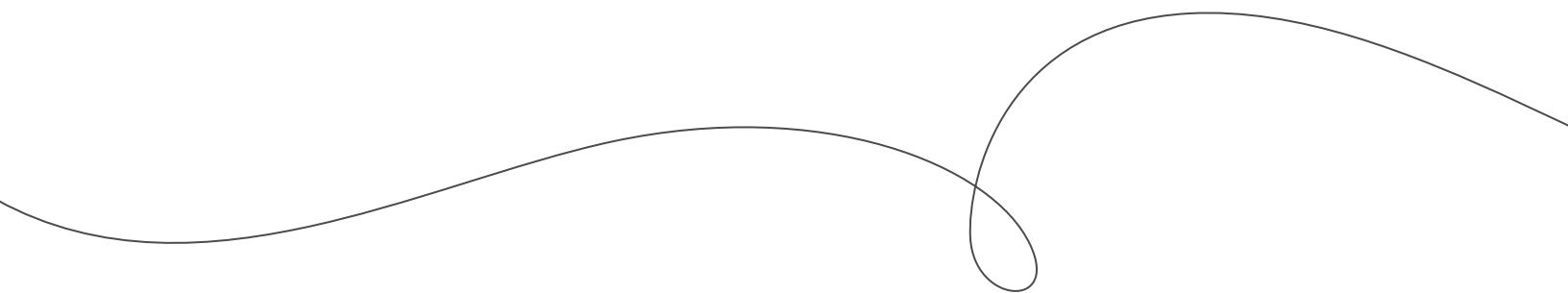
How do forces affect motion?

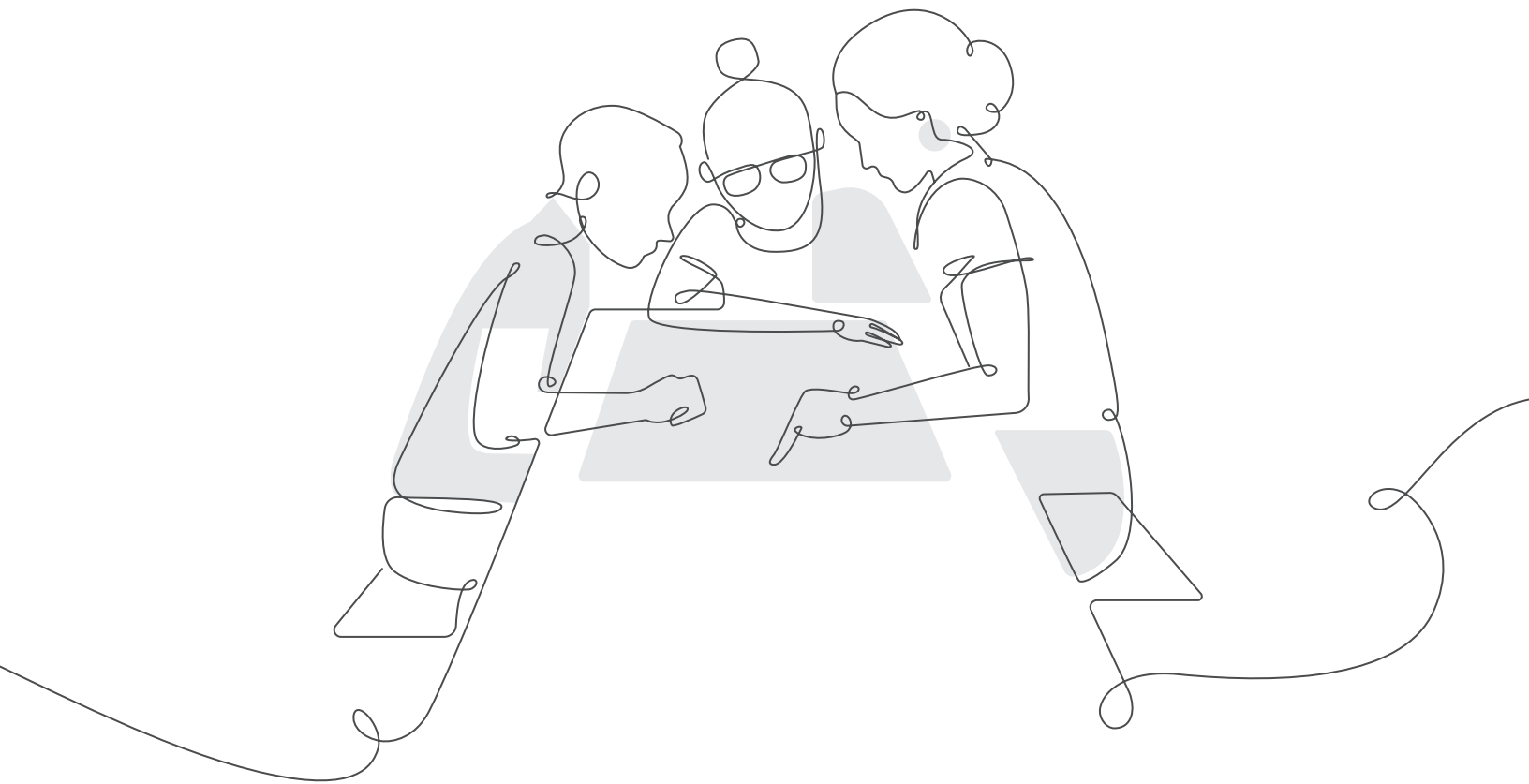
Classroom Wall

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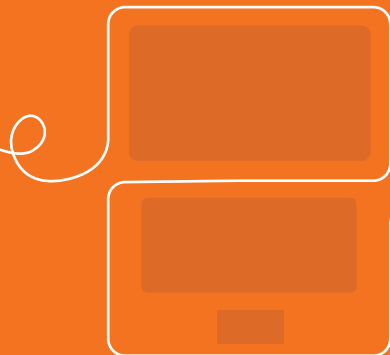
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