

STEM & STEAM

CLASSROOM MANAGEMENT TOOLKIT



K-5TH
GRADE

CREATED BY BROOKE BROWN

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***Whole Class, Group, Individual**

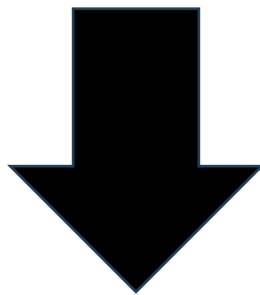
***EDITABLE Google Slides**

CLASSROOM PROCEDURES

Use the planner and checklist on the following pages to track basic classroom procedures as you teach, model, and practice them with your students. There is also a blank template for you to type in your own procedures.

You may also use the provided Google Slides presentation as a visual aid for your students.

[CLICK BELOW FOR PROCEDURES SLIDE SHOW](#)



CLASSROOM PROCEDURES

GRADE LEVEL/CLASS: _____

PROCEDURE	STUDENT EXPECTATIONS	DATE TAUGHT
HALLWAY EXPECTATIONS		
ENTERING THE CLASSROOM		
ATTENTION GETTERS		
WORK SPOTS		
INDEPENDENT WORK		
PARTNER & GROUP WORK		
SUPPLIES & MATERIALS		
TECHNOLOGY		
REWARDS & CONSEQUENCES		
BATHROOM & DRINK BREAKS		
SAFETY DRILLS		
CLEANING UP		
FINISHED WORK		
WORK & PROJECTS IN PROGRESS		
LINING UP & LEAVING THE CLASSROOM		



EXPECTATIONS

After you plan your procedures, hold a class meeting to establish a shared list of Class Expectations that are developmentally appropriate for your students. Use a “Looks Like/Sounds Like” chart to further discuss and clarify student expectations for STEM Activities. Printable copies are provided on the following pages OR you may access the [editable Google Slides version](#) below. Here are some examples of possible responses:

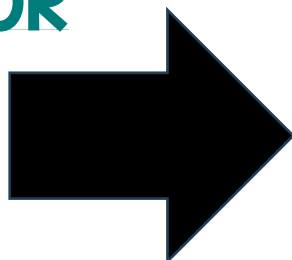
CLASS EXPECTATIONS

- We will work as a team.
- We will listen and follow directions.
- We will stay focused and on task.
- We will use self control with our body and voice.
- We will give our personal best effort.
- We will use materials safely and responsibly.
- We will not give up when things get hard.
- We will cheer each other to success.



STEM EXPECTATIONS

What will STEM activities LOOK like?	What will STEM activities SOUND like?
 <ul style="list-style-type: none">• Drawing blueprints• Building models• Testing and improving designs• Treating materials carefully• Using materials safely• Sharing materials• Working together• Writing about our builds• Cleaning up materials	 <ul style="list-style-type: none">• Appropriate voice level• Discussing designs• Encouraging words• Sharing and listening to ideas• Cheers of success• Materials connecting• Materials being cleaned up

[CLICK HERE FOR DIGITAL/EDITABLE CHARTS](#)



STEM EXPECTATIONS

What will STEM activities LOOK like?	What will STEM activities SOUND like?
	

CLASS EXPECTATIONS

STEM EXPECTATIONS

**What will STEM activities
LOOK like?**



**What will STEM activities
SOUND like?**



STEAM EXPECTATIONS

**What will STEAM activities
LOOK like?**



**What will STEAM activities
SOUND like?**

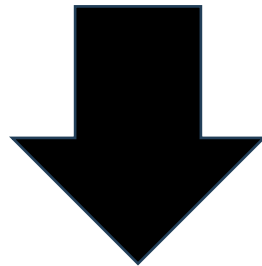


STEM CHALLENGE SLIDES & TIMERS

The following Google Slides have fillable digital templates for STEM/STEAM challenges that you can use for any STEM activity.

There are slides with timers included for 20, 30, 45, and 60 minutes to help students manage their work time.

[CLICK BELOW FOR CHALLENGE SLIDES & TIMERS](#)



A template for a STEM challenge slide. At the top, the words "STEM CHALLENGE" are written in large, multi-colored letters (S: red, T: yellow, E: green, M: blue, C: purple, H: orange, A: pink, L: light blue, L: light green, E: yellow, N: orange, G: pink, E: light blue) on a black background. Below this is a white box with a black border. Inside the white box, there is a pink rounded rectangle with the word "CHALLENGE" in black and "Type Here" below it. To the left of the pink box is a black rounded rectangle with a white timer "30:00" in the center. To the right of the black box is a yellow rounded rectangle with the word "MATERIALS" in black and three bullet points below it, each followed by "Type Here". In the bottom left corner of the white box, there is a small, colorful lightbulb icon with a string. In the bottom right corner of the white box, there is a small copyright notice: "©2018 Brooke Brown".

PARTNER & GROUP MATCH-UP CARDS

The following cards allow you to partner and group students randomly. The cards are also color-coded to align with the digital rotation charts on Page 24.

Count out the cards to match the number of students in your class, with one color for each group (i.e. 4 groups = 4 different colors), then mix up the cards in a baggie or tub. Students will draw a card and then find their matching color for their partner or group.

There are 4 different shape options provided for grouping students with labels for each shape: LEGO, lightbulbs, gears, and robots.



PARTNER & GROUP MATCH-UP CARDS

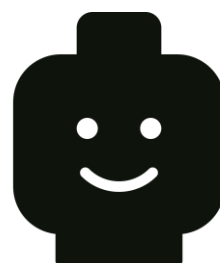
LABELS FOR BAGGIES OR BINS

PARTNER MATCH-UPS



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GROUP MATCH-UPS



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PARTNER MATCH-UPS



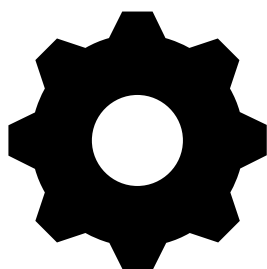
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GROUP MATCH-UPS



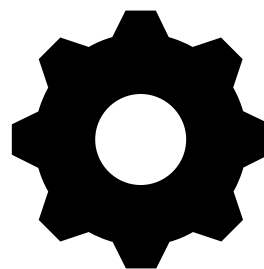
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PARTNER MATCH-UPS



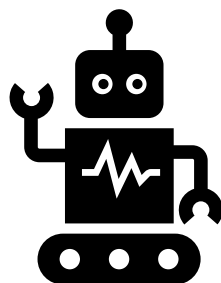
©Brooke Brown

GROUP MATCH-UPS



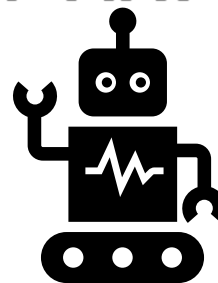
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PARTNER MATCH-UPS





















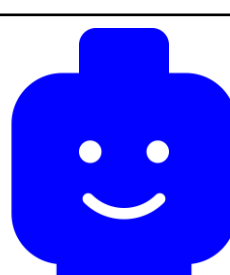
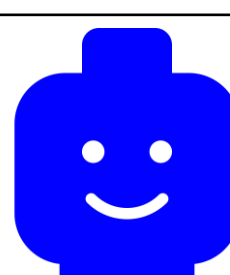



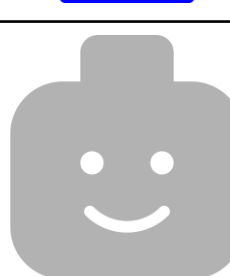
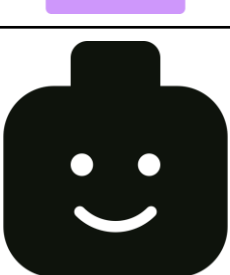
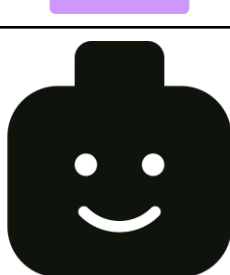
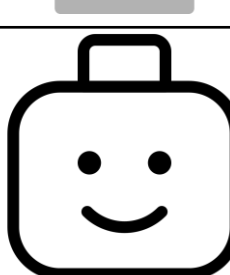
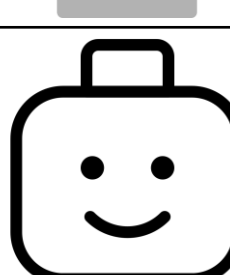
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GROUP MATCH-UPS

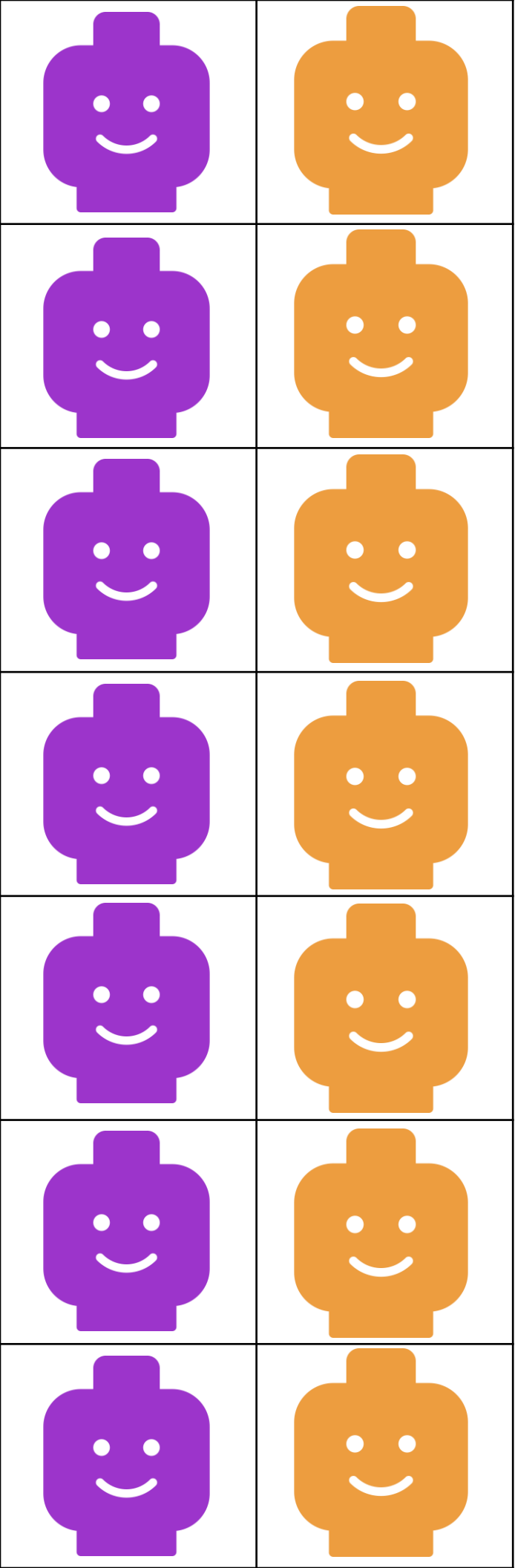


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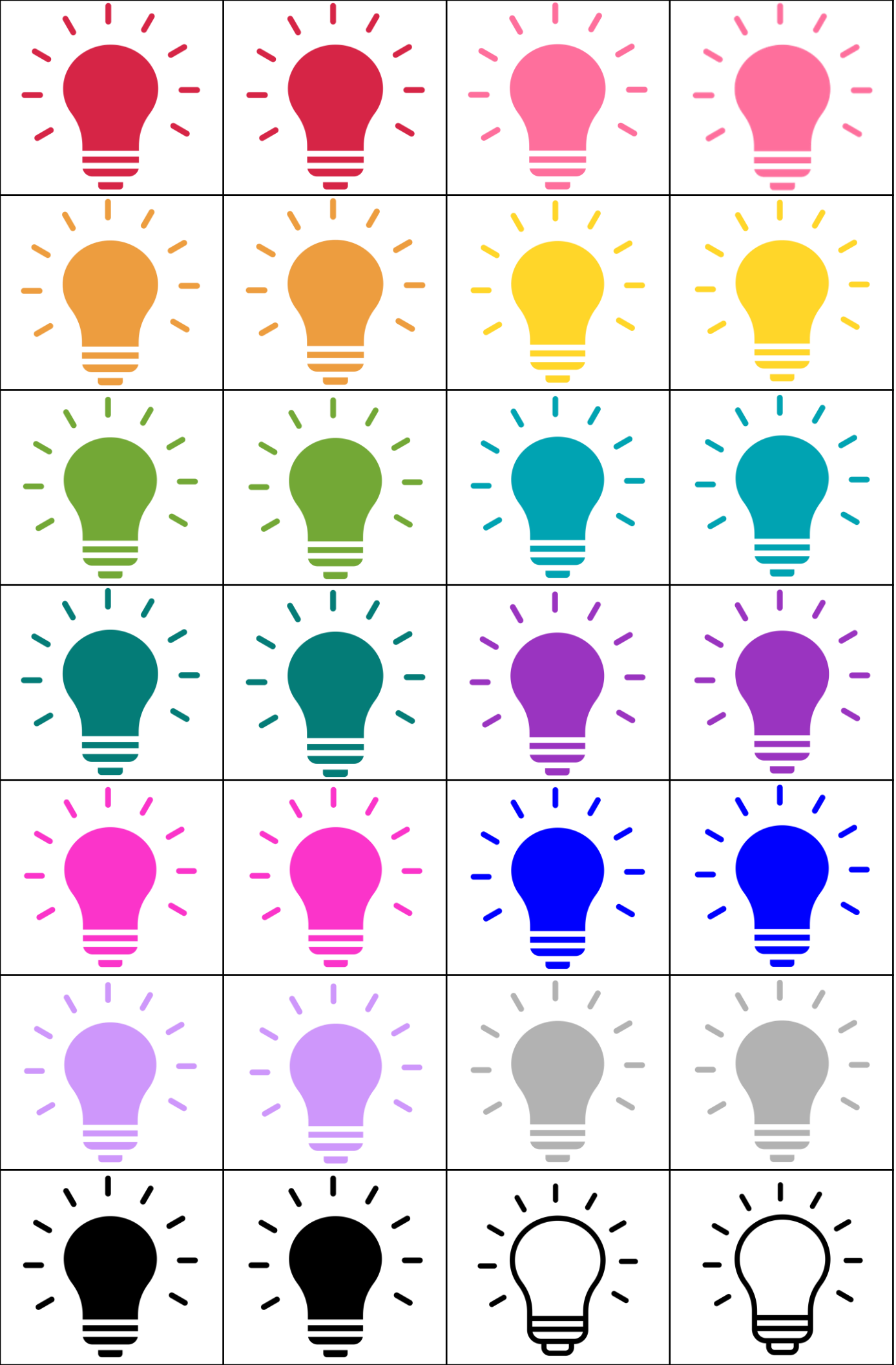
PARTNER MATCH-UP CARDS

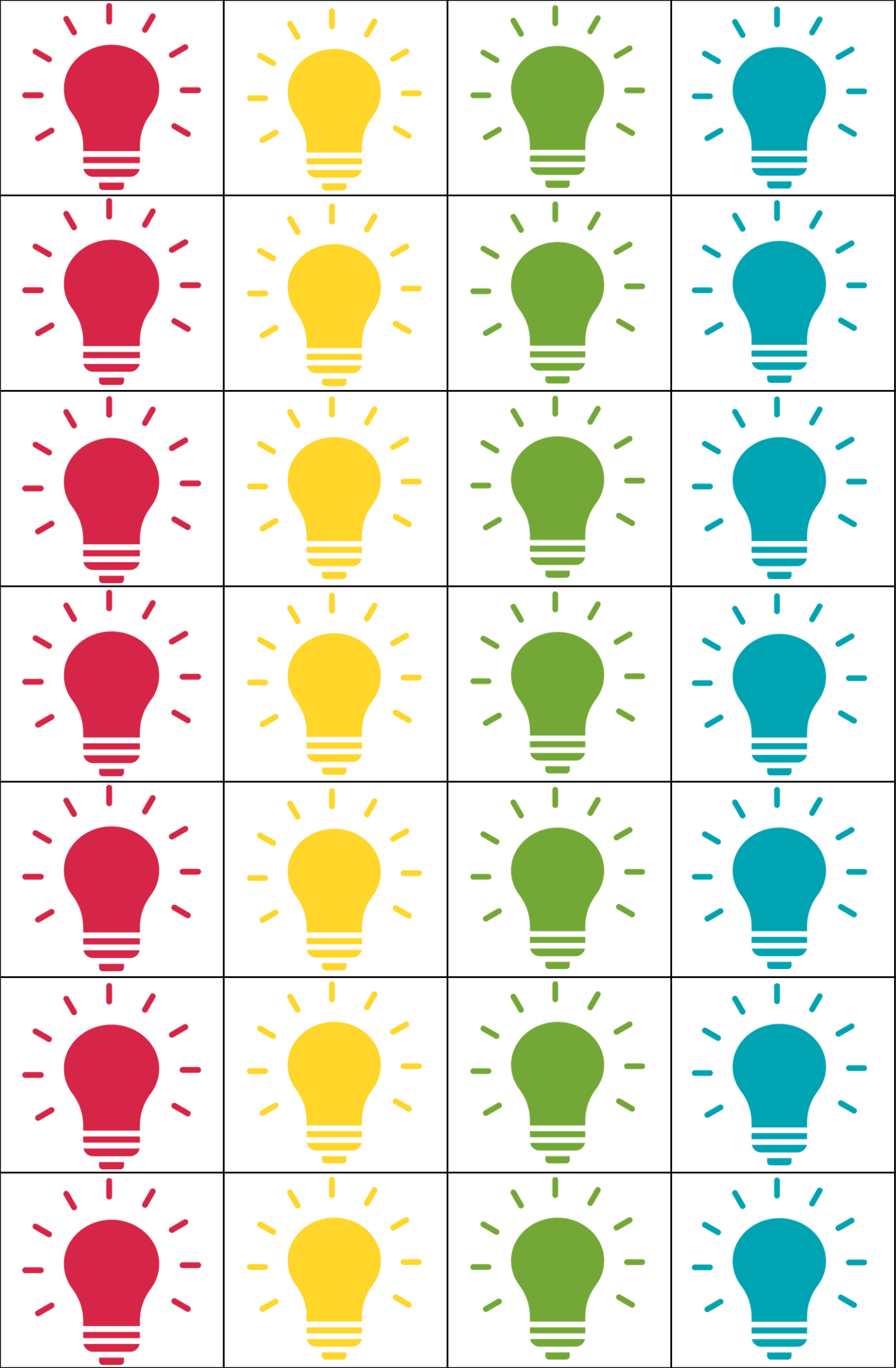
GROUP MATCH-UP CARDS



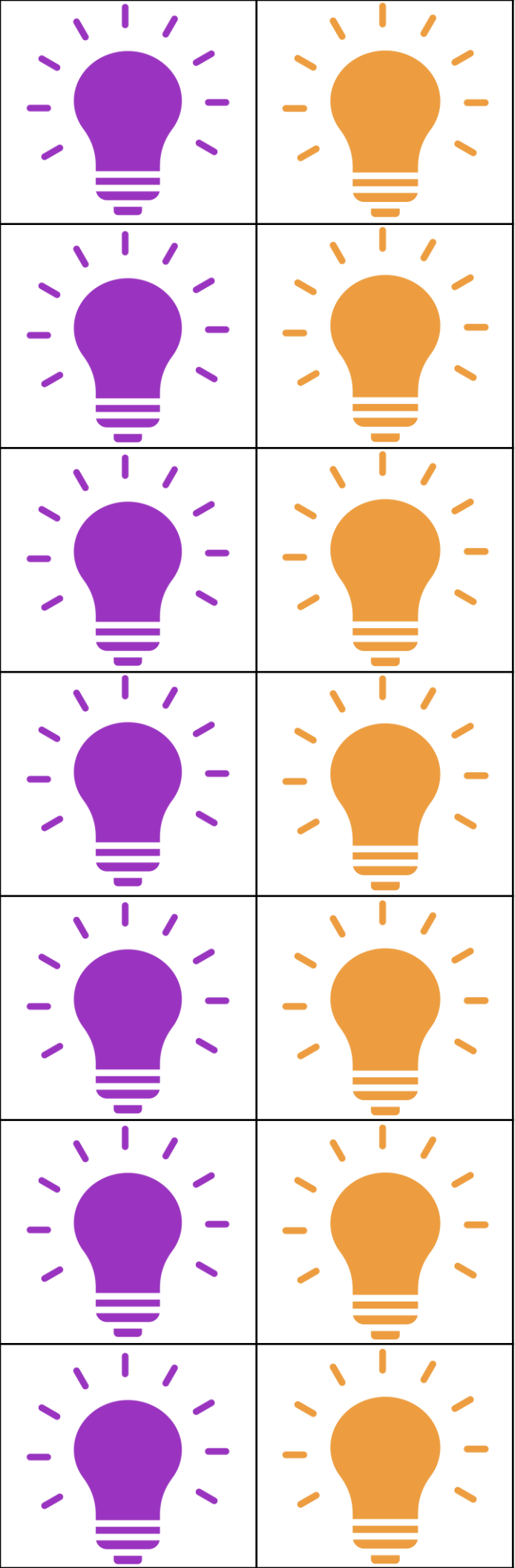
PARTNER MATCH-UP CARDS



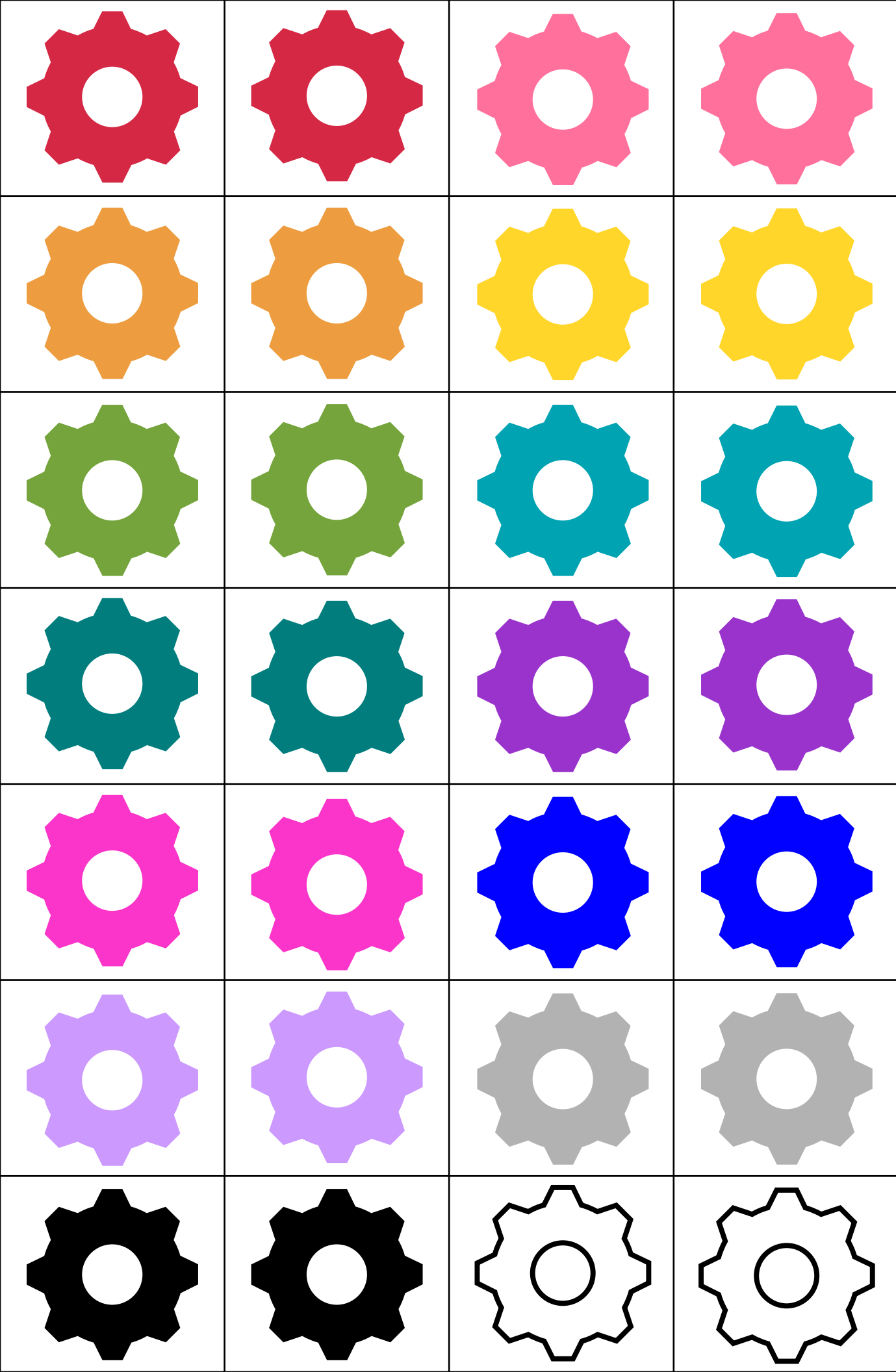
GROUP MATCH-UP CARDS



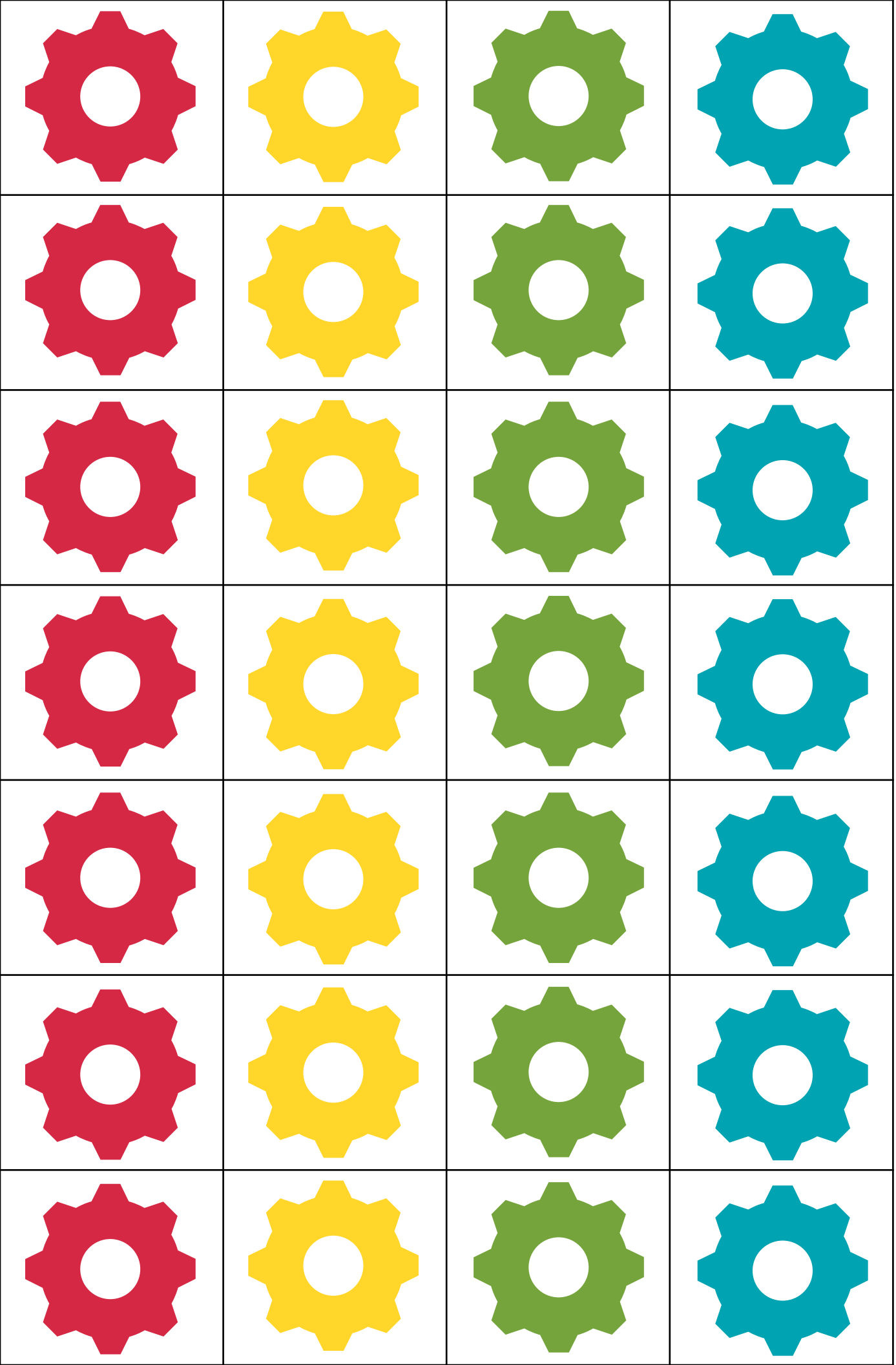
GROUP MATCH-UP CARDS



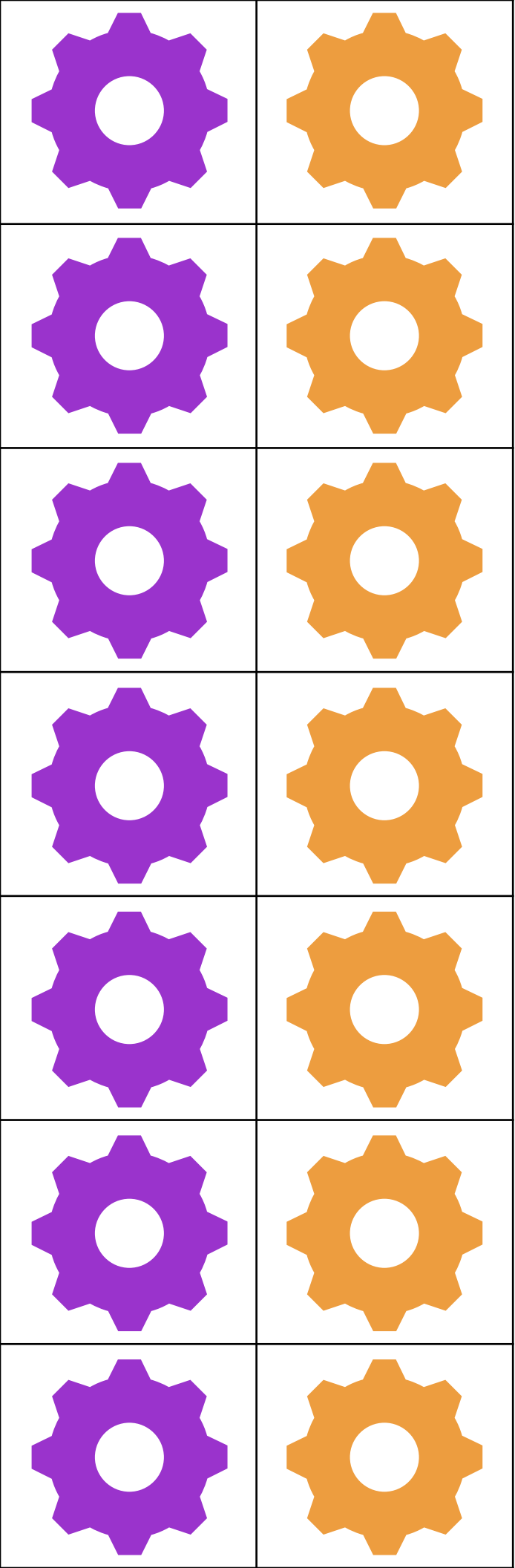
PARTNER MATCH-UP CARDS



GROUP MATCH-UP CARDS



GROUP MATCH-UP CARDS

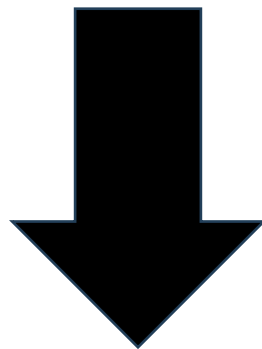


GROUP ROTATION CHARTS





The following digital charts are perfect for managing rotated STEM/STEAM stations.

There are options for 4, 5, and 6 groups that are color-coded to match the Group Cards on the previous pages. You can type students' names in the charts and use the "STEM Rotations" chart to rotate color groups. Options with timers are also provided.





CLICK BELOW FOR GROUP CHARTS AND ROTATION CHARTS



STEM VERSION

STEM ROTATIONS			
GROUP 	GROUP 	GROUP 	GROUP 
1	2	3	4
MATERIALS AND/OR INSTRUCTIONS	MATERIALS AND/OR INSTRUCTIONS	MATERIALS AND/OR INSTRUCTIONS	MATERIALS AND/OR INSTRUCTIONS

STEAM VERSION

STEAM ROTATIONS			
GROUP 	GROUP 	GROUP 	GROUP 
1	2	3	4
MATERIALS AND/OR INSTRUCTIONS	MATERIALS AND/OR INSTRUCTIONS	MATERIALS AND/OR INSTRUCTIONS	MATERIALS AND/OR INSTRUCTIONS

GROUP ROLE CARDS & BRACELETS

If you would like to provide more structure and responsibility for your students with cooperative group roles during STEM/STEAM challenges, the following cards and bracelets are provided. You may also have students share roles.

Keep in mind that all group members should be participating in the overall design, build, and improvement of the project.

The Group Role bracelets can be printed on different colors of paper to match each color group, laminated, and stapled for repeated uses. You may also add Velcro dots so that they are easy to put on and take off.



LEAD ENGINEER



- Makes team decisions
- Makes sure everyone has a voice and is participating
- Encourages team members

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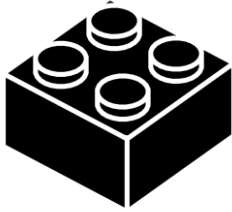
ARCHITECT



- Puts together team design ideas
- Draws and labels final blueprint
- Makes sure that the design follows the blueprint

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MATERIALS MANAGER



- Gathers materials
- Keeps materials organized
- Makes sure materials are not wasted
- Puts materials away

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PROJECT TESTER



- Uses measurement tools as needed
- Records test results
- Shares improvement ideas with the team

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TIMEKEEPER



- Makes sure group members stay on task
- Keeps track of time left
- Makes sure time is being used wisely

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PRESENTER

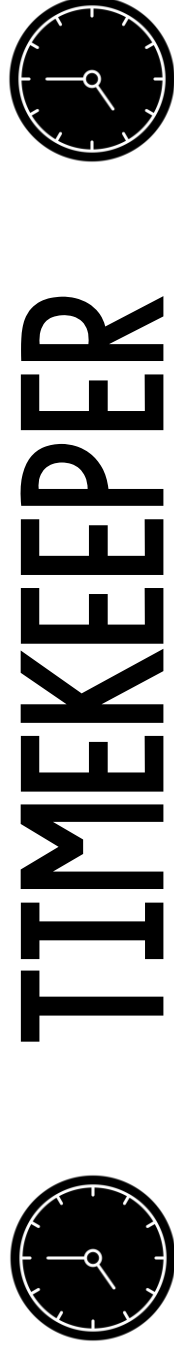
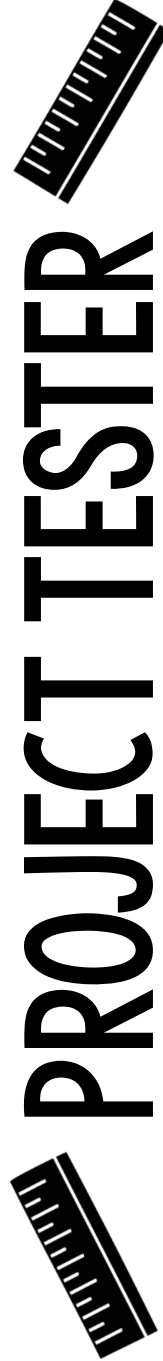
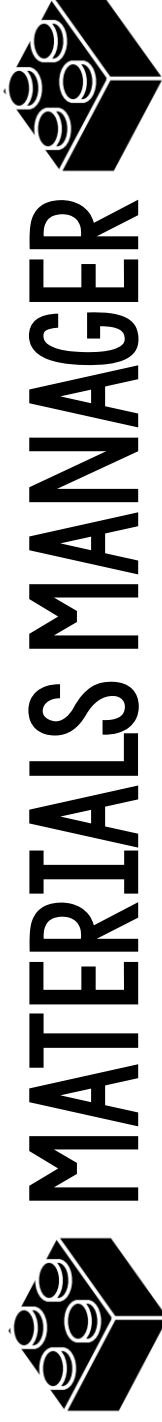
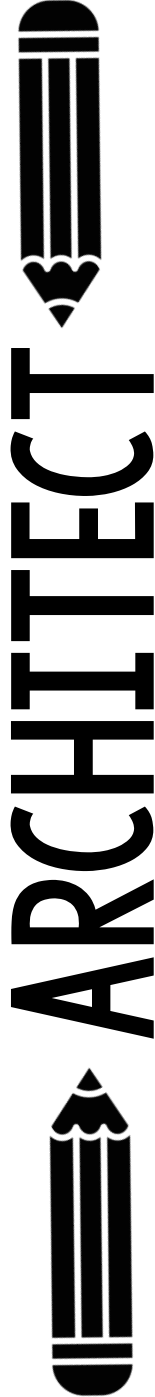


- Shares final design with the class
- Shares team successes and struggles
- Answers questions about the project

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STEM/STEAM GROUP ROLE BRACELETS

These Cooperative Group Role bracelets can be printed on different colors of paper to match each color group, laminated, and stapled for repeated uses. You may also add Velcro dots so that they are easy to put on and take off.

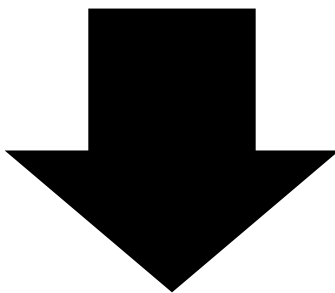


STEM/STEAM STATION TENTS

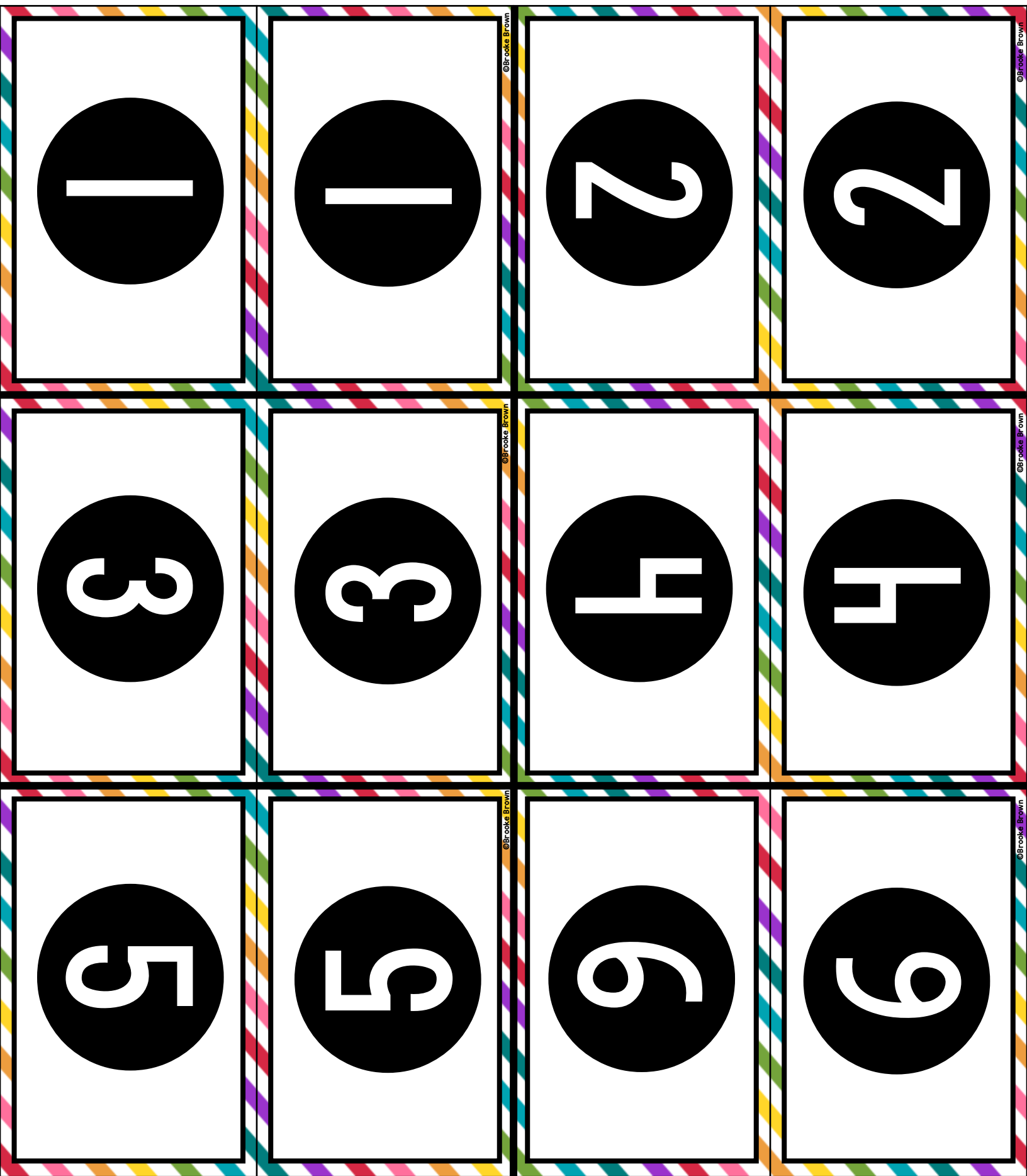
Use the following STEM/STEAM Station tents to help students easily rotate to numbered stations.



Click below to access [EDITABLE and printable Google Slides templates](#) that you can customize and print for each station.



If you would like to number STEM/STEAM stations for students to rotate through, you can use these mini table tents. Cut apart and fold in half so that the number is visible on both sides of the tent. You can also put them inside large binder clips and stand them up.



STEM/STEAM INCENTIVES & REWARDS

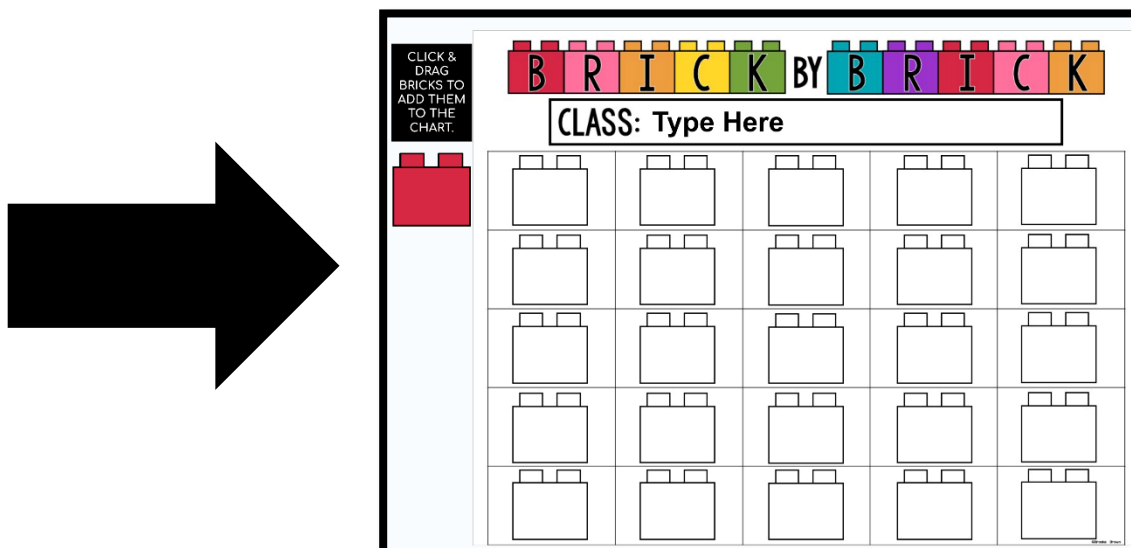
WHOLE CLASS REWARD

The following large "Brick by Brick" chart can be used to determine a whole class goal with a reward.

Laminate, cut the colored bricks apart, and put Velcro dots on the back. Put the opposite Velcro dots on the white bricks on the empty chart. Stick a brick on the chart every time the class meets the designated goal. When the class earns the predetermined number of bricks, they will receive a reward.



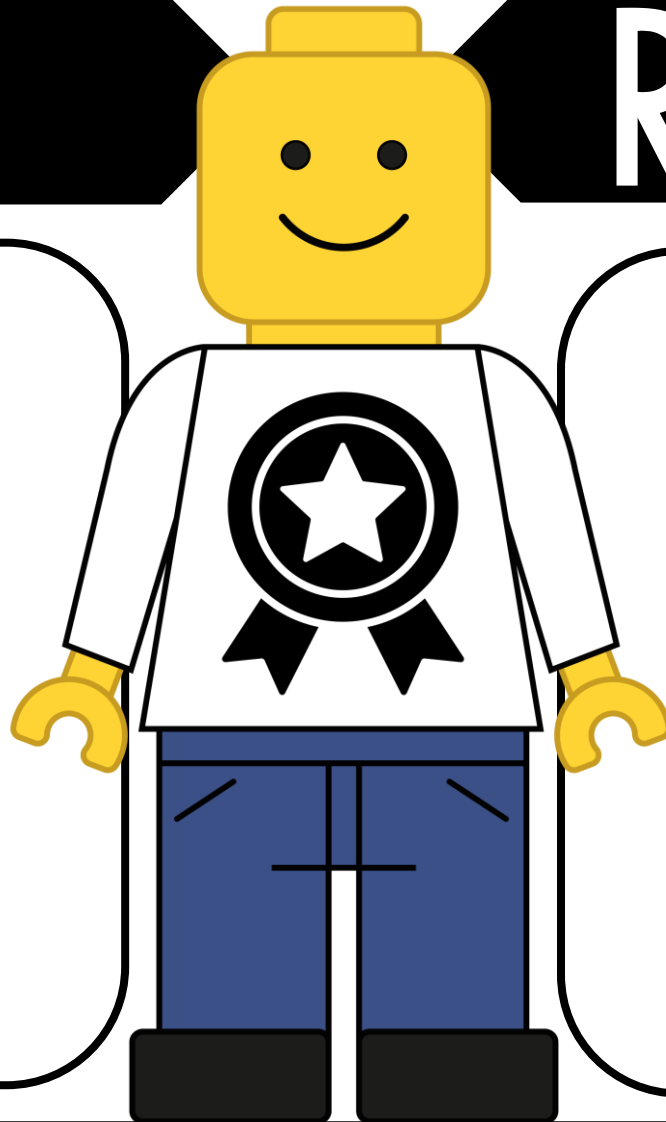
You may also access a [Digital Google Slides of the "Brick by Brick" reward system](#) below:



B R I C K BY B R I C K

GOAL

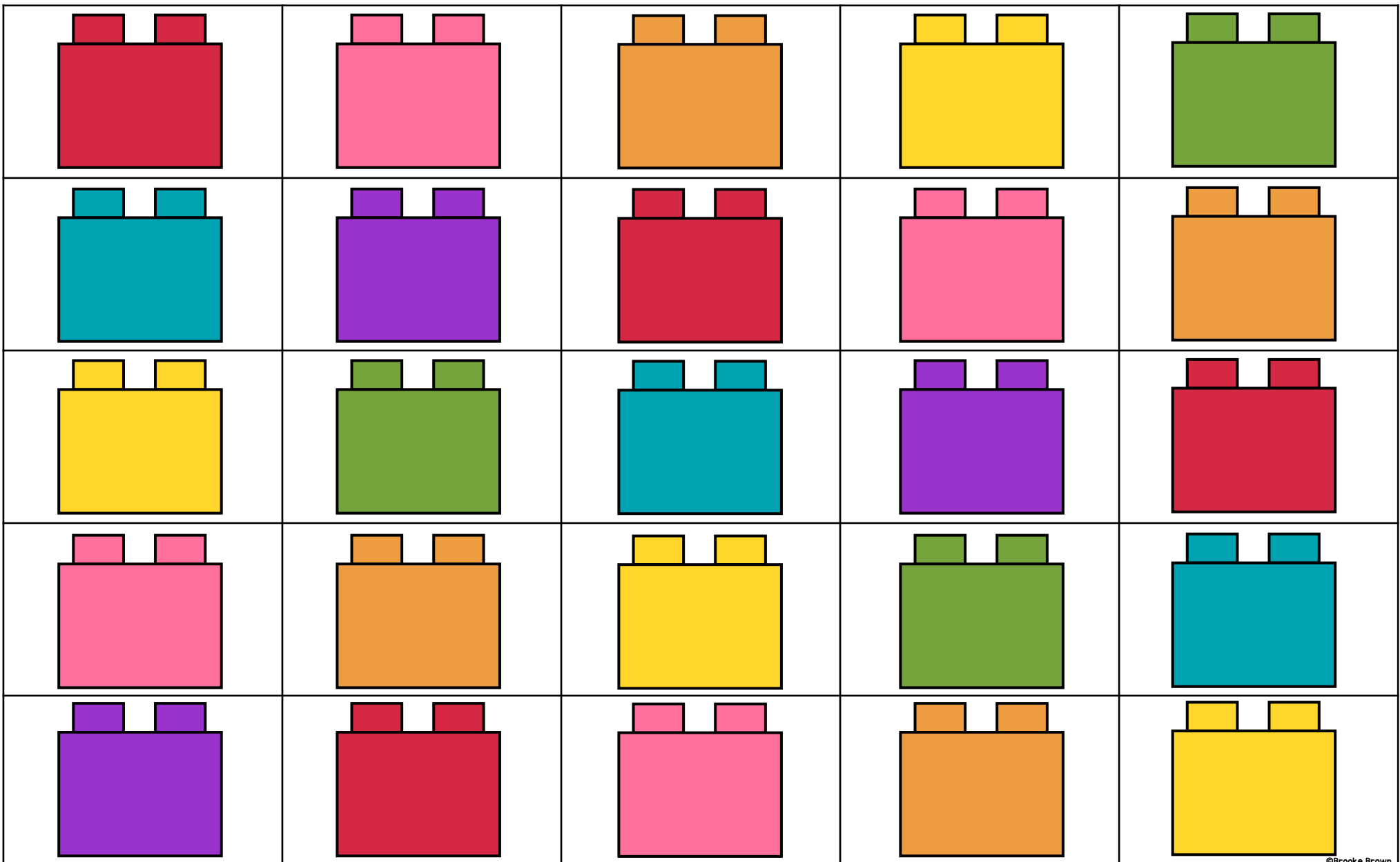
REWARD



B R I C K BY **B R I C K**

CLASS:

Laminate, cut the colored bricks apart, and put Velcro dots on the back. Put the opposite Velcro dots on the white bricks on the previous empty chart. Stick a brick on the chart every time the class meets the designated goal. When the class earns the predetermined number of bricks, they will receive a reward.



STEM/STEAM INCENTIVES & REWARDS

GROUP OR CLASS REWARDS

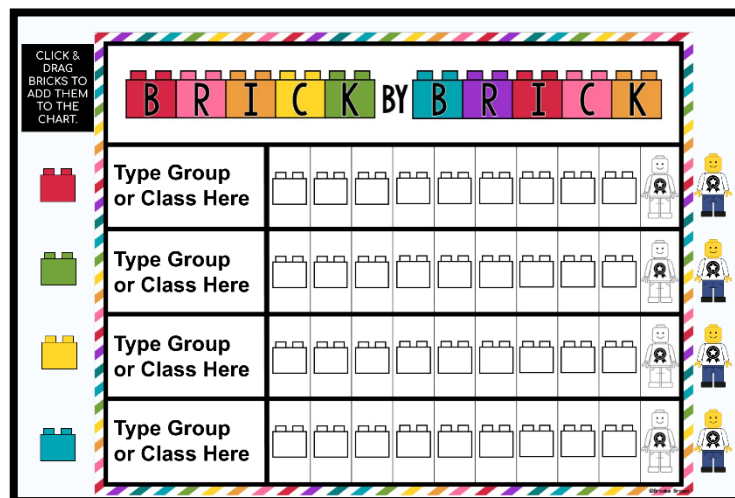
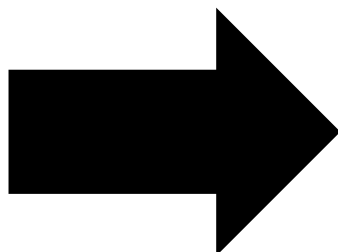
The following charts are designed for rewarding groups or classes. There are options for 4, 5, and 6 groups or classes.

Type the group or class into the boxes on the left-hand side. Then print and laminate the charts or put inside dry erase pockets.

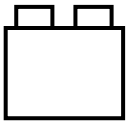
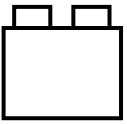
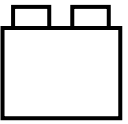
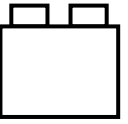
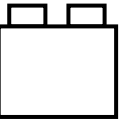
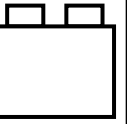
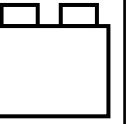
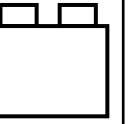
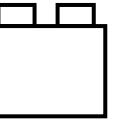
Every time a group or class meets a specific goal, use a dry erase marker to color in a brick. When a group or class reaches 10 bricks, they will receive a reward.

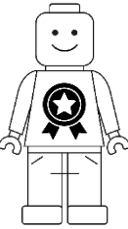


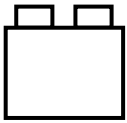
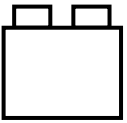
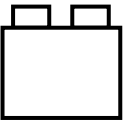
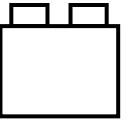
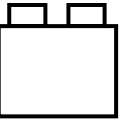
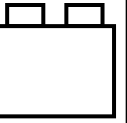
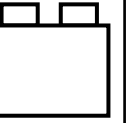
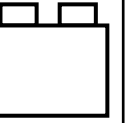
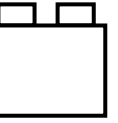
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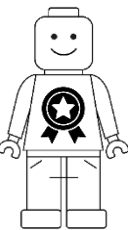


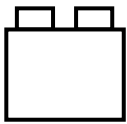
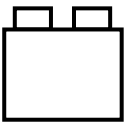
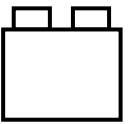
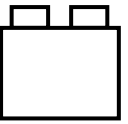
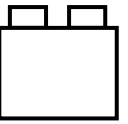
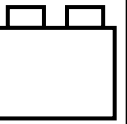
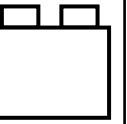
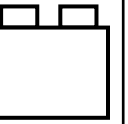
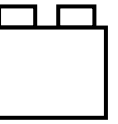
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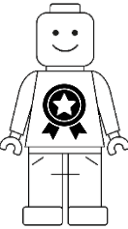
									
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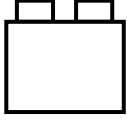
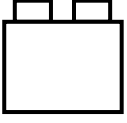
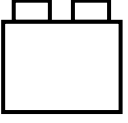
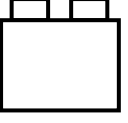
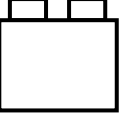
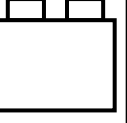
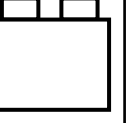
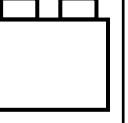
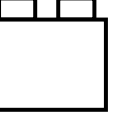


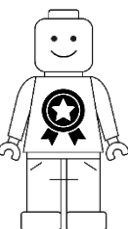
									
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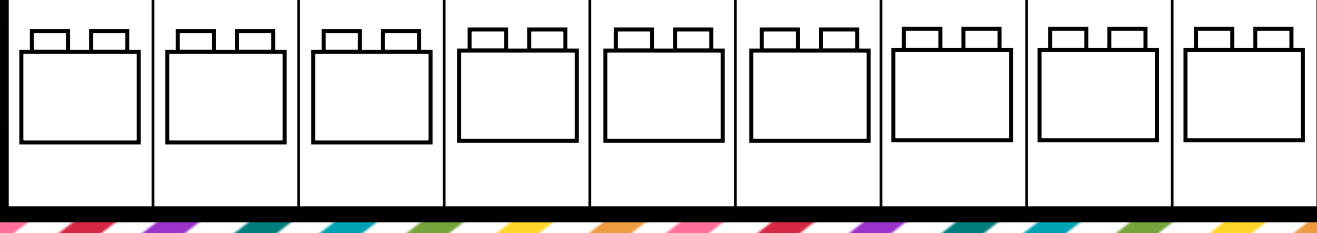
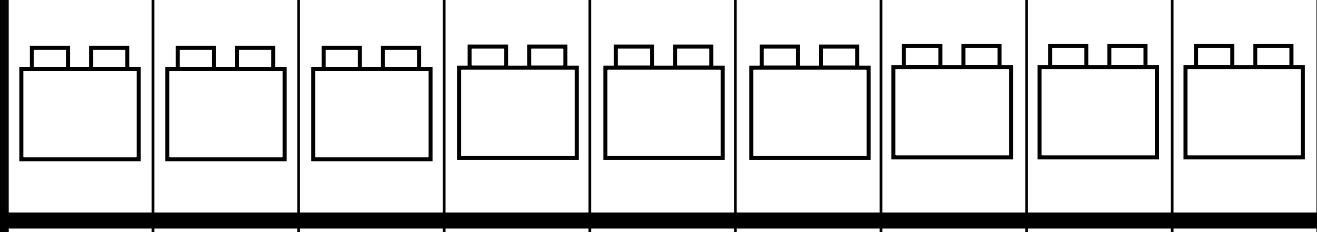
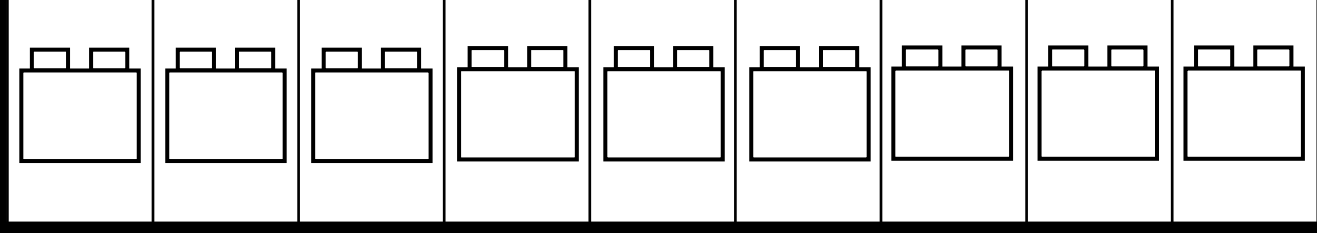
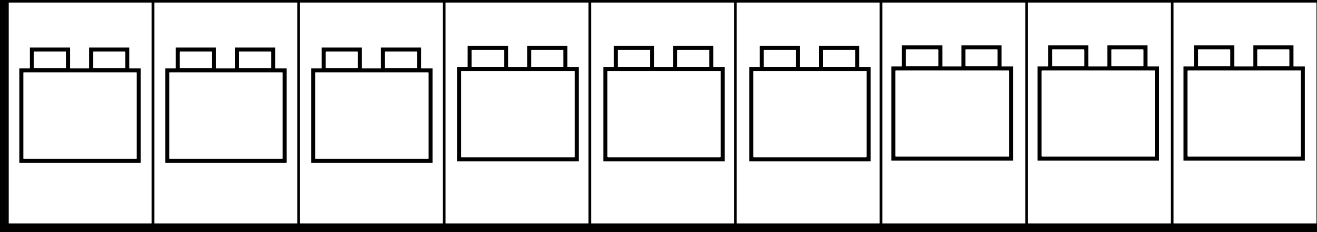
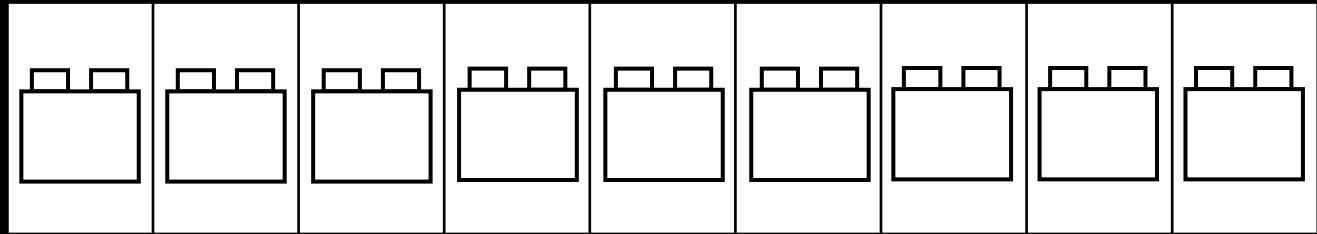
									
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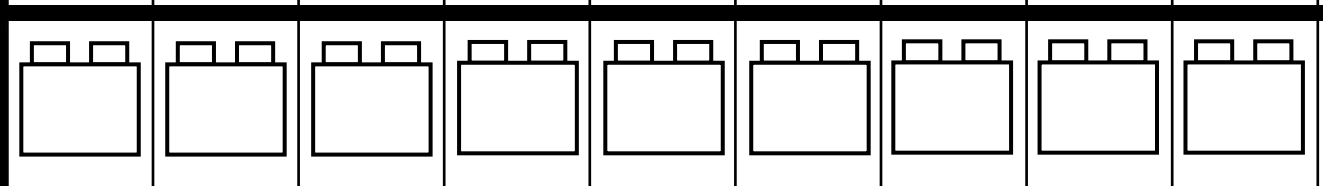
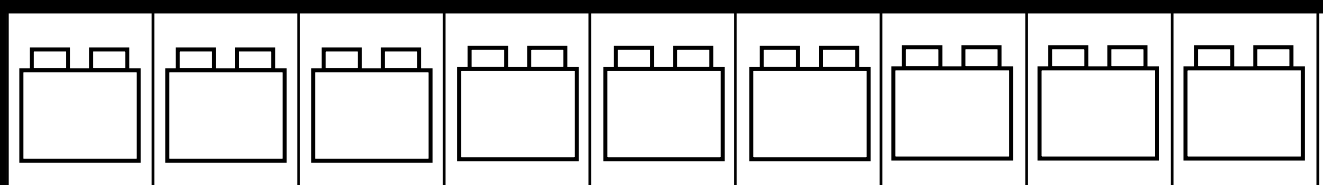
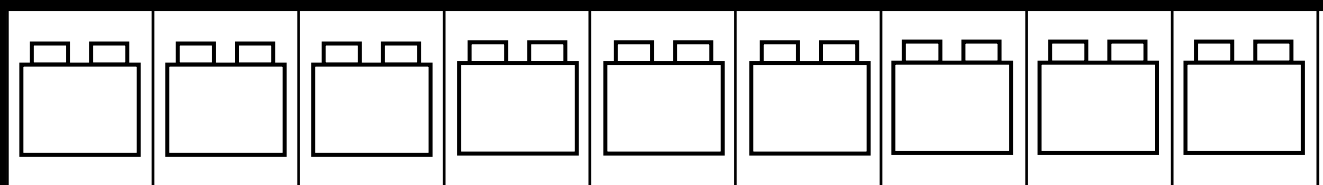
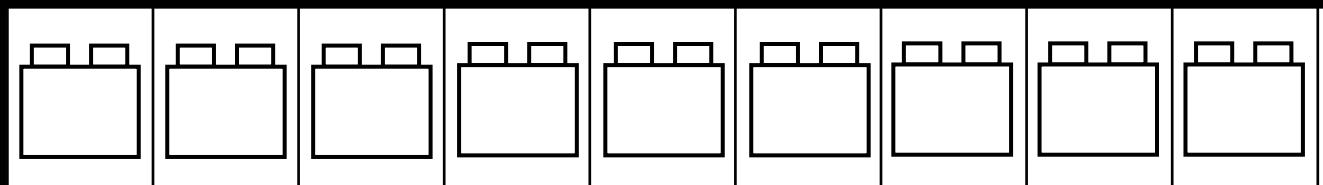
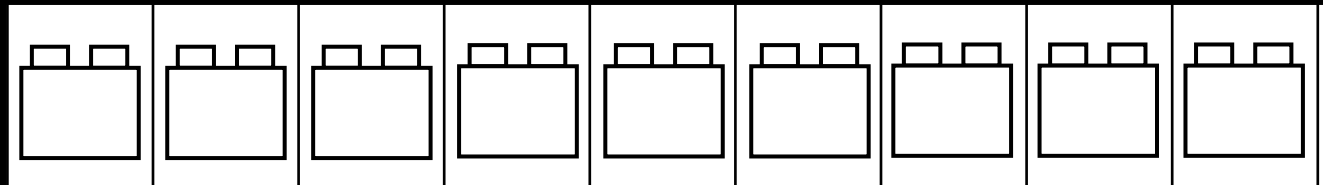
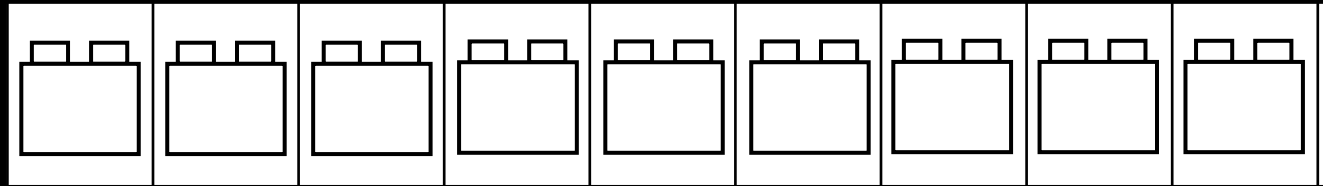
									
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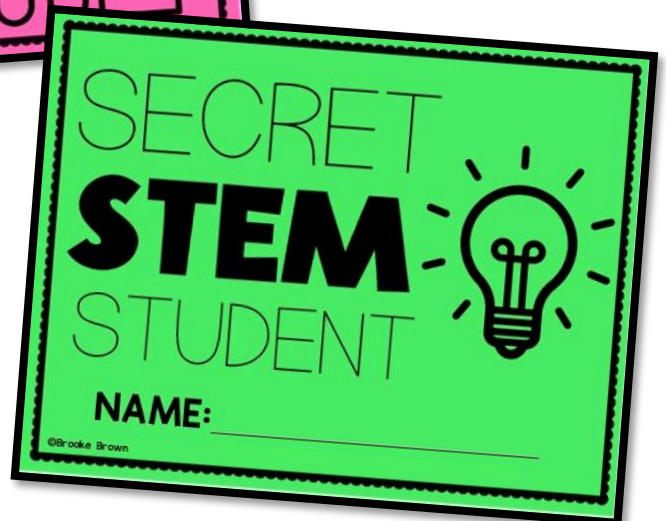
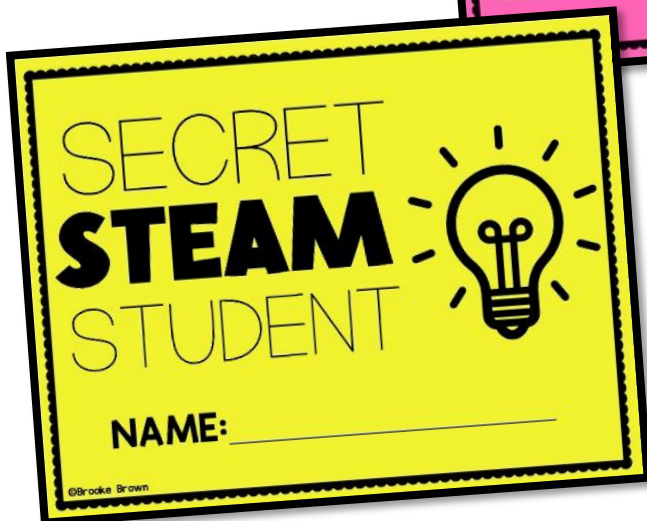
STEM/STEAM INCENTIVES & REWARDS

INDIVIDUAL REWARDS

The following reward certificates are designed for individual incentives.

At the beginning of class, the teacher will randomly select a student that is the "Mystery Maker," "Secret STEM Student," or "Secret STEAM Student." The name of this student is kept secret until the end of class.

At the end of class, if the Mystery or Secret student demonstrated satisfactory behavior, their name will be revealed and they will receive a reward certificate. If behavior goals are not met, the student's name is kept secret and no reward certificate is given.



MYSTERY
MAKER

NAME:



MYSTERY
MAKER

NAME:



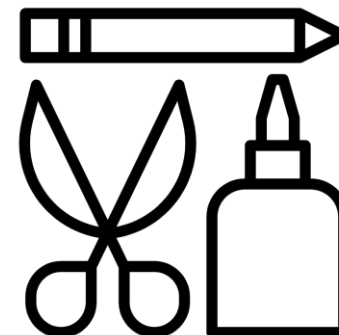
MYSTERY
MAKER

NAME:



MYSTERY
MAKER

NAME:



SECRET

STEM

STUDENT



NAME: _____

SECRET

STEM

STUDENT



NAME: _____

SECRET

STEM

STUDENT



NAME: _____

SECRET

STEM

STUDENT



NAME: _____

SECRET
STEAM
STUDENT



NAME: _____

SECRET
STEAM
STUDENT



NAME: _____

SECRET
STEAM
STUDENT



NAME: _____

SECRET
STEAM
STUDENT



NAME: _____

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