STEMLab ACTIVITY

NAME:

courtesy of Ms. Jill's STEAMworks

Kindergarten: *The Dot*

Draw a picture featuring a dot (that is not simply a dot)

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Kindergarten: *Creepy Carrots*

Draw a solution to a problem in the book

STEMLab ACTIVITY

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Kindergarten: Bugs & Crawly Things

The Very Ugly Bug

Draw/color a very ugly bug

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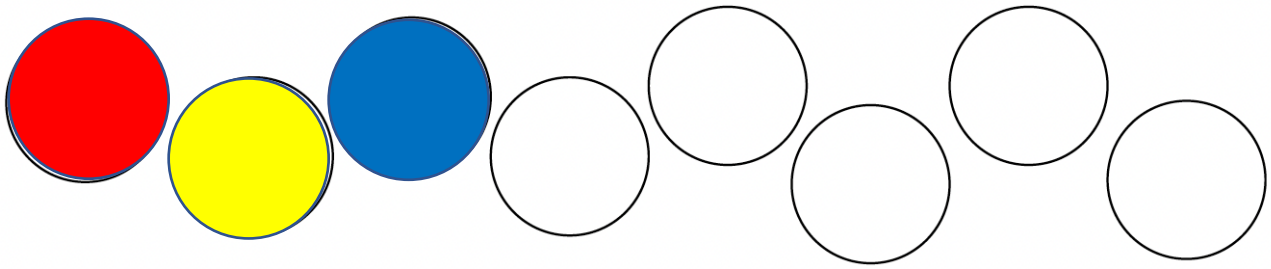
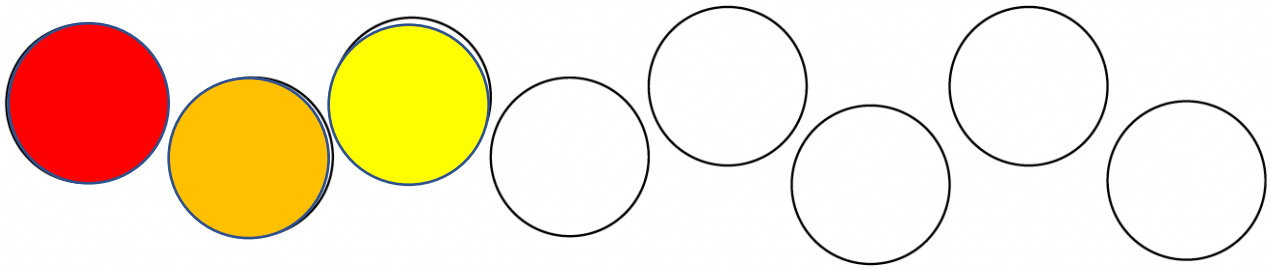
Kindergarten: Bugs & Crawly Things

Continue the pattern (sequence) on the caterpillar with crayons

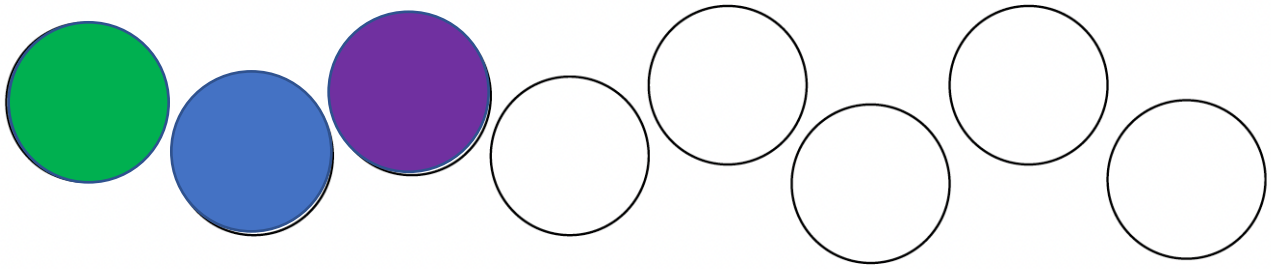
Primary colors



Warm colors



Cool colors



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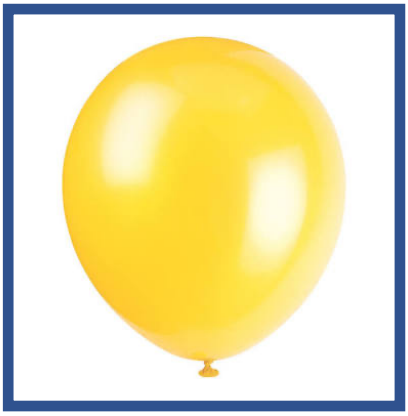
Kindergarten Push/Pull

Cut out the seven squares rectangles/squares and glue them on the push/pull worksheet in the proper place.



STEMLab ACTIVITY

NAME:

Kindergarten: Push/Pull

courtesy of Ms. Jill's STEAMworks

PUSH	PULL

STEMLab ACTIVITY

NAME:

courtesy of Ms. Jill's STEAMworks

Kindergarten: Magnets: **Test items such as: Hexbug Nano, paper clip, penny, aluminum foil ball, cotton ball, plastic Lego, pencil.**

MAGNETIC	NON-MAGNETIC

STEMLab ACTIVITY

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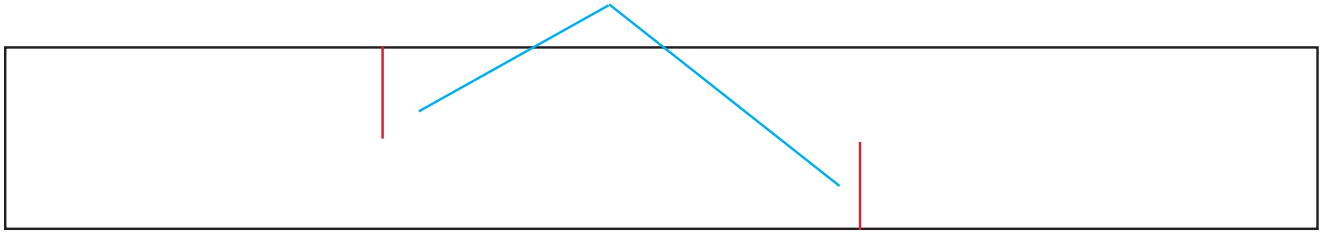
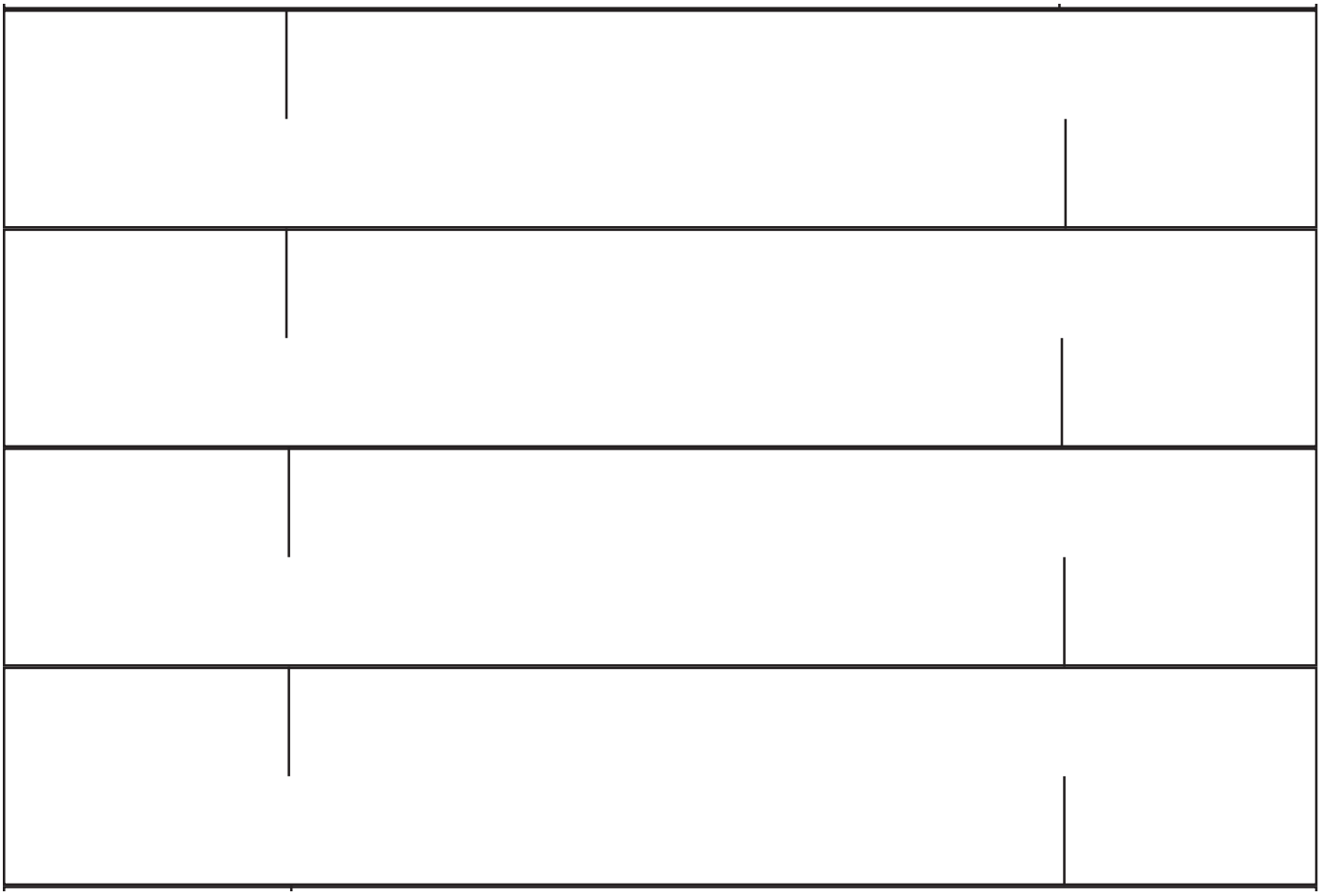
Kindergarten: Paper flight engineering

Paper copter template

Cut a long strip of paper. Cut on the solid red lines, then loop around and slide the slots together.





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Kindergarten: Weight/Mass: Test items

such as: glass marble vs. ping-pong ball, Jenga block vs. 2 x 6 Lego, steel marble vs. domino, dry sponge vs. wet sponge, pencil vs. steel marble, Lego vs. eraser, Playdough cannister vs. tennis ball

HEAVIER	LIGHTER

STEMLab ACTIVITY

NAME:

courtesy of Ms. Jill's STEAMworks

Kindergarten: Weight/Mass/Gravity

Gravity drop experiment: Which will hit the ground first when dropped? Steel marble or ping-pong ball? Tin foil ball or ping-pong ball? Big binder clip or golf pencil? Cotton ball or feather? Jenga block or domino? Lego block or pencil? Piece of paper or cotton ball?

HIT FIRST	HIT SECOND

STEMLab ACTIVITY

NAME:

courtesy of Ms. Jill's STEAMworks

Kindergarten: Buoyancy

Sink or float? **Test items such as: Aluminum foil ball, cotton ball, piece of sponge, piece of swim noodle, paper clip, big binder clip, penny, pencil, Lego brick, superball**

FLOAT	SINK

STEMLab ACTIVITY

NAME:

courtesy of Ms. Jill's STEAMworks

Kindergarten: Buoyancy:

Buoyancy of materials

Determine
(1) which boat stays afloat the longest when empty
(2) which boat can carry the most marbles before sinking

Hypothesis: Which boat do you think will stay afloat the longest when empty?

Your Answer: _____

BOAT	Seconds afloat	Marbles carried
Aluminum foil		
Ivory soap		
Sponge		
Straws		
Legos		
Pool noodles		

STEMLab ACTIVITY

NAME:

courtesy of Ms. Jill's STEAMworks

Kindergarten: Friction testing

Which surface causes the most and least friction? Put you hypotheses in order by gluing a piece of the surface covering in the HYPOTHESIS COLUMN. Then glue the results in the TEST RESULTS column. Choose 5-6 surfaces from: waxed paper, aluminum foil, sandpaper strips, masking tape strips, cardboard, wood, Styrofoam, cloth, etc.

	HYPOTHESES	TEST RESULTS
Most Friction		
Least friction		

STEMLab ACTIVITY

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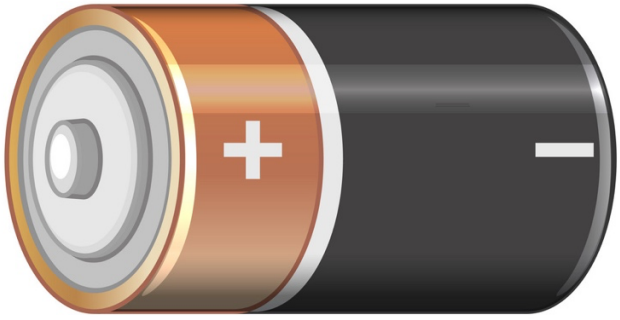
Kindergarten: Batteries

Circle the POSITIVE side.



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Kindergarten: Batteries

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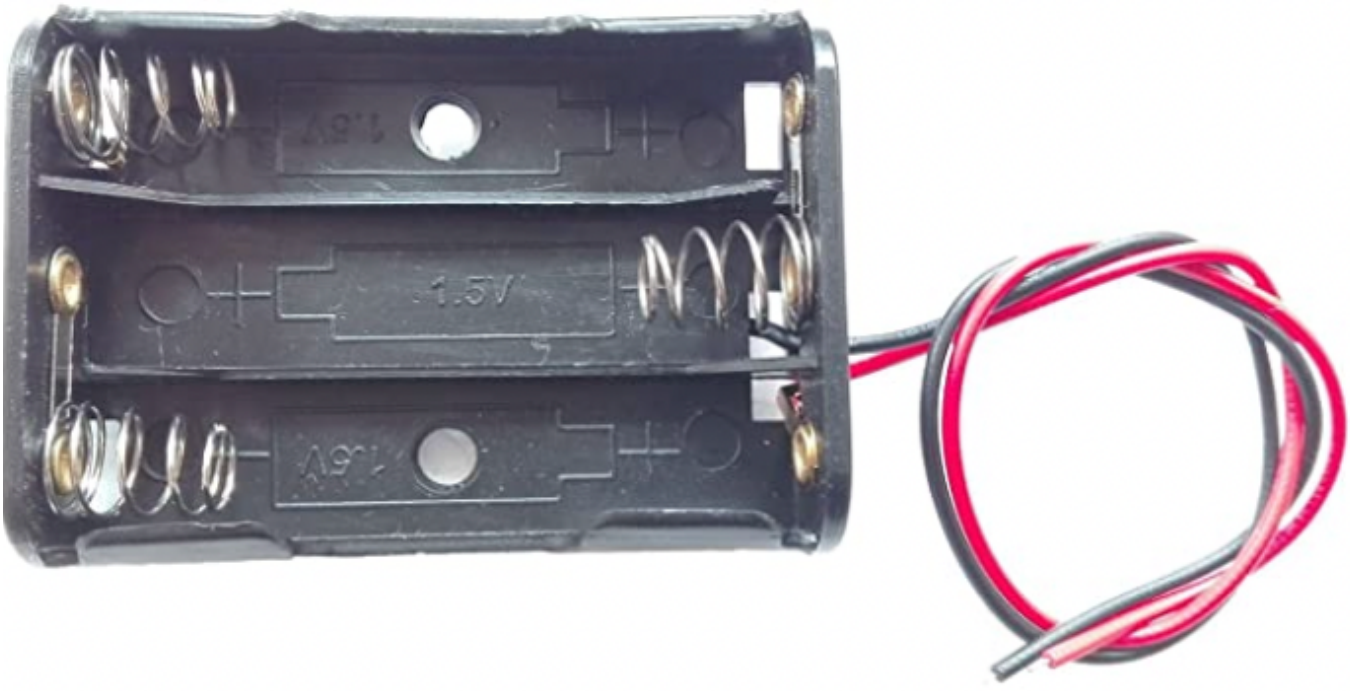

STEMLab ACTIVITY

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Kindergarten: Robotics

Beebot skills checklist (for teacher use; students add stars)

Put a check mark or color in the box after you have completed each task.	
	Move in an L shape
	Move in a square
	Move in a rectangle
	Move in an L shape then do the same route backwards
	Pick a card and move to that shape and color on the mat
	Pick a card and move to a shape with the same number of sides
	Go to all four corners of the mat
	Spell your name on the mat
	Move to every square on the board in the fewest steps
	Complete the maze
	Do the *Itsy Bitsy Spider* with Beebot linear mat
	Move Beebot through sneakers in the same sequence as Pete the Cat
	Pick a card and get the Beebot from HOME to the place ojn the card
	See how many Red cups can be pushed 4 forwards by Beebot
	See how many Red cups can be pulled 4 forwards by Beebot
	Make a tower with cups that is easy for Beebot to knock over (under 3 seconds)
	Make a tower with cups that is difficult for Beebot to knock over (over 3 seconds)
	Build a red cup wall and use craft sticks to make a doorway for Beebot

STEMLab ACTIVITY

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Kindergarten: Physics & Engineering

Chain reaction & building skills checklists (for teacher use; students add stars)

Put a check mark or color in the box after you have completed each task.	
	Standard domino chain
	Increasing size domino chain
	Double rows of domino chain
	Start chain reaction with a pendulum
	Start chain reaction with a gravity drop

Put a check mark or color in the box after you have completed each task.	
	Standard magnetic marble maze (all straight), end in bucket
	Use a bendy tube, L, or U in magnetic marble maze
	Use a fidget spinner in magnetic marble maze
	Use a gate device in magnetic marble maze

Put a check mark or color in the box after you have completed each task.	
	Build the tallest red cup tower
	Build the longest red cup wall
	Build the sturdiest red cup tower
	Build a blocks tower balanced on a single cube
	Build a cantilevered blocks structure
	Build a tower or wall with your choice of building materials in classroom

STEMLab ACTIVITY

NAME:

courtesy of Ms. Jill's STEAMworks

Kindergarten: Physics and Circuitry

Force and motion & circuitry skills checklists (for teacher use; students add stars)

Put a check mark or color in the box after you have completed each task.	
	Answer "what can push"
	Answer "what can pull"
	Make 2 gears interact
	Make 4 or more gears interact
	Make gears of different sizes interact
	Use a gear crank
	Make a circle of gears
	Make a swim noodle gear
	Make a magnet pull another magnet
	Make a magnet push another magnet
	Pick up something with a magnet fishing rod
	Use a magnet to make the penguin skater move
	Use a magnet to move the magnetic ball through the maze

Put a check mark or color in the box after you have completed each task.				
	Complete battery positive or negative worksheet			
				Try out teacher-built circuitry devices
	Try out a commercial floor piano			
	Make a magnet LED circuit creature			