HALLOWEEN BOT BASICS

SIMPLE ROBOTICS CHALLENGES FOR BEGINNERS

DING DONG!

1) Tape the paper door to a glue stick.
2) Program your robot forward to touch th to "ring the doorbel backward to you.
3) Change the distance stick and program again.

SPOOKY SYMMETRY

1) Spread out your 6 "B" symmetry pieces on the floor. Put the other 6 "A" symmetry pieces in

TRICK OR TREAT

1) Create a path or maze with straight edges. You may use wooden planks, your maze.

HIDE IN THE HAUNTED HOUSE

1) Tape the haunted house to a box. Place the box in front of your robot.
2) Program your robot to move

WORD WEBS

1) Place the "NOUNS" spider card on the floor. Mix up the web cards and place them facedown in a stack.
2) Draw 8 web cards and place them in a circle around the spider card.
3) Place your robot on the spider card.

PUMPKIN POLYGONS

1) Connect the pumpkin mats with tape to make a large grid.
2) Mix up the polygon word cards and place them facedown in a stack.
3) Flip over the top card. your robot to move to matching polygon on th
4) Repeat with the

AROUND THE PUMPKIN PATCH

1) Build a pumpkin out of linking cubes.
2) Program your robot to go und the

CANDY COUNT

1) Build a tower out of your candy mini cups.
2) Program your robot to crash into the cups and knock down as cups that

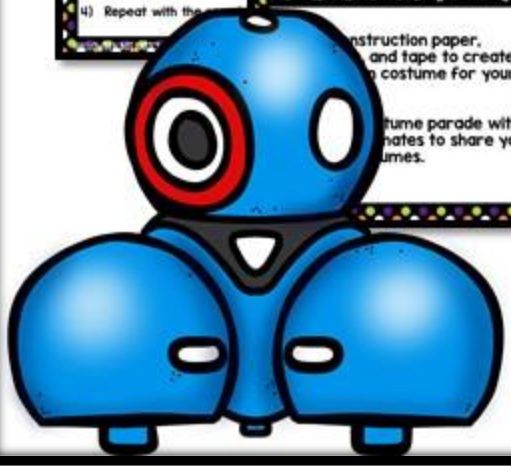
COSTUME PARADE

nstruction paper, and tape to create a costume for your

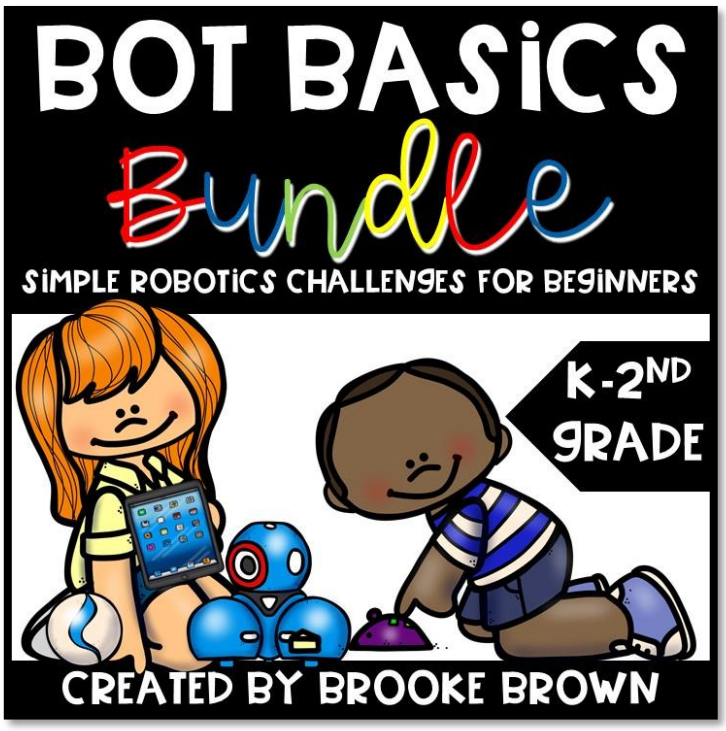
tume parade with hates to share your umes.

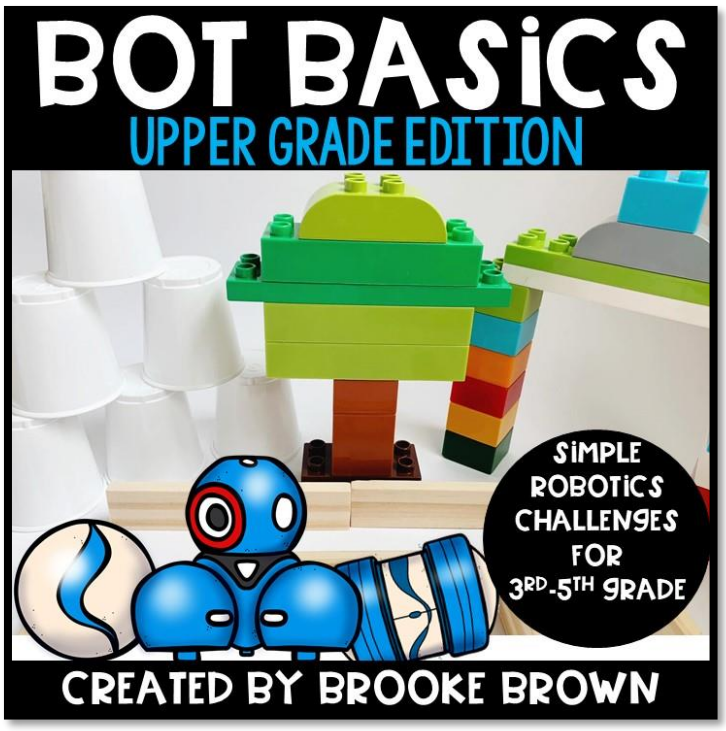
TREAT COLLECTOR

1) Create a shovel out of a paper cup and tape it to the front of your robot.
2) Spread pieces of candy out on the floor.
3) Program your robot to use the shovel to push the pieces of candy into a pile.
4) Spread out the candy and collect again!



LOVE THESE ROBOTICS CHALLENGES? YOU'LL LOVE MY OTHER BOT BASICS PACKS!





CONTENTS

WHAT YOU NEED

The following Bot Basics challenges will work with almost any moving, programmable robot and the tasks will vary slightly depending on the size and abilities of your robots.

Suggested Robots

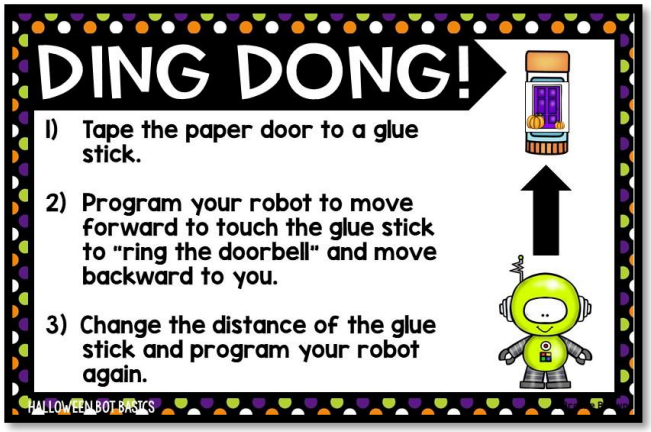
-Sphero Spark
-Sphero Bolt
-Sphero Ollie
-Sphero Mini
-Ozobot Bit (OzoBlockly)
-Ozobot Evo (OzoBlockly or Evo app)
-Dash
-Bee-Bot
-Code and Go Mouse
-Botley

HOW TO USE

Halloween Bot Basics can used as robotics stations and can also be used as a whole class if you have multiple robots for students to share. Print the provided instruction cards and pieces and laminate for durability.

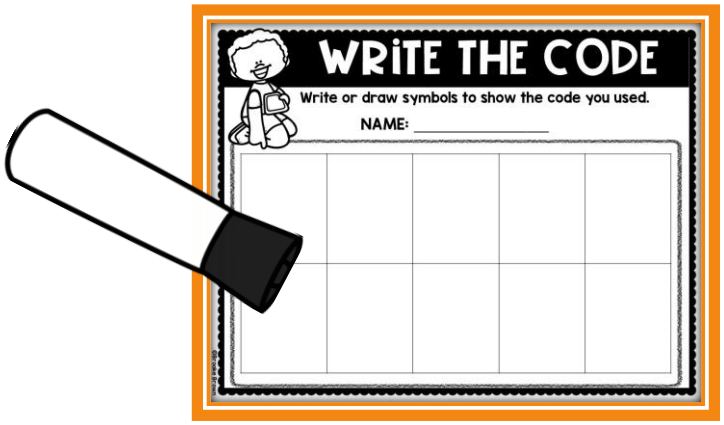
Direction cards can by folded in half as tents to display at each station. These cards can be stored in gallon-sized Ziplock baggies with extra pieces when not in use.

Students follow the challenge instructions to program their robots. Some challenges may include basic school supplies or building materials or may require students to build a path or maze.



OPTIONAL WRITTEN CODES:

Make copies of the most appropriate templates for your robots on pages 7-8 for students to write the codes OR place inside dry erase pockets or page protectors for students to use with write and wipe markers.



WRITE THE CODE

Write or draw symbols to show the code you used.

NAME: _____

WRITE THE CODE

Write or draw symbols to show the code you used.

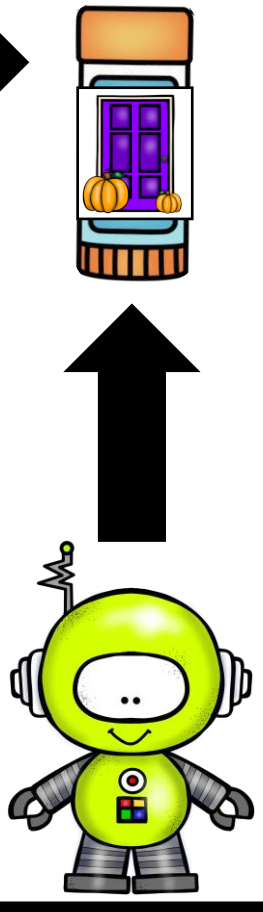
NAME: _____

DING DONG!

1) Tape the paper door to a glue stick.

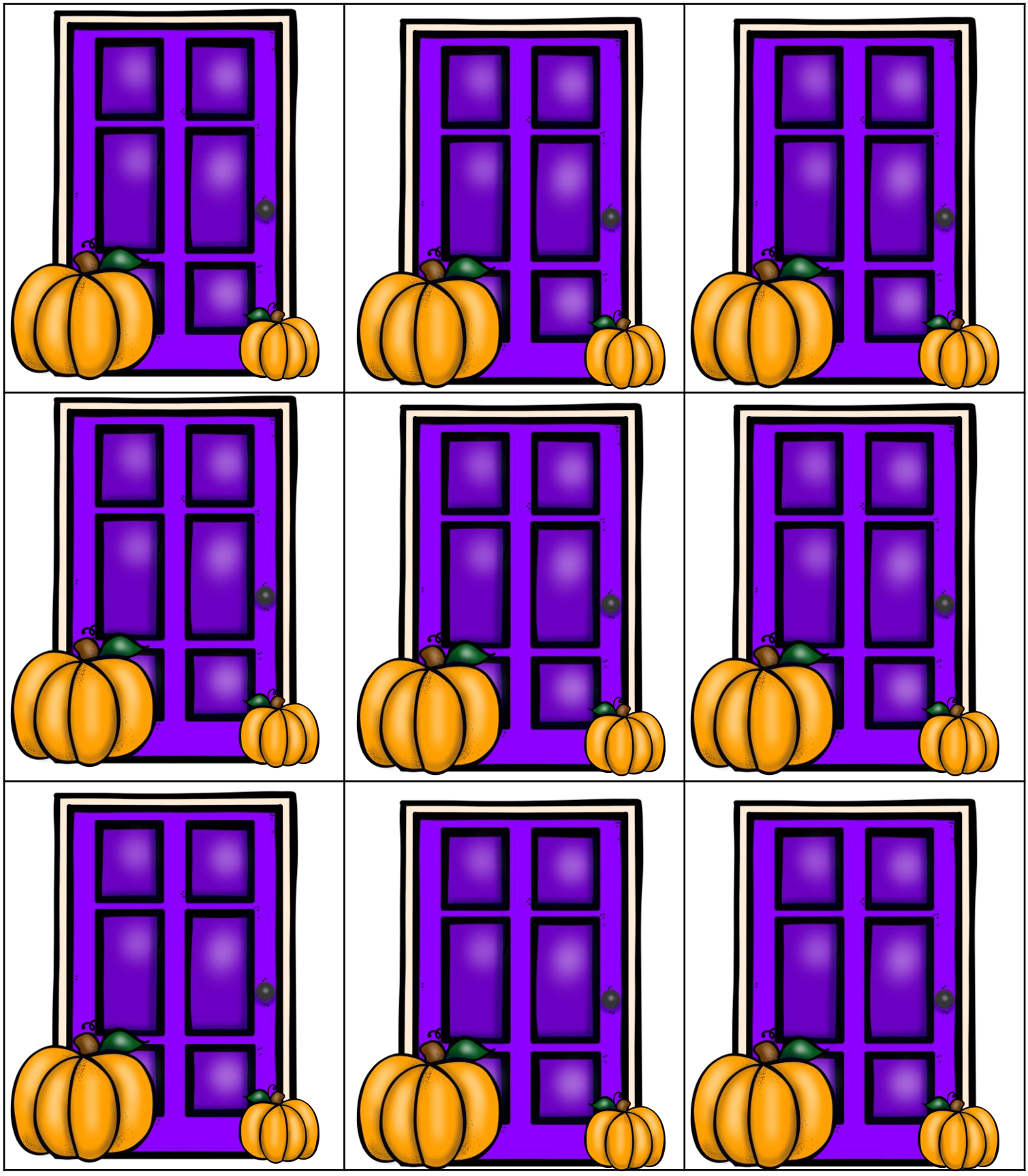
2) Program your robot to move forward to touch the glue stick to "ring the doorbell" and move backward to you.

3) Change the distance of the glue stick and program your robot again.



DING DONG!

Tape the paper doors to the front of glue sticks.

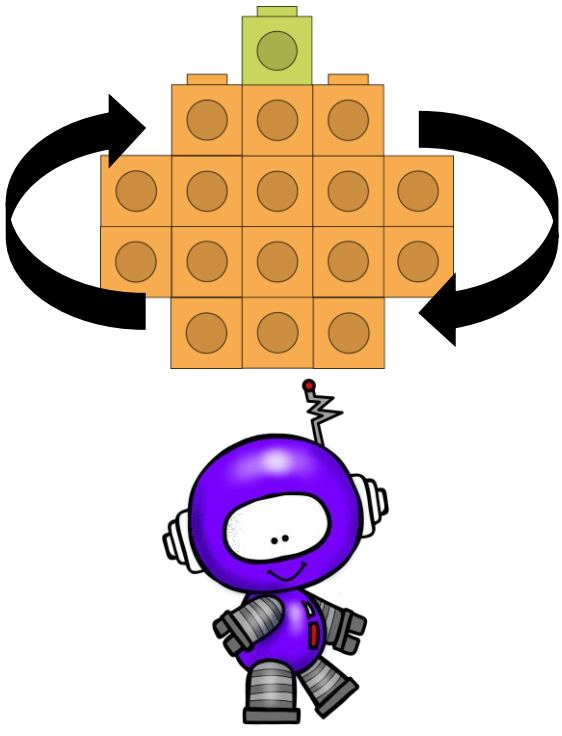


AROUND THE PUMPKIN PATCH

1) Build a pumpkin out of linking cubes.

2) Program your robot to go all the way around the pumpkin.

3) Program your robot to go all the way around the pumpkin 3 times.



TREAT COLLECTOR

1) Create a shovel out of a paper cup and tape it to the front of your robot.

2) Spread pieces of candy out on the floor.

3) Program your robot to use the shovel to push the pieces of candy into a pile.

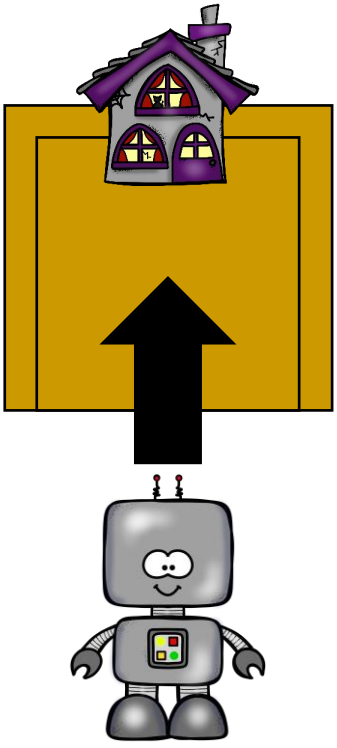
4) Spread out the candy and collect again!

HIDE IN THE HAUNTED HOUSE

1) Tape the haunted house to a box. Place the box in front of your robot.

2) Program your robot to move forward and go inside the haunted house.

3) Change the distance of the haunted house and program your robot again!



HIDE IN THE HAUNTED HOUSE

Tape the haunted houses to empty boxes.
You may also decorate the boxes to look like haunted houses.

COSTUME PARADE

1) Use construction paper, scissors, and tape to create a Halloween costume for your robot!

2) Have a costume parade with your classmates to share your robot costumes.

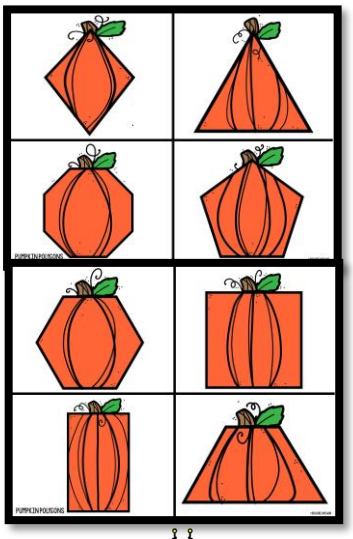
PUMPKIN POLYGONS

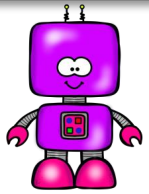
1) Connect the pumpkin mats with tape to make a large grid.

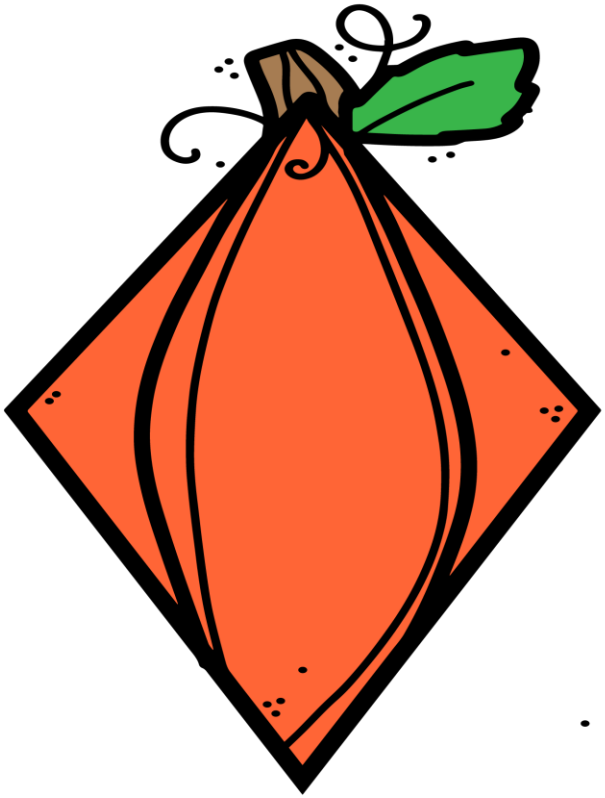
2) Mix up the polygon word cards and place them facedown in a stack.

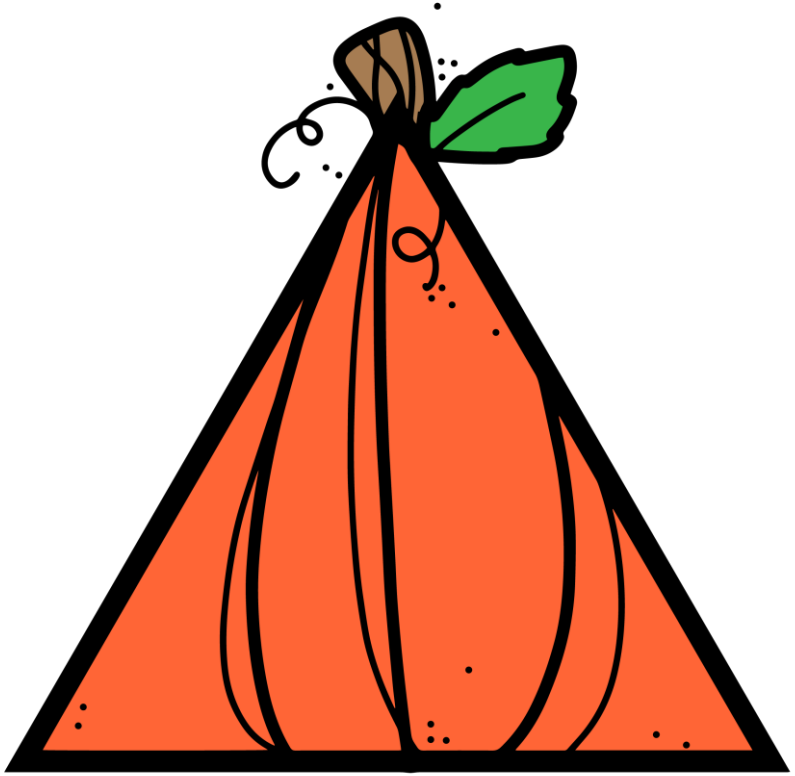
3) Flip over the top card. Program your robot to move to the matching polygon on the mat.

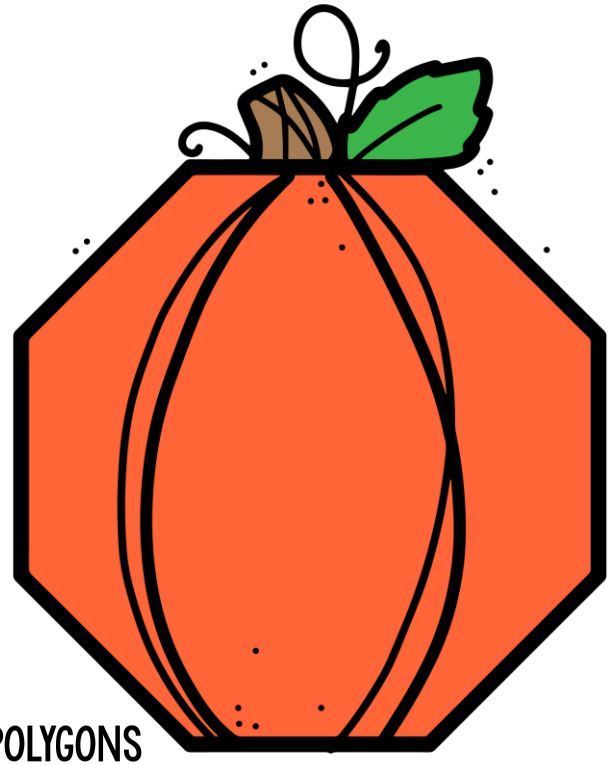
4) Repeat with the remaining cards.

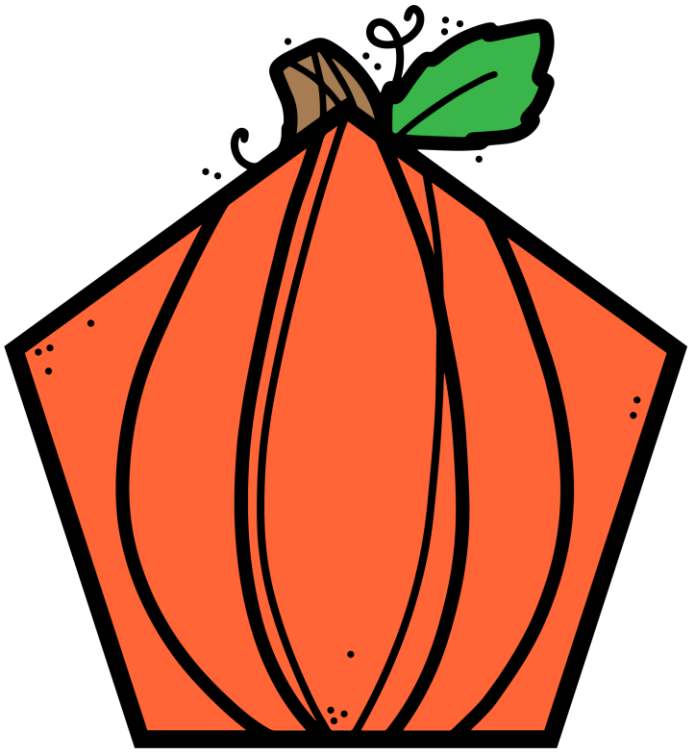




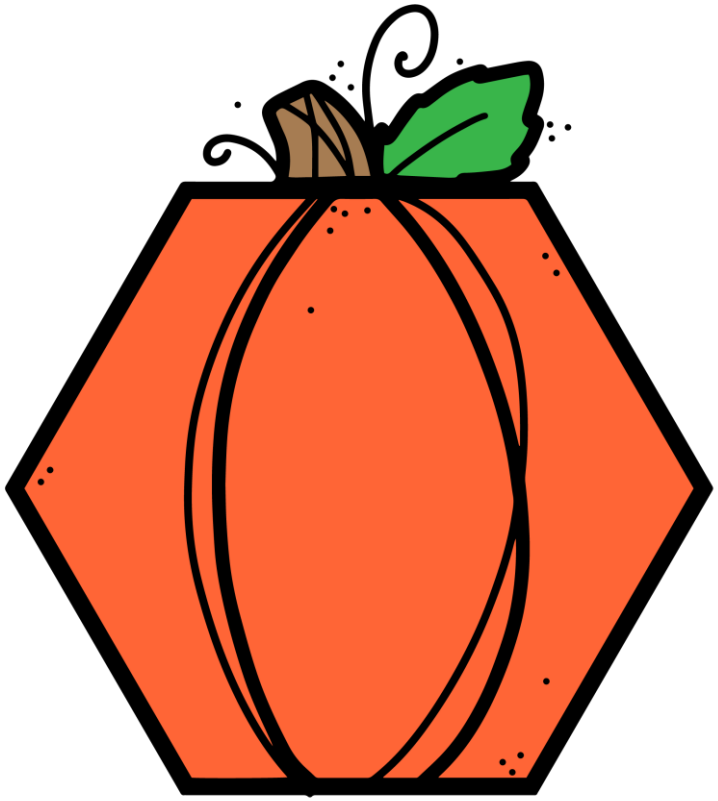


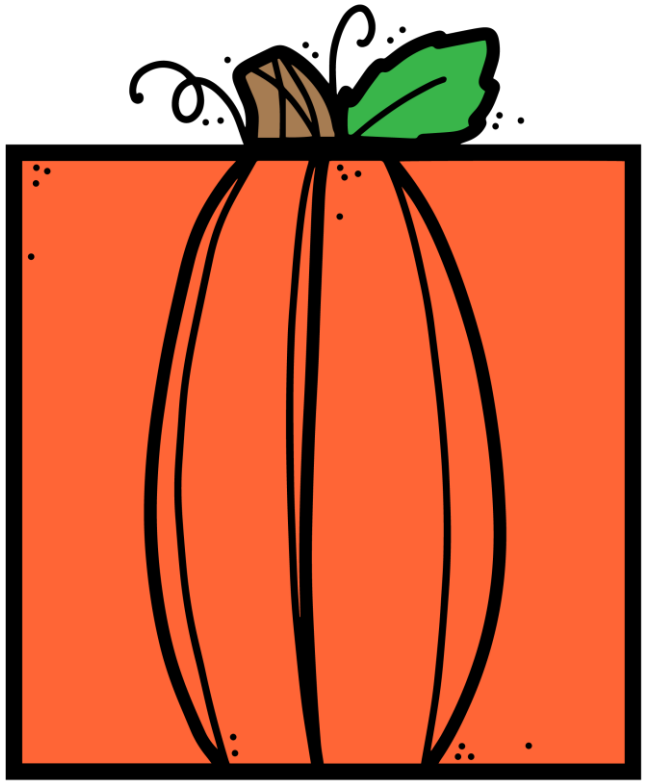


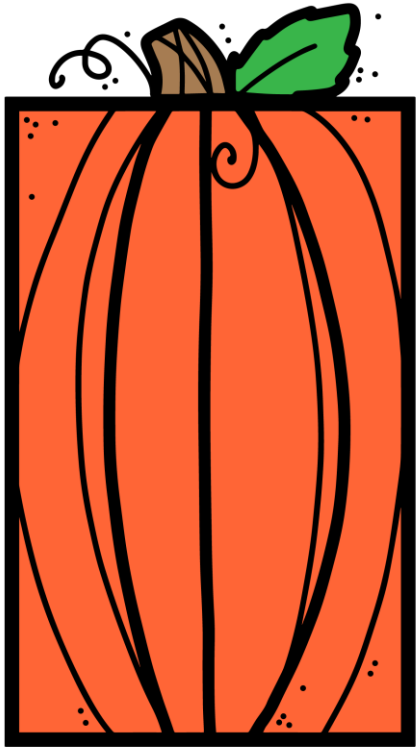




PUMPKIN POLYGONS







PUMPKIN POLYGONS

triangle

PUMPKIN POLYGONS ©BROOKE BROWN

trapezoid

PUMPKIN POLYGONS ©BROOKE BROWN

square

PUMPKIN POLYGONS ©BROOKE BROWN

pentagon

PUMPKIN POLYGONS ©BROOKE BROWN

rectangle

PUMPKIN POLYGONS ©BROOKE BROWN

hexagon

PUMPKIN POLYGONS ©BROOKE BROWN

rhombus

PUMPKIN POLYGONS ©BROOKE BROWN

octagon

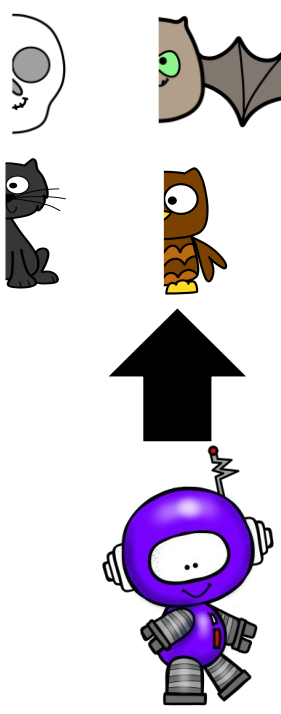
PUMPKIN POLYGONS ©BROOKE BROWN

SPOOKY SYMMETRY

1) Spread out your 6 "B" symmetry pieces on the floor. Put the other 6 "A" symmetry pieces in a stack facedown.

2) Flip over the top "A" symmetry piece and program your robot to move to the matching symmetry piece.

3) Repeat with the other symmetry pieces in the stack.



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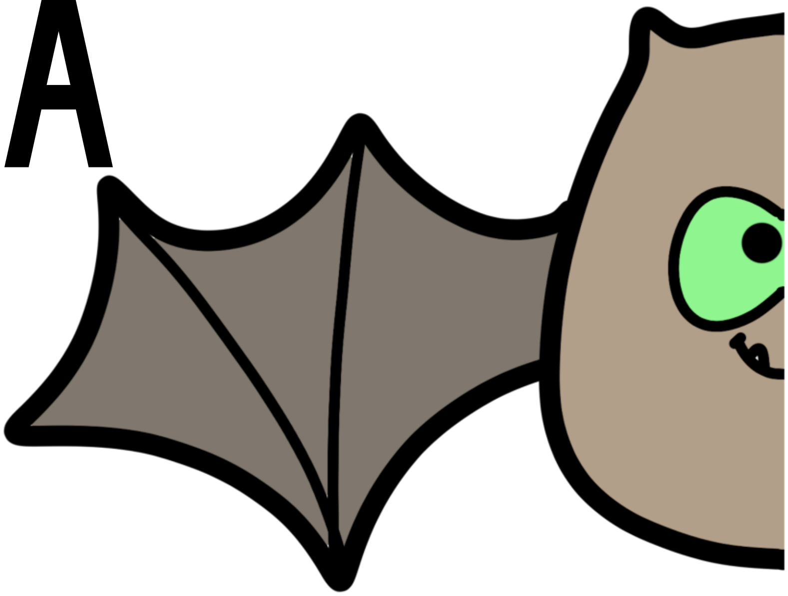
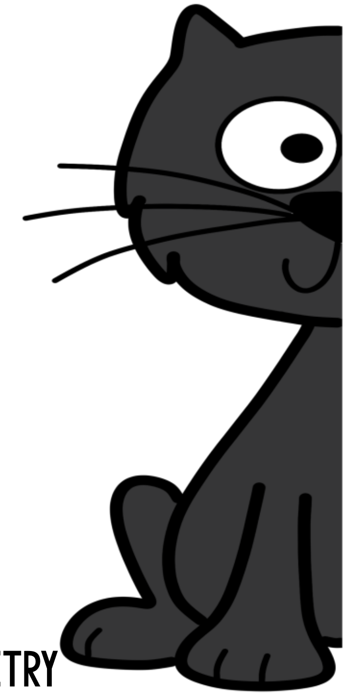


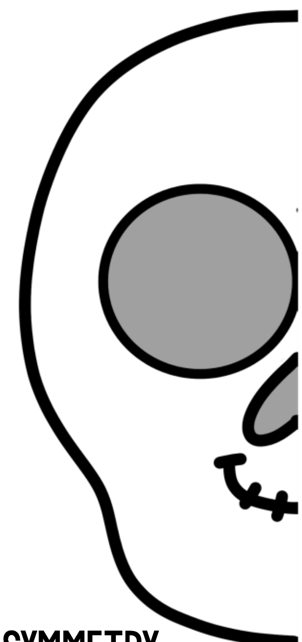
SPOOKY SYMMETRY

A



SPOOKY SYMMETRY

A



SPOOKY SYMMETRY

A

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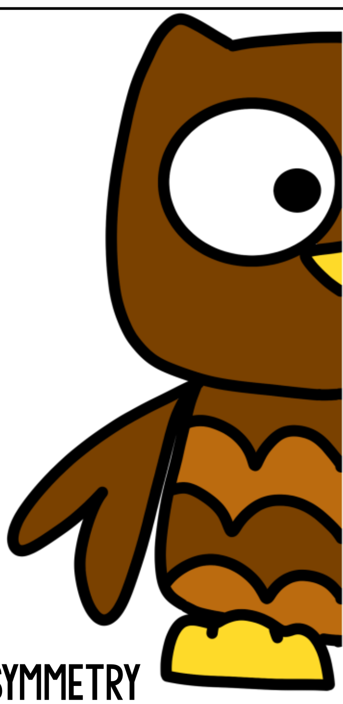
A



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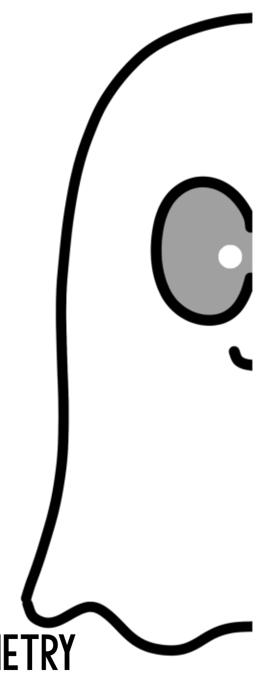
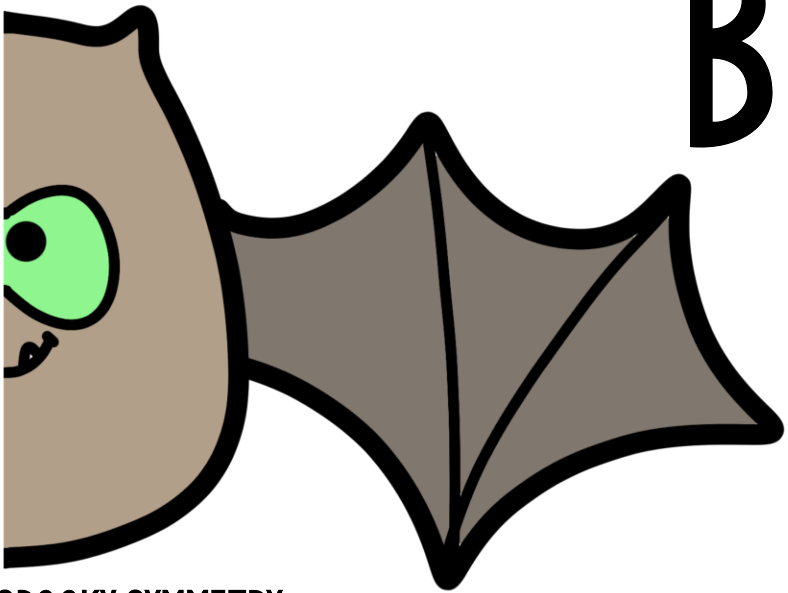


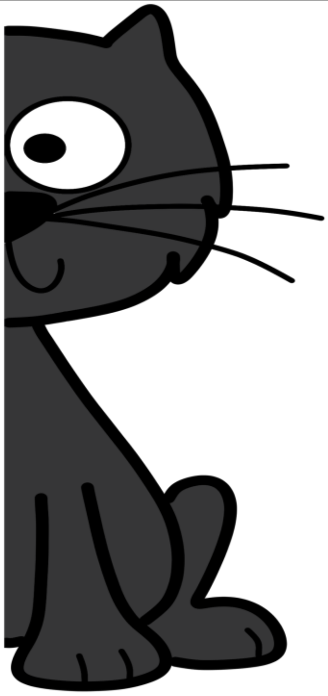
SPOOKY SYMMETRY

B



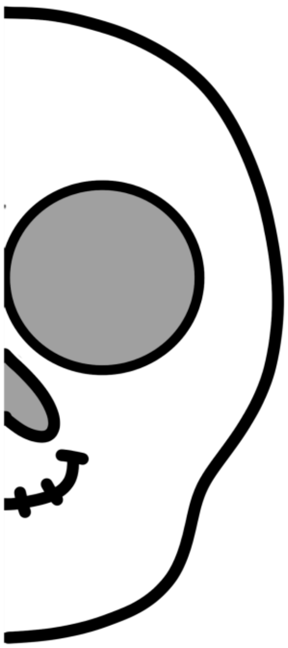
SPOOKY SYMMETRY

B



SPOOKY SYMMETRY

B

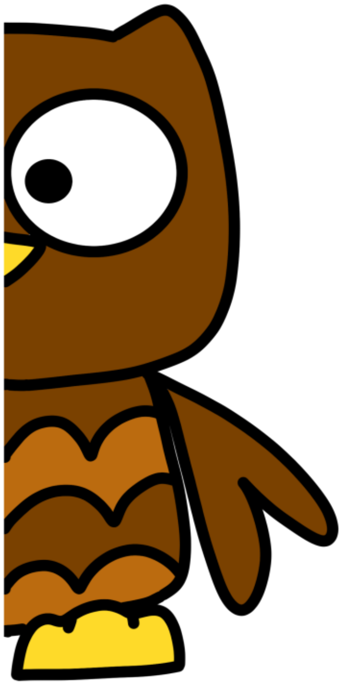


SPOOKY SYMMETRY

B

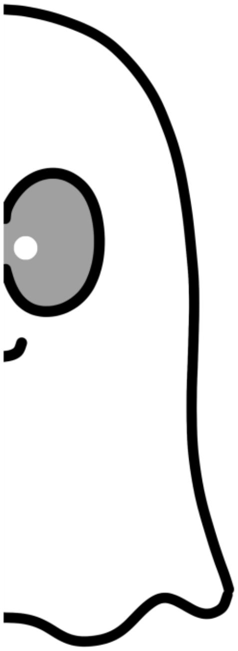
SPOOKY SYMMETRY

B



SPOOKY SYMMETRY

B



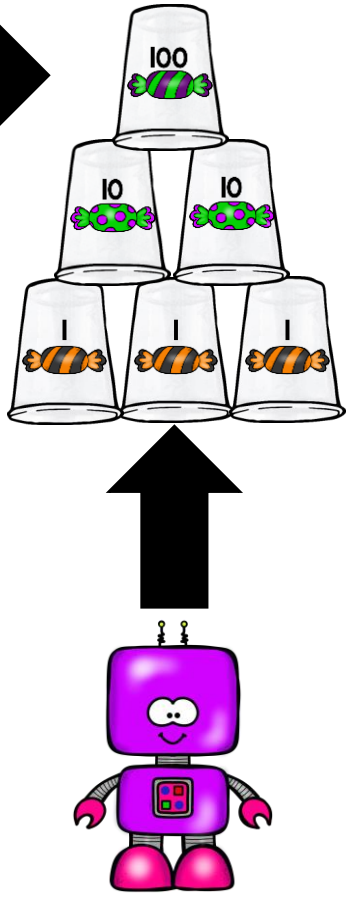
SPOOKY SYMMETRY

CANDY COUNT

1) Build a tower out of your candy mini cups.

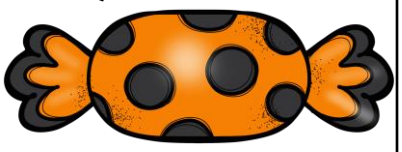
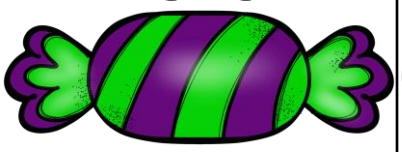
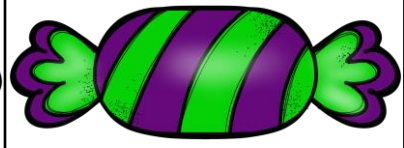
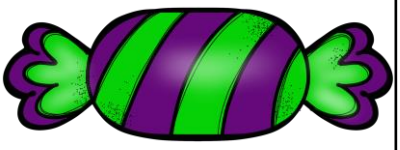
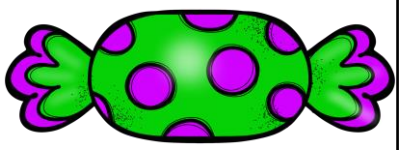
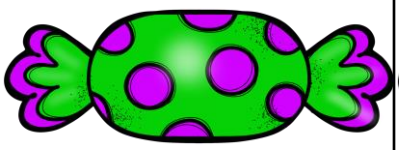
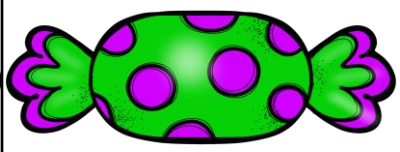
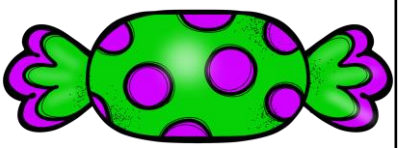
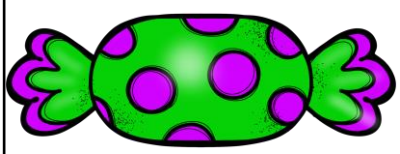
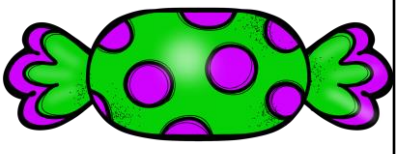
2) Program your robot to crash into the cups and knock down as many as possible. Add up the total number for the cups that fell down.

3) Change your tower design and program your robot again.



CANDY COUNT

Tape the paper candy to the front of mini cups.

1,000 	1,000 	1,000 	1,000 
100 	100 	100 	100 
10 	10 	10 	10 
10 	10 	1 	1 
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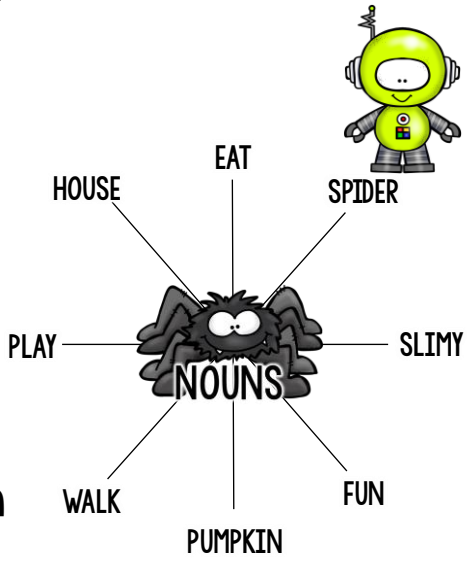
WORD WEBS

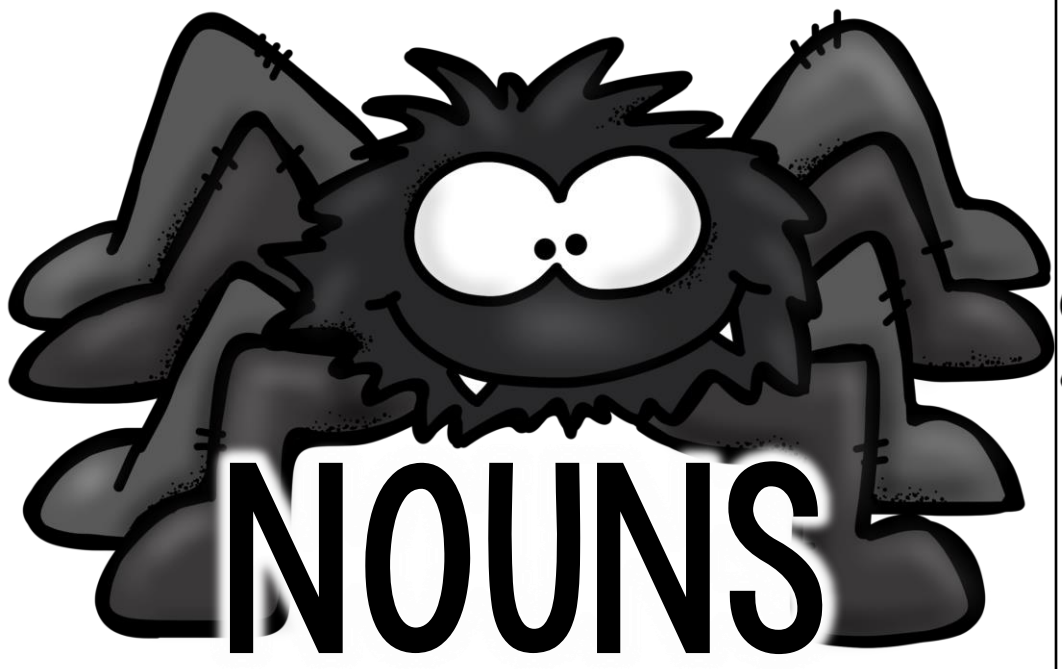
1) Place the "NOUNS" spider card on the floor. Mix up the web cards and place them facedown in a stack.

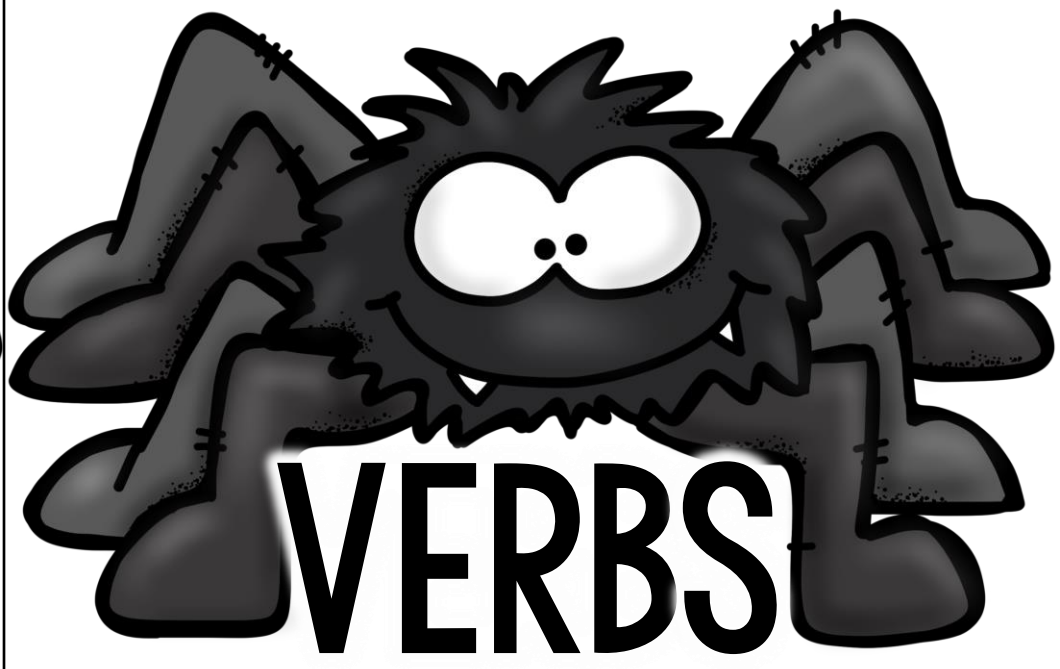
2) Draw 8 web cards and place them in a circle around the spider card.

3) Place your robot on the spider card. Program your robot to move and touch ONLY the word cards that are NOUNS.

4) Repeat steps with the "VERBS" and "ADJECTIVES" spiders.







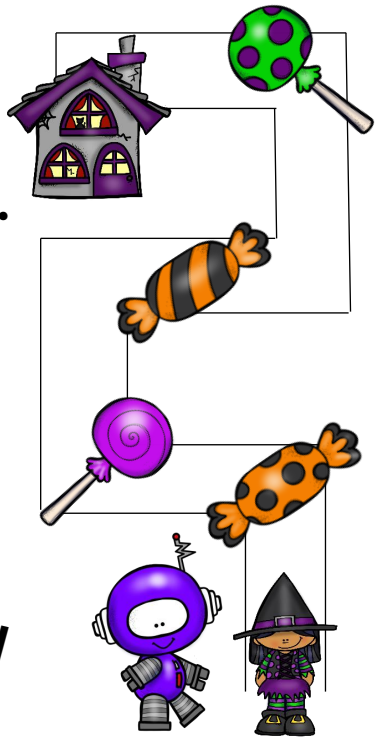
COSTUME	HOUSE	CANDY
PUMPKIN	FRIEND	SPIDER
CARVE	PLAY	EAT
WALK	SCREAM	SCARE
SPOOKY	ORANGE	SILLY
FUN	SWEET	SLIMY

TRICK OR TREAT

1) Create a path or maze with straight edges. You may use wooden planks, popsicle sticks, base ten rods, or construction paper to make your maze.

2) Put the WITCH at the beginning of your maze and the HAUNTED HOUSE at the end. Put the CANDY along the path.

3) Program your robot to move from the WITCH to the HAUNTED HOUSE and collect all the CANDY along the way. Try to use only ONE sequence of code.

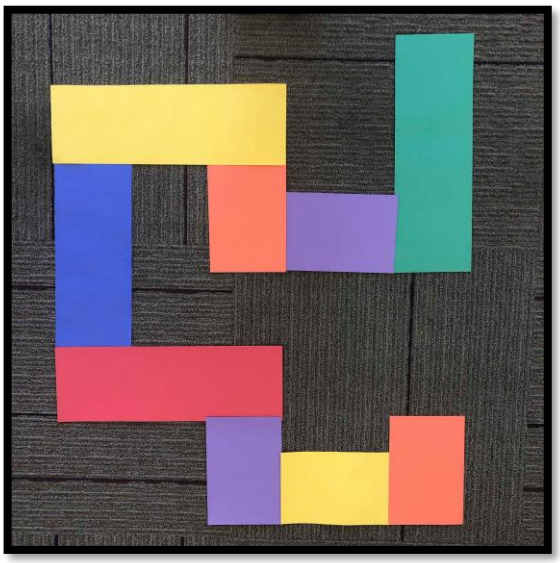


MAZE EXAMPLES

Mazes can be created out of any straight edge materials such as popsicle sticks, wooden planks, base ten rods, or laminated construction paper strips. (SEE EXAMPLES BELOW)

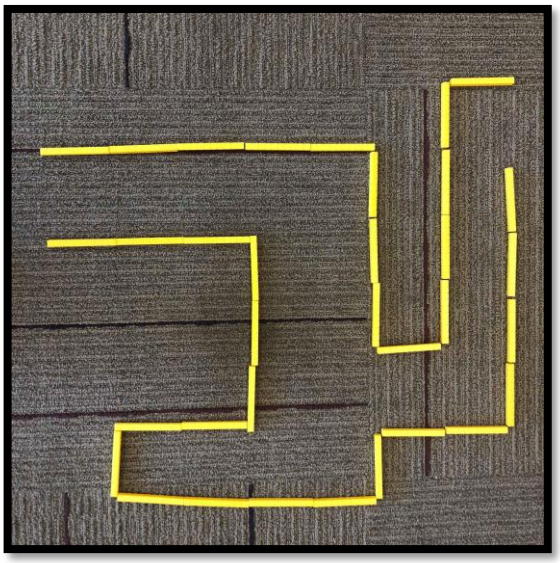
LAMINATED CONSTRUCTION PAPER

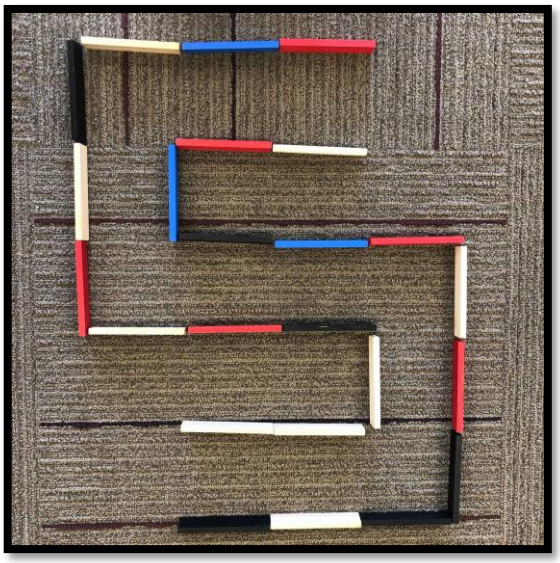
6" X 18" AND 6" X 9"



POPSICLE STICKS

BASE TEN RODS





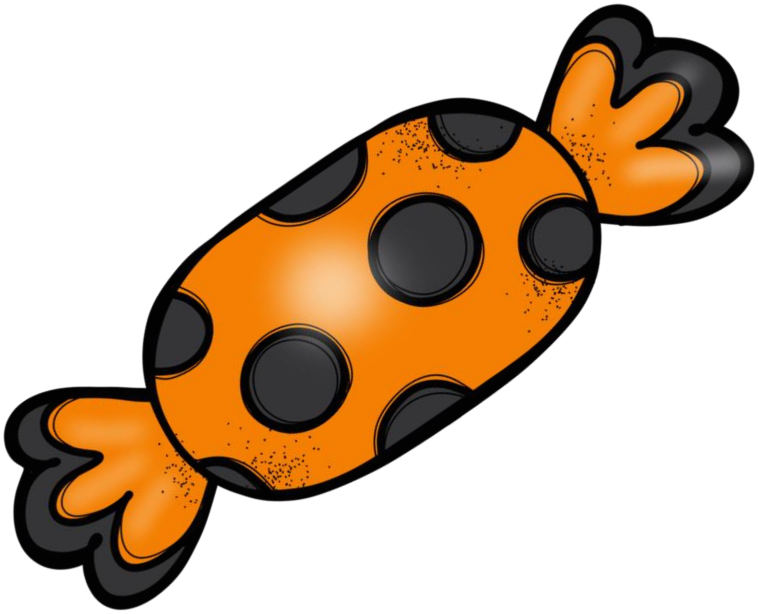
WOODEN PLANKS

START

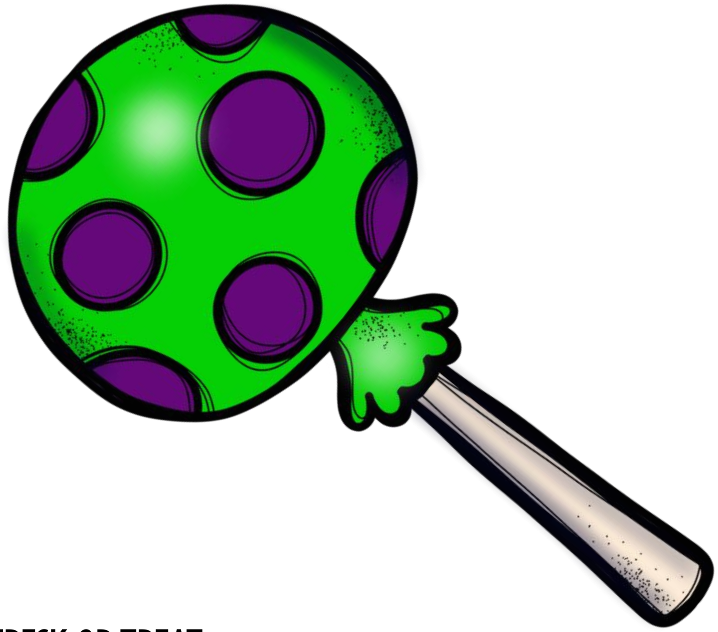
TRICK OR TREAT

END

TRICK OR TREAT

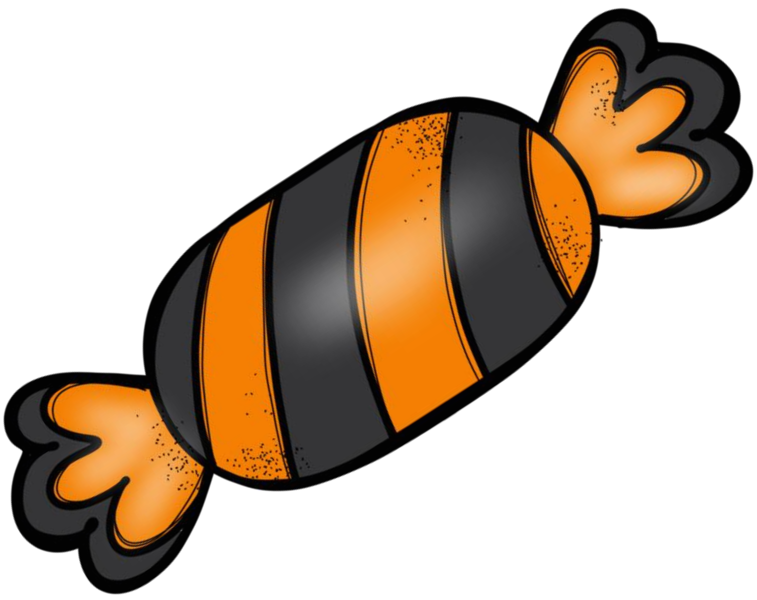


TRICK OR TREAT



TRICK OR TREAT

TRICK OR TREAT



TRICK OR TREAT

CREDITS

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Created by Brooke Brown

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