

Unit 3 Lesson 1

Putting a STOP to Online Meanness

Resources

STOP Online Meanness

NAME _____

DATE _____

Directions

Read the story below and then work with a partner to answer the questions that follow.

Jada's parents let her play on a website where she can take care of a pet pony and decorate its stall. Her friend Michael has played with her in the past and knows her username and password. One day Jada goes to the site to care for her pony. She finds that her pony's stall is a mess and that there are some things missing.

1. What do you think happened? *I think ...*

2. How do you think Jada feels? Why? *I think Jada feels ...*

3. What advice would you give Jada to respond to this situation? Remember S-T-O-P.



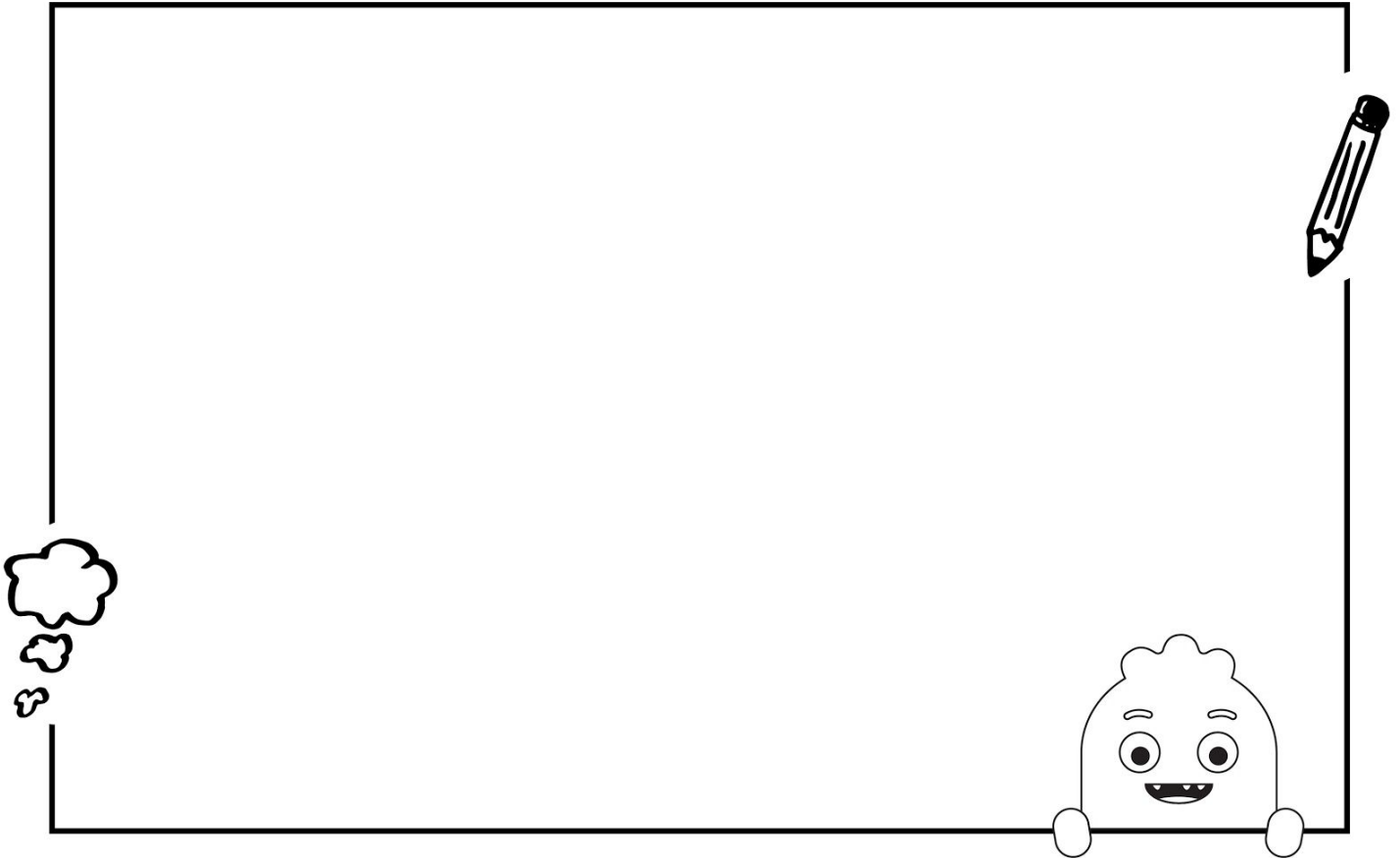
STOP Online Meanness

NAME _____

DATE _____

Pause & Think Moment

Draw a picture about what you should do if you experience someone being mean to you online.



Explain what you should do if you experience someone being mean to you online.



Unit 3 Lesson 2

Password Power-Up

Resources

NAME _____

DATE _____

Uh-Oh! If ... Then Scenarios



Directions

1. In your "home" group, read your assigned scenario and discuss what could happen if a password were stolen. Jot down your group's answer, and then wait for the teacher's instructions to switch to your "expert" group.
2. In your "expert" group, take turns sharing your "home" group's response. Complete your handout by taking notes on what each presenter shares.

Scenario 1

*Maya forgets her phone on the bus. **IF** someone found it and figured out her password to unlock it, **THEN** what could happen?*

Scenario 2

*Jared writes his email address in his notebook and leaves it open while he goes to the bathroom. **IF** someone saw his email address and figured out his email password, **THEN** what could happen?*



NAME _____

DATE _____

Uh-Oh! If ... Then Scenarios

Scenario 3

Kylie goes over to her friend Asia's house to play an online video game. After she leaves, her gaming profile is still saved. Asia's little brother, Ben, turns on the game and sees it. **IF** Ben figured out Kylie's password, **THEN** what could happen?

Scenario 4

Thomas uses an app on his phone to pay bills from his bank account. **IF** someone figured out his password to the app, **THEN** what could happen?

Scenario 5

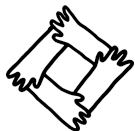
Beatrix logs in to her doctor's website to see medical information about herself. **IF** someone figured out her password to the website, **THEN** what could happen?



NAME _____

DATE _____

Uh-Oh! If ... Then Scenarios



Directions

1. In your "home" group, read your assigned scenario and discuss what could happen if a password were stolen. Jot down your group's answer, and then wait for the teacher's instructions to switch to your "expert" group.
2. In your "expert" group, take turns sharing your "home" group's response. Complete your handout by taking notes on what each presenter shares.

Scenario 1

Maya forgets her phone on the bus. **IF** someone found it and figured out her password to unlock it, **THEN** what could happen?

IF someone figured out her phone-unlock password, THEN they could see her messages, use her apps, and pretend to be her.

Scenario 2

Jared writes his email address in his notebook and leaves it open while he goes to the bathroom. **IF** someone saw his email address and figured out his email password, **THEN** what could happen?

IF someone figured out his email password, THEN they could see private emails he has sent and received, and they could pretend to be him online.



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NAME _____

DATE _____

Uh-Oh! If ... Then Scenarios

Scenario 3

Kylie goes over to her friend Asia's house to play an online video game. After she leaves, her gaming profile is still saved. Asia's little brother, Ben, turns on the game and sees it. **IF** Ben figured out Kylie's password, **THEN** what could happen?

IF Ben figured out her video game password, THEN he could pretend to be her online and hurt her reputation.

Scenario 4

Thomas uses an app on his phone to pay bills from his bank account. **IF** someone figured out his password to the app, **THEN** what could happen?

IF someone figured out his banking password (and username), THEN they could steal money from his account.

Scenario 5

Beatrix logs in to her doctor's website to see medical information about herself. **IF** someone figured out her password to the website, **THEN** what could happen?

IF someone figured out her website password, THEN they could find out private health and medical information about her.



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Power Up Your Password

NAME _____

DATE _____

Directions

Follow the steps to create your own strong password.






Practice Round

1. Start with a phrase . Think of a quote or group of words that will be easy to remember.	Example: <i>There's no way I'm kissing a frog.</i>
2. Write down just the first letter of each word in the phrase.	
3. Capitalize some of the letters.	
4. Add one or two memorable numbers .	
5. Memorize it. Repeat your new password in your head so it sticks.	

Your Turn

1. Start with a phrase . Think of a quote or group of words that will be easy to remember.	
2. Write down just the first letter of each word in the phrase.	
3. Capitalize some of the letters.	
4. Add one or two memorable numbers .	
5. Memorize it. Repeat your new password in your head so it sticks.	

Password Tips to Remember

-  Start with a memorable _____.
-  Only your _____ should know your password.
-  Never use any _____ identity information in your password.
-  Create passwords with at least _____ characters.
-  Use letters, numbers, and _____ in your password.



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Power-Up Your Password

NAME _____

DATE _____

Directions

Follow the steps to create your own strong password.






Practice Round

1. Start with a phrase . Think of a quote or group of words that will be easy to remember.	Example: <i>There's no way I'm kissing a frog.</i>
2. Write down just the first letter of each word in the phrase.	tnwikaF
3. Capitalize some of the letters.	TnwikaF (answers will vary)
4. Add one or two memorable numbers .	Tnw44KaF (answers will vary)
5. Memorize it. Repeat your new password in your head so it sticks.	

Your Turn

1. Start with a phrase . Think of a quote or group of words that will be easy to remember.	answers will vary
2. Write down just the first letter of each word in the phrase.	answers will vary
3. Capitalize some of the letters.	answers will vary
4. Add one or two memorable numbers .	answers will vary
5. Memorize it. Repeat your new password in your head so it sticks.	

Password Tips to Remember

-  Start with a memorable phrase.
-  Only your parents should know your password.
-  Never use any private identity information in your password.
-  Create passwords with at least eight characters.
-  Use letters, numbers, and symbols in your password.



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Unit 3 Lesson 3

My Robotic Friends Jr.

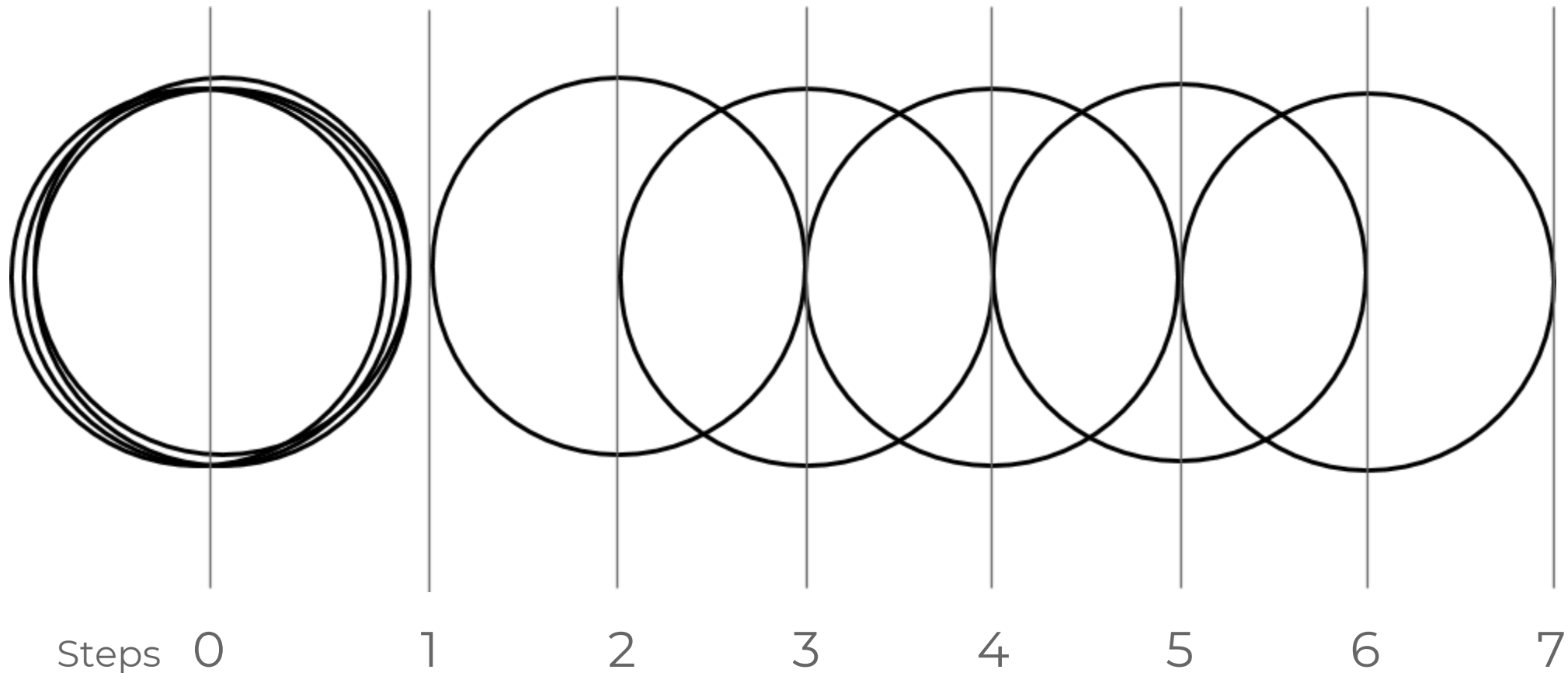
Resources

My Robotic Friends

Cup Spacing



CUP STACK



My Robotic Friends

Symbol Key



Pick Up Cup



Put Down Cup



Step Forward



Step Backward

My Robotic Friends

Cup Stack Ideas



My Robotic Friends

Cup Stack Ideas



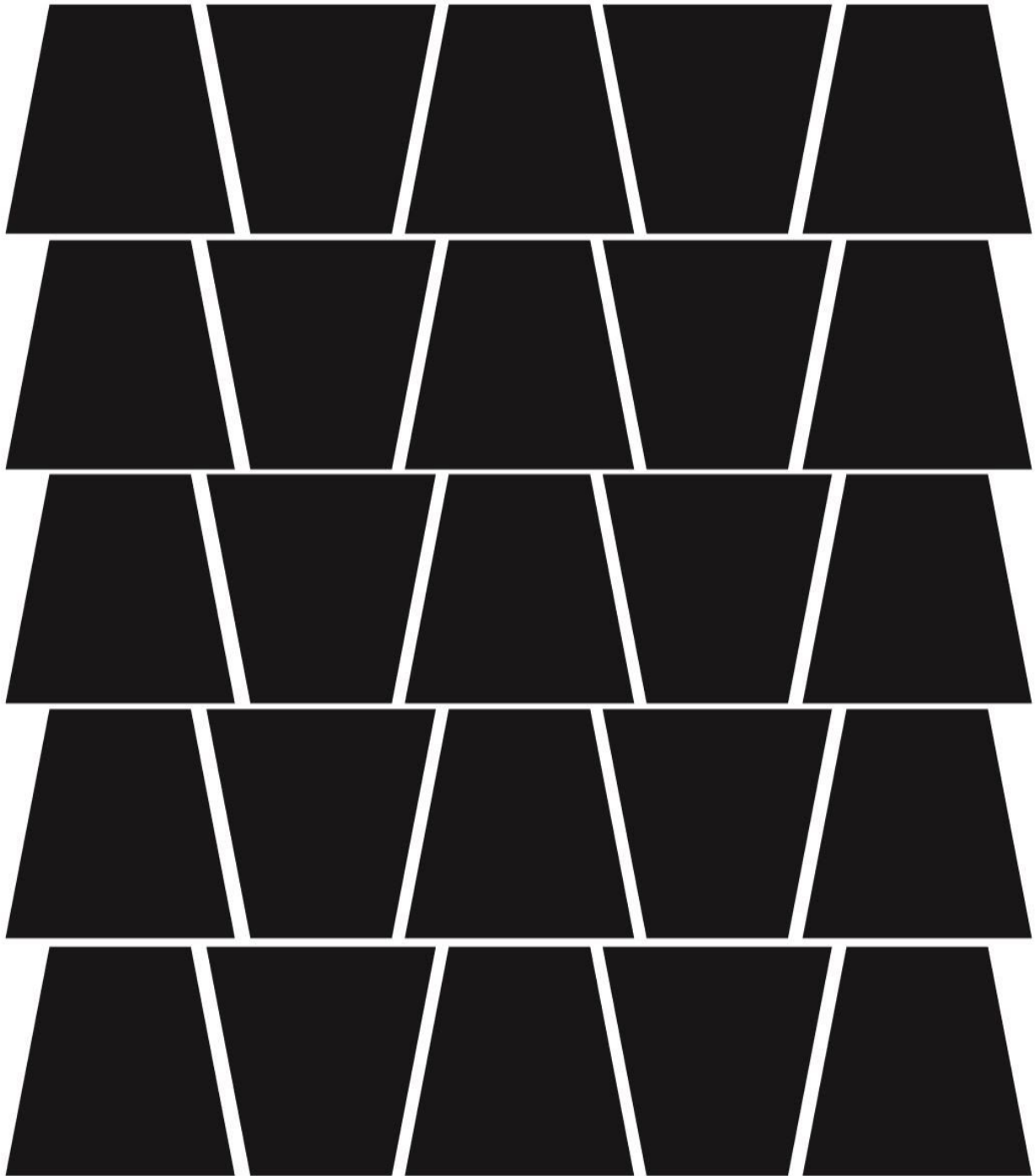
My Robotic Friends

Paper Trapezoids



To cut quickly:

First cut in horizontal strips, then snip along lines to make trapezoids.



Unit 3 Lesson 4

Programming with Angry Birds

Resources

Unit 3 Lesson 5

Debugging in Maze

Resources

Main Activity Notes

Teachers play a vital role in computer science education and supporting a collaborative and vibrant classroom environment. During online activities, the role of the teacher is primarily one of encouragement and support. Online lessons are meant to be student-centered, so teachers should avoid stepping in when students get stuck. Some ideas on how to do this are:

- Utilize [pair programming](#) whenever possible during the activity.
- Encourage students with questions/challenges to start by asking their partner.
 - Unanswered questions can be escalated to a nearby group, who might already know the solution.
- Remind students to use the debugging process before you approach.
- Have students describe the problem that they're seeing. What is it supposed to do? What does it do? What does that tell you?
- Remind frustrated students that frustration is a step on the path to learning, and that persistence will pay off.
- If a student is still stuck after all of this, ask leading questions to get the student to spot an error on their own.

Teacher Tip:

Show the students the **right** way to help classmates:

- Don't sit in the classmate's chair
- Don't use the classmate's keyboard
- Don't touch the classmate's mouse
- Make sure the classmate can describe the solution to you out loud before you walk away

Unit 3 Lesson 6

Collecting Treasure with Laurel

Resources

Unit 3 Lesson 7

Creating Art with Code

Resources

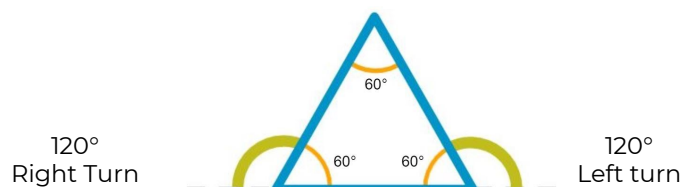
Turns & Angles

in Regular Polygons



Triangle

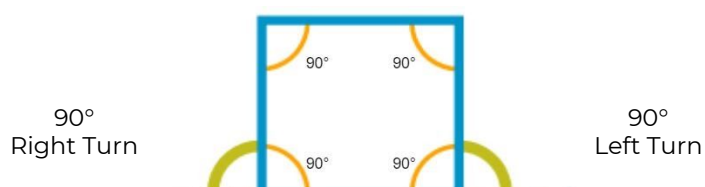
(3 sides)



Each turn is $360^\circ / 3 = 120^\circ$
Each angle is $180^\circ - 120^\circ = 60^\circ$

Rectangle

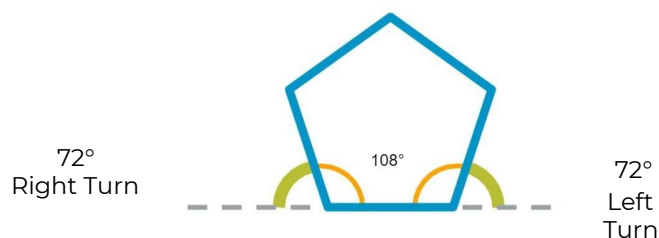
(4 sides)



Each turn is $360^\circ / 4 = 90^\circ$
Each angle is $180^\circ - 90^\circ = 90^\circ$

Pentagon

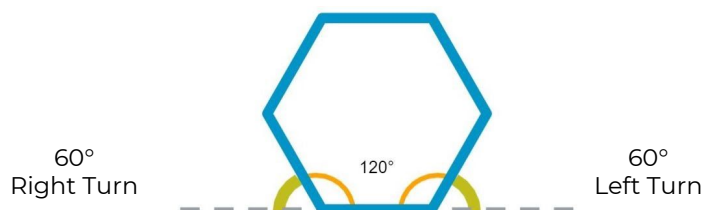
(5 sides)



Each turn is $360^\circ / 5 = 72^\circ$
Each angle is $180^\circ - 72^\circ = 108^\circ$

Hexagon

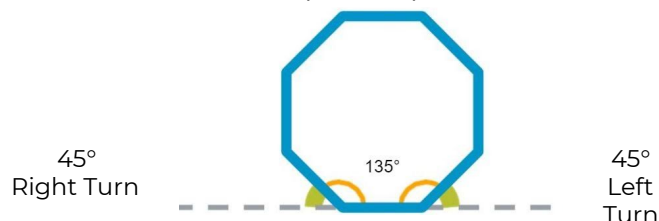
(6 sides)



Each turn is $360^\circ / 6 = 60^\circ$
Each angle is $180^\circ - 60^\circ = 120^\circ$

Octagon

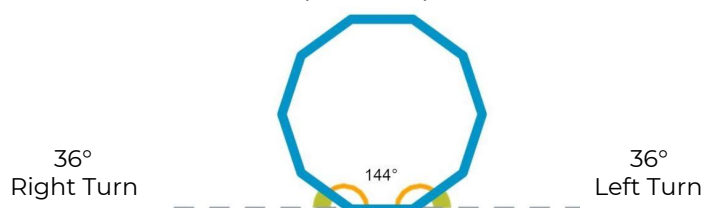
(8 sides)



Each turn is $360^\circ / 8 = 45^\circ$
Each angle is $180^\circ - 45^\circ = 135^\circ$

Decagon

(10 sides)



Each turn is $360^\circ / 10 = 36^\circ$
Each angle is $180^\circ - 36^\circ = 144^\circ$

Unit 3 Lesson 8

Binary Bracelets

Resources

Binary Bracelets

Binary Decoder Key



Letter	Binary
A	■ □ ■ ■ ■ ■ ■ □
B	■ □ ■ ■ ■ ■ □ ■
C	■ □ ■ ■ ■ ■ □ □
D	■ □ ■ ■ ■ □ ■ ■
E	■ □ ■ ■ ■ □ ■ □
F	■ □ ■ ■ ■ □ □ ■
G	■ □ ■ ■ ■ □ □ □
H	■ □ ■ ■ □ ■ ■ ■
I	■ □ ■ ■ □ ■ ■ □
J	■ □ ■ ■ □ ■ □ ■
K	■ □ ■ ■ □ ■ □ □
L	■ □ ■ ■ □ □ ■ ■
M	■ □ ■ ■ □ □ ■ □

Letter	Binary
N	■ □ ■ ■ □ □ □ ■
O	■ □ ■ ■ □ □ □ □
P	■ □ ■ □ ■ ■ ■ ■
Q	■ □ ■ □ ■ ■ ■ □
R	■ □ ■ □ ■ ■ □ ■
S	■ □ ■ □ ■ ■ □ □
T	■ □ ■ □ ■ □ ■ ■
U	■ □ ■ □ ■ □ ■ □
V	■ □ ■ □ ■ □ □ ■
W	■ □ ■ □ ■ □ □ □
X	■ □ ■ □ □ ■ ■ ■
Y	■ □ ■ □ □ ■ ■ □
Z	■ □ ■ □ □ ■ □ ■

Find the first letter of your first name.

Fill in the squares of the bracelet below to match the pattern of the squares next to the letter that you found.

Cut the bracelet out and tape it around your wrist to wear it!

Name(s) _____ Period _____ Date _____

Binary Bracelets

Binary Decoder Key



Letter	Binary
A	■ □ ■ ■ ■ ■ ■ □
B	■ □ ■ ■ ■ ■ □ ■
C	■ □ ■ ■ ■ ■ □ □
D	■ □ ■ ■ ■ □ ■ ■
E	■ □ ■ ■ ■ □ ■ □
F	■ □ ■ ■ ■ □ □ ■
G	■ □ ■ ■ ■ □ □ □
H	■ □ ■ ■ □ ■ ■ ■
I	■ □ ■ ■ □ ■ ■ □
J	■ □ ■ ■ □ ■ □ ■
K	■ □ ■ ■ □ ■ □ □
L	■ □ ■ ■ □ □ ■ ■
M	■ □ ■ ■ □ □ ■ □

Letter	Binary
N	■ □ ■ ■ □ □ □ ■
O	■ □ ■ ■ □ □ □ □
P	■ □ ■ □ ■ ■ ■ ■
Q	■ □ ■ □ ■ ■ ■ □
R	■ □ ■ □ ■ ■ □ ■
S	■ □ ■ □ ■ ■ □ □
T	■ □ ■ □ ■ □ ■ ■
U	■ □ ■ □ ■ □ ■ □
V	■ □ ■ □ ■ □ □ ■
W	■ □ ■ □ ■ □ □ □
X	■ □ ■ □ □ ■ ■ ■
Y	■ □ ■ □ □ ■ ■ □
Z	■ □ ■ □ □ ■ □ ■

Can you figure out what the message says?

■ □ ■ ■ ■ ■ □ □	_____
■ □ ■ ■ □ □ □ □	_____
■ □ ■ ■ ■ □ ■ ■	_____
■ □ ■ ■ ■ □ ■ □	_____
■ □ ■ ■ □ ■ ■ □	_____
■ □ ■ □ ■ ■ □ □	_____
■ □ ■ ■ ■ □ □ □	_____
■ □ ■ □ ■ □ ■ □	_____
■ □ ■ □ ■ □ ■ □	_____
■ □ ■ ■ □ □ □ ■	_____

Write the message here!

Binary Bracelets

Binary Decoder Key



Letter	Binary
A	■ □ ■ ■ ■ ■ □
B	■ □ ■ ■ ■ ■ □
C	■ □ ■ ■ ■ ■ □
D	■ □ ■ ■ ■ ■ □
E	■ □ ■ ■ ■ ■ □
F	■ □ ■ ■ ■ ■ □
G	■ □ ■ ■ ■ ■ □
H	■ □ ■ ■ ■ ■ □
I	■ □ ■ ■ ■ ■ □
J	■ □ ■ ■ ■ ■ □
K	■ □ ■ ■ ■ ■ □
L	■ □ ■ ■ ■ ■ □
M	■ □ ■ ■ ■ ■ □

Letter	Binary
N	■ □ ■ ■ ■ ■ □
O	■ □ ■ ■ ■ ■ □
P	■ □ ■ ■ ■ ■ □
Q	■ □ ■ ■ ■ ■ □
R	■ □ ■ ■ ■ ■ □
S	■ □ ■ ■ ■ ■ □
T	■ □ ■ ■ ■ ■ □
U	■ □ ■ ■ ■ ■ □
V	■ □ ■ ■ ■ ■ □
W	■ □ ■ ■ ■ ■ □
X	■ □ ■ ■ ■ ■ □
Y	■ □ ■ ■ ■ ■ □
Z	■ □ ■ ■ ■ ■ □

Can you figure out what the message says?

■ □ ■ ■ ■ ■ □	■ ■ □ □	— C —
■ □ ■ ■ ■ ■ □	□ □ □ □	— O —
■ □ ■ ■ ■ ■ □	■ □ ■ ■ ■ ■ □	— D —
■ □ ■ ■ ■ ■ □	■ □ ■ ■ ■ ■ □	— E —
■ □ ■ ■ ■ ■ □	□ ■ ■ ■ □	— I —
■ □ ■ ■ ■ ■ □		— S —
■ ■ □ □		— F —
■ □ ■ ■ ■ ■ □	■ □ □ ■	— U —
■ □ ■ ■ ■ ■ □		— N —

Write the message here!

_ **C** _ _ **O** _ _ **D** _ _ **E** _
 _ **I** _ _ **S** _
 _ **F** _ _ **U** _ _ **N** _

Binary Bracelets

Binary Decoder Key



Unit 3 Lesson 9

My Loopy Robotic Friends Jr.

Resources

My Robotic Friends

Cup Stack Ideas



My Robotic Friends

Cup Stack Ideas

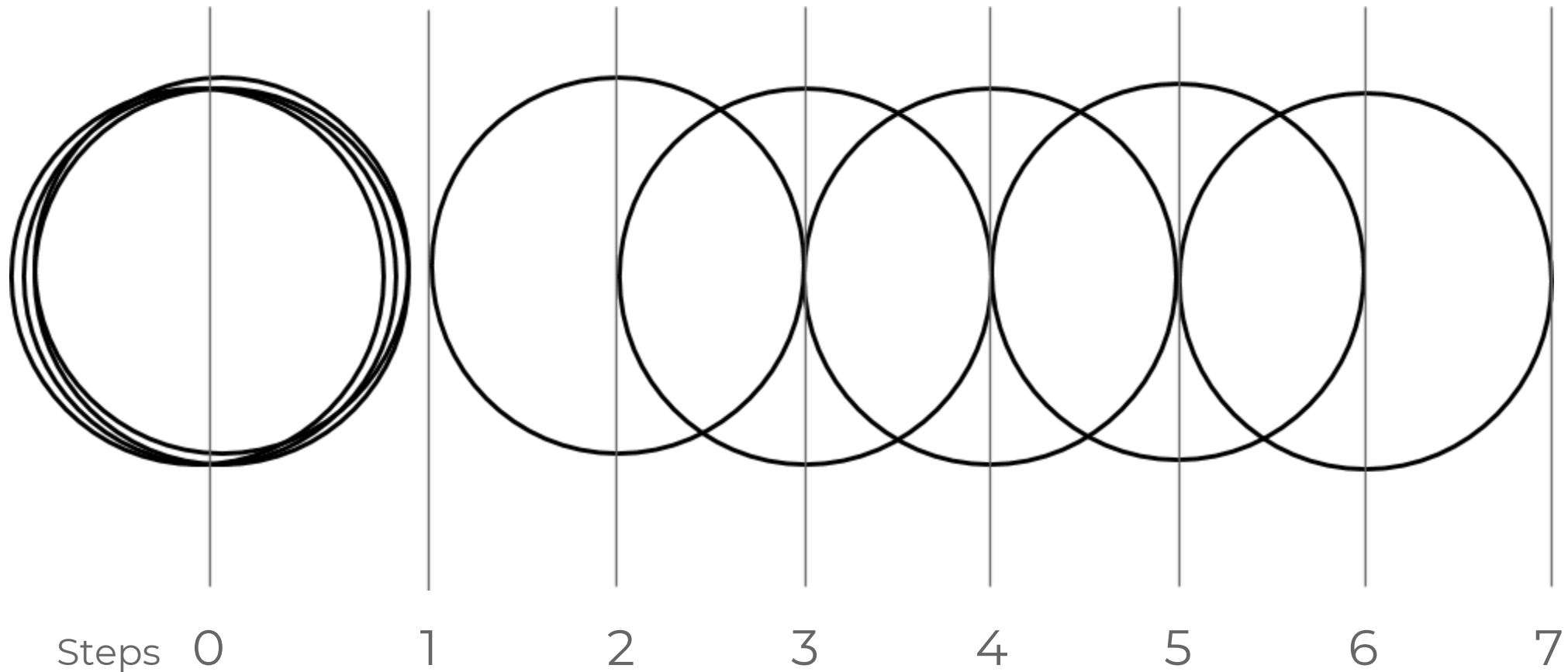


My Robotic Friends

Cup Spacing



CUP STACK



My Robotic Friends

Symbol Key



Pick Up Cup



Put Down Cup



Step Forward



Step Backward

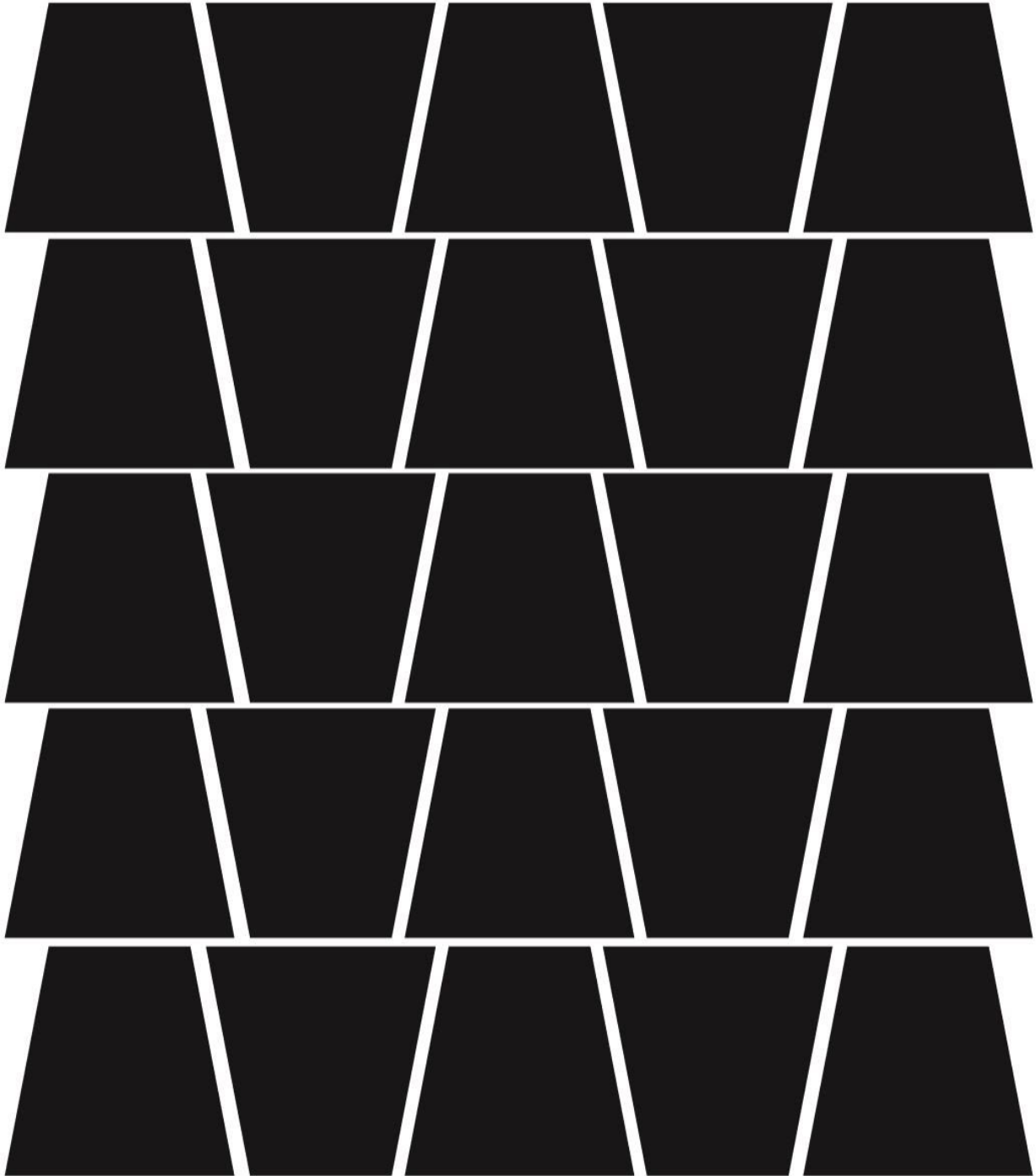
My Robotic Friends

Paper Trapezoids



To cut quickly:

First cut in horizontal strips, then snip along lines to make trapezoids.



Unit 3 Lesson 10

Loops with Rey and BB-8

Resources

Unit 3 Lesson 11

Harvesting Crops with Loops

Resources

Unit 3 Lesson 12

Looking Ahead with Minecraft

Resources

Unit 3 Lesson 13

Sticker Art with Loops

Resources

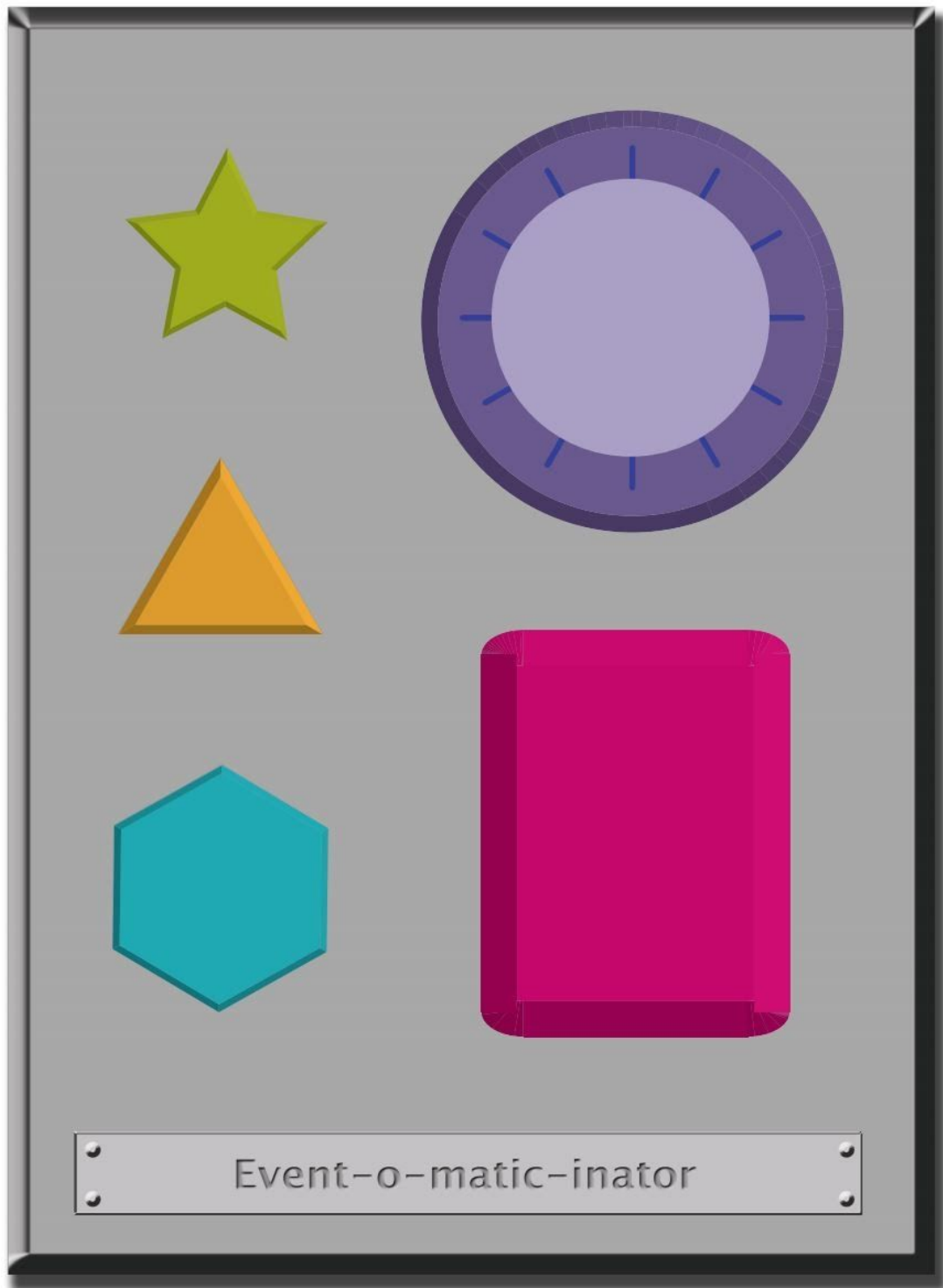
Unit 3 Lesson 14

The Big Event

Resources

The Big Event (Course C)

Event Controller

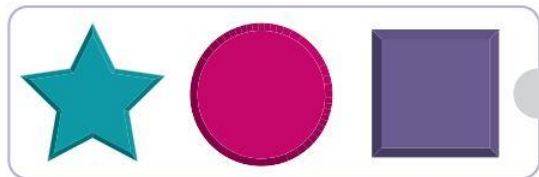
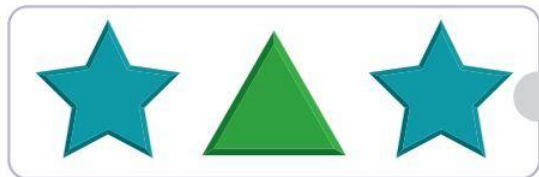
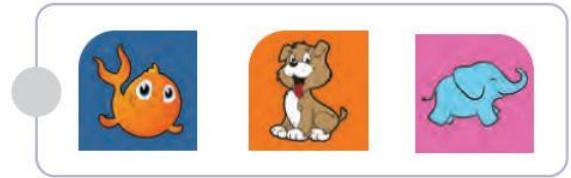
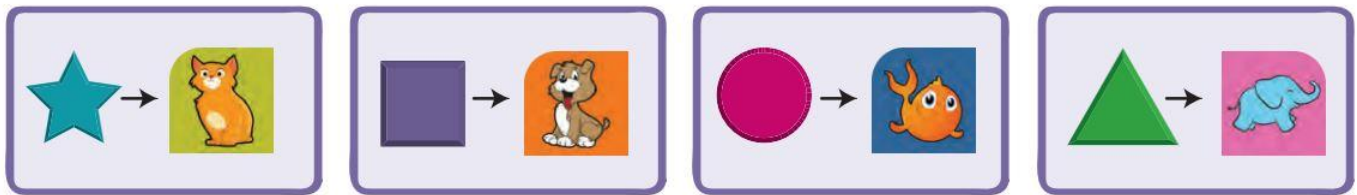


The Big Event



You've been given a magical controller that changes the picture on the frame on your desk. Take a look below to see what each button does. Can you figure out which series of button events will cause your frame to show the pictures on the right?

Draw a line from each set of pictures to the button combination that causes it. The first one has been done for you.



The Big Event



You've been given a magical controller that changes the picture on the frame on your desk. Take a look below to see what each button does. Can you figure out which series of button events will cause your frame to show the pictures on the right?

Draw a line from each set of pictures to the button combination that causes it. The first one has been done for you.

Four button combinations are shown at the top, each with a shape and an arrow pointing to a picture:

- Star → Cat
- Square → Dog
- Circle → Fish
- Triangle → Elephant

Below are four sets of pictures to be matched with the button combinations. The first set is already connected by a yellow line to the Star → Cat button combination.

Set of Pictures	Button Combination
Star, Star, Star	Fish, Dog, Elephant
Star, Triangle, Star	Cat, Fish, Dog
Circle, Square, Triangle	Cat, Elephant, Cat
Star, Circle, Square	Cat, Cat, Cat

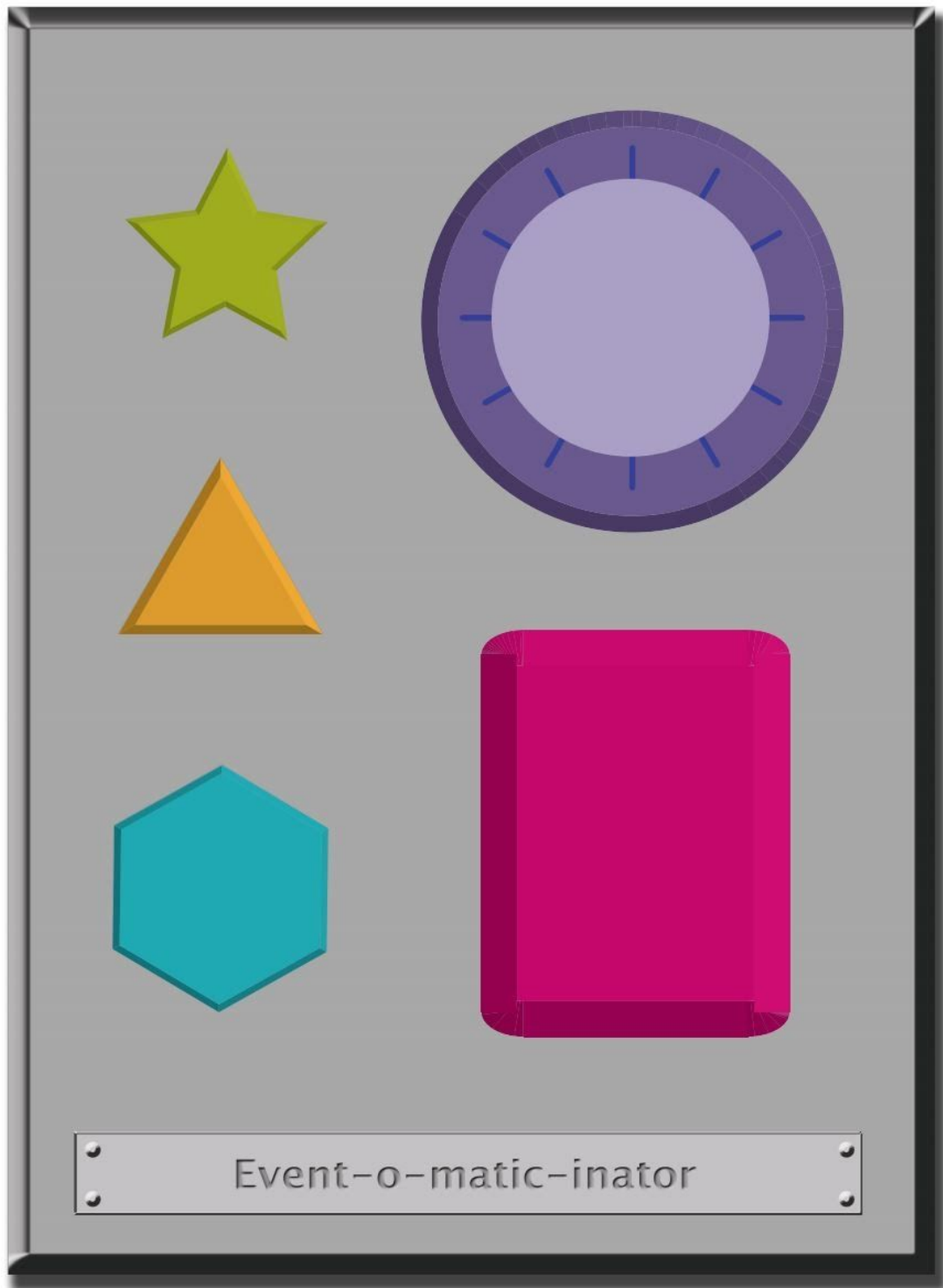
Unit 3 Lesson 15

Build a Flappy Game

Resources

The Big Event (Course C)

Event Controller



Unit 3 Lesson 16

Chase Game with Events

Resources

Unit 3 Lesson 17

Picturing Data

Resources

Unit 3 Lesson 18

End of Course Project

Resources

Name(s) _____ Date _____

Play Lab Project Planning Guide



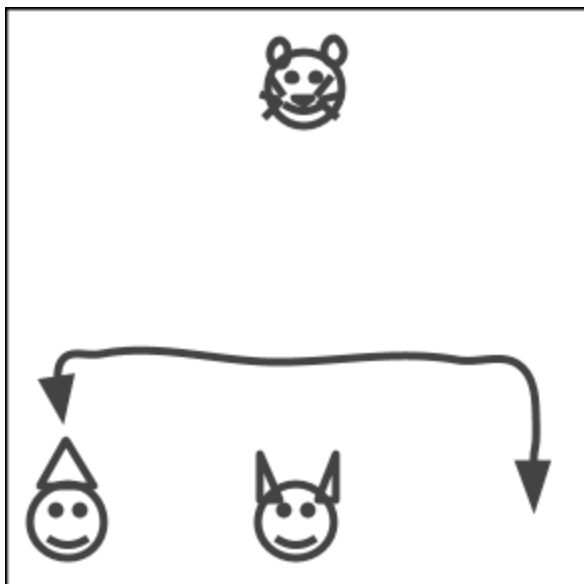
You are going to create your own game using Play Lab.

1. Draw a star next to the actor that will be the player or hero.
Circle all the other actors that will be in your game.



2. What is the setting of your game? Where will it take place? Outside on the
grass

3. Draw your actors.
Use arrows to show how they will move.



4. How will the player score points or win the game?

You get a point when you get the dog.

5. How will the player lose points or lose the game?

You lose if you touch the witch.

Name(s) _____ Date _____

Play Lab Project Planning Guide



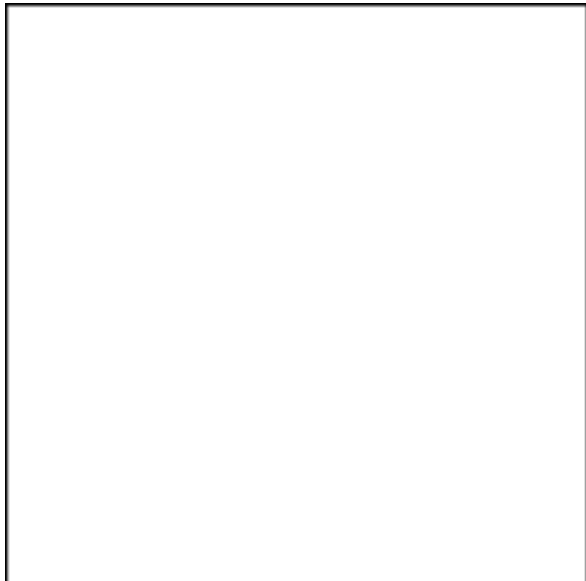
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1. Draw a star next to the actor that will be the player or hero.
Circle all the other actors that will be in your game.



2. What is the setting of your game? Where will it take place? _____

3. Draw your actors.
Use arrows to show how they will move.



4. How will the player score points or win the game?

5. How will the player lose points or lose the game?

