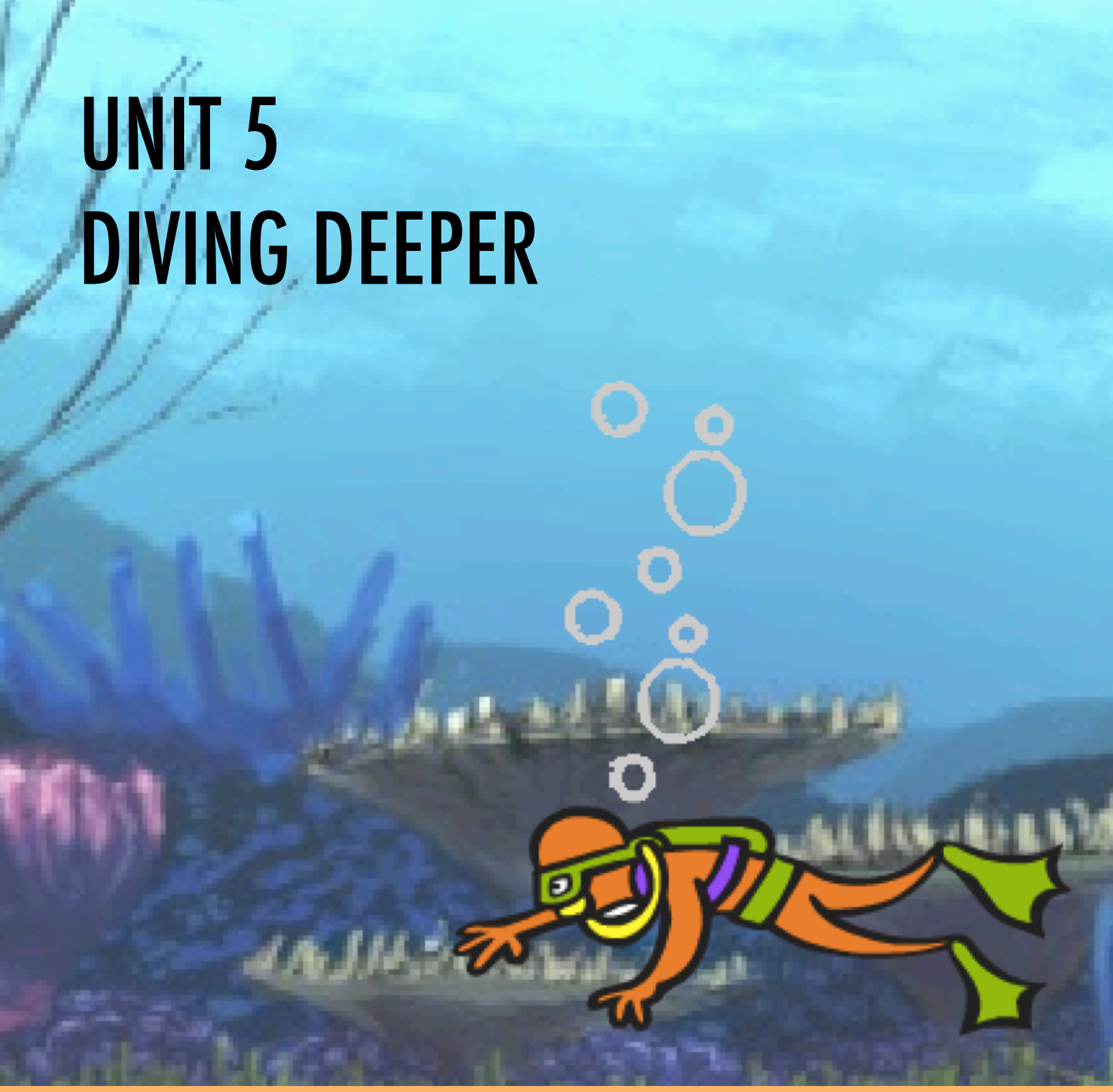
UNIT 5
DIVING DEEPER



YOU ARE HERE

0 1 2 3 4 **5** 6

WHAT'S INCLUDED

KNOW WANT LEARN
ROUND TWO
ADVANCED CONCEPTS
HARDWARE & EXTENSIONS
ACTIVITY DESIGN
MY DEBUG IT!

KNOW WANT LEARN

NAME: _____

What do you know about creative computing & scratch? What do you want to know next? This activity is an opportunity for you to consider which areas of Scratch you feel comfortable navigating (What do I know?) and which areas you would like to explore further (What do I want to know?). Use different resources around you to investigate what you want to know, and then share your findings (What did I learn?).

WHAT DO I KNOW?

Reflecting on your design experiences so far, write down what you know about Scratch and creative computing.

WHAT DO I WANT TO KNOW?

Based on your personal interests, generate a list of things you want to find out more about or discover next.

WHAT DID I LEARN?

Gather resources to investigate items from the list you created above, and then share what you learned from your research.

UNIT 5 REFLECTION

KNOW WANT LEARN REFLECTIONS

NAME: _____

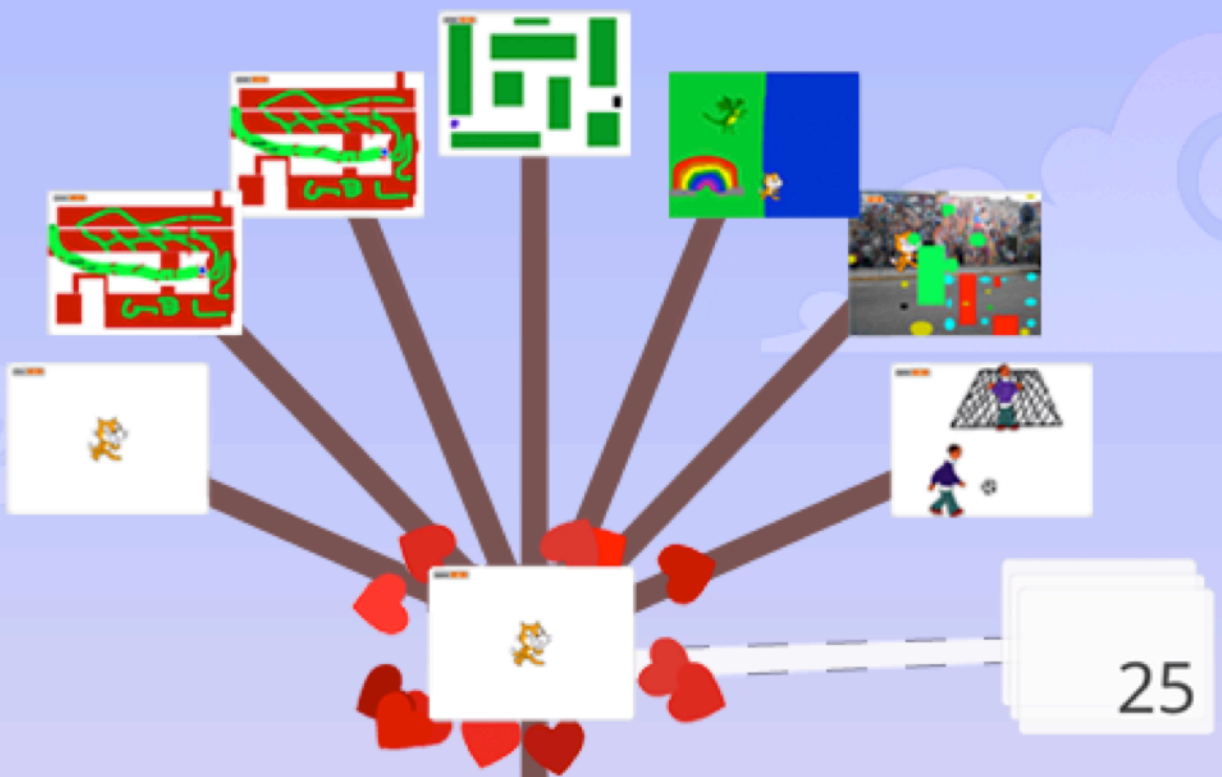
RESPOND TO THE FOLLOWING REFLECTION PROMPTS USING THE SPACE PROVIDED BELOW OR IN YOUR DESIGN JOURNAL.

+ What do you know?

+ What do you want to know?

+ What did you learn?

+ What were your strategies for investigating what you wanted to know?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UNIT 5 REFLECTION

ROUND TWO REFLECTIONS

NAME: _____

RESPOND TO THE FOLLOWING REFLECTION PROMPTS USING THE SPACE PROVIDED BELOW OR IN YOUR DESIGN JOURNAL.

+ Why did you choose that project or activity to work on?

+ What would you do if you had more time?

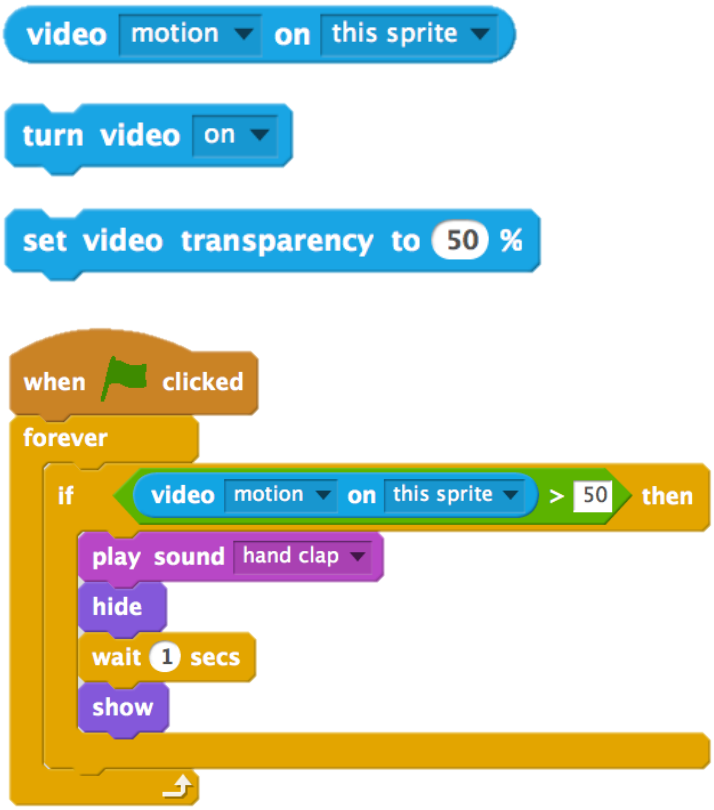
VIDEO SENSING

HOW CAN YOU USE VIDEO SENSING IN YOUR SCRATCH PROJECTS?

Did you know that you can make your Scratch projects interactive through a webcam? Explore this advanced Scratch concept by creating a project that incorporates the video sensing feature.

START HERE

- ❑ Open an existing Scratch project or start a new project to add video sensing.
- ❑ Check out blocks for video sensing in the Sensing category.
- ❑ Experiment with video on, turn video, and set video transparency to blocks to program your project to sense video motion.



THINGS TO TRY

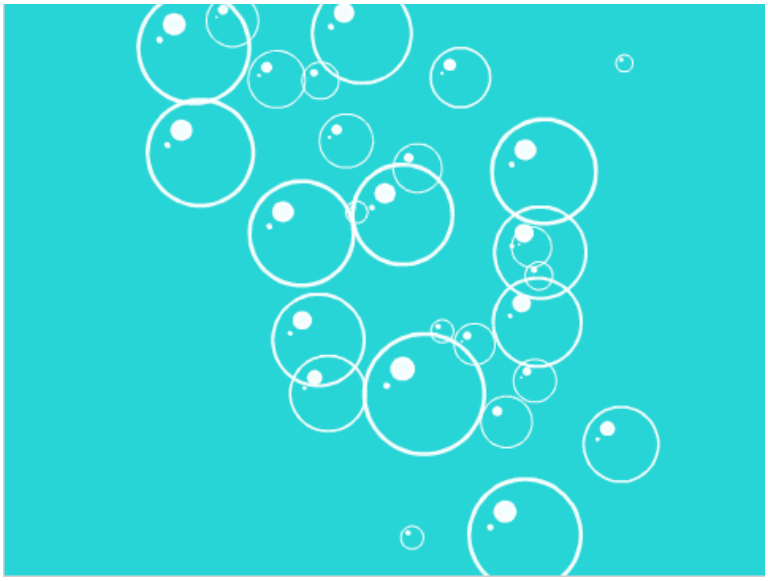
- ❑ Make sure your webcam is connected! Test it out using the turn video on block.
- ❑ If you're feeling a little stuck, that's okay! Explore some of the other projects in the Video Sensing studio to see how they use the video blocks or use the Tips Window to learn more about video sensing.

FINISHED?

- + Add your project to the Advanced Concepts studio: http://scratch.mit.edu/studios/221311
- + Add video sensing to one of your past projects!
- + Help a neighbor!
- + Remix a project in the Video Sensing studio.

CLONING

HOW CAN YOU USE CLONING IN YOUR SCRATCH PROJECTS?

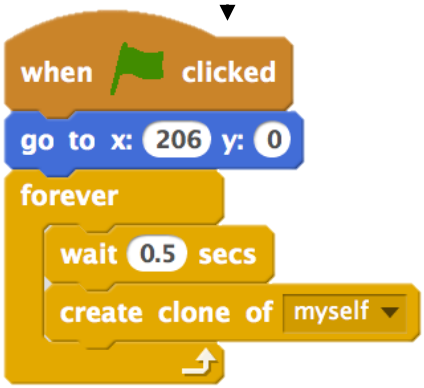


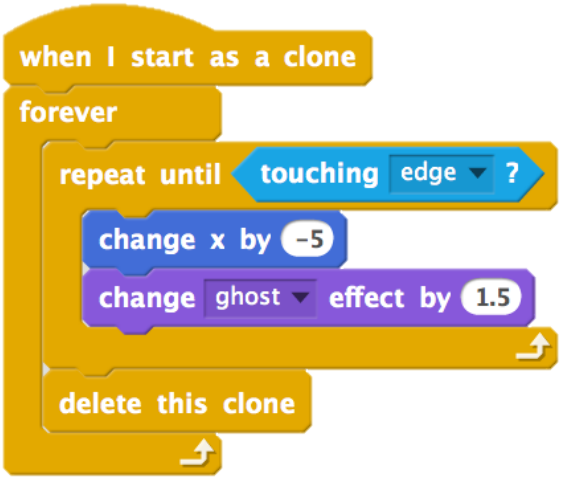
Cloning is an easy way to create multiples of the same sprite. You can use cloning to make many objects and create cool effects in a project.

Explore this advanced Scratch concept by creating a project that incorporates the cloning feature.

START HERE

- ❑ Open an existing Scratch project or start a new project to experiment with cloning.
- ❑ Check out blocks for cloning in the Control category.
- ❑ Experiment with the blocks to create clones of your sprite. Define behaviors for what your cloned sprites will do.





THINGS TO TRY

- ❑ If you can't see your clone initially, check if the original sprite is in the same location – it might be covering the clone! Program your original sprite or the clone to move or go to different locations so you can see them.
- ❑ Stuck? That's okay! Explore some of the other projects in the Cloning Studio to see how they use cloning or search in the Tips Window to learn more about the Create Clone and When I start as a Clone blocks.

FINISHED?

- + Add your project to the Cloning studio: http://scratch.mit.edu/studios/201437
- + Add cloning to one of your past projects!
- + Help a neighbor!
- + Remix a project in the Cloning studio.


Motion
move 10 steps
turn 15 degrees
turn 15 degrees
point in direction 90
point towards
go to x: 0 y: 0
go to
glide 1 secs to x: 0 y: 0
change x by 10
set x to 0
change y by 10
set y to 0
when clicked
show
say
hide
forever
show
point in direction 90
move 10 steps
Sprites
New sprite:
Sprite1
Sprite2

UNIT 5 REFLECTION

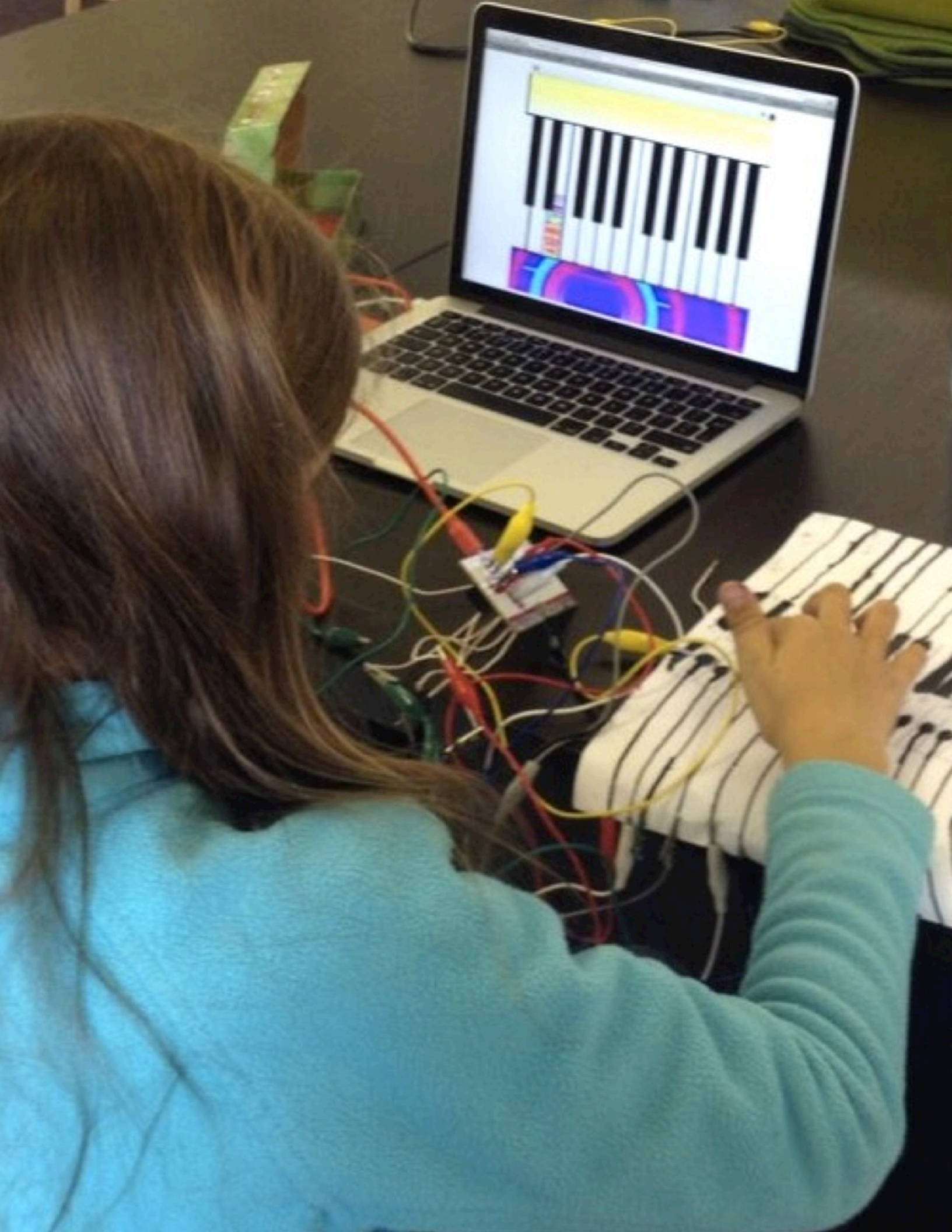
ADVANCED CONCEPTS REFLECTIONS

NAME: _____

RESPOND TO THE FOLLOWING REFLECTION PROMPTS USING THE SPACE PROVIDED BELOW OR IN YOUR DESIGN JOURNAL.

+ Which advanced concept(s) did you choose to explore?

+ What was your strategy for learning more about the concept(s) you selected?



UNIT 5 REFLECTION

HARDWARE & EXTENSIONS REFLECTIONS

NAME: _____

RESPOND TO THE FOLLOWING REFLECTION PROMPTS USING THE SPACE PROVIDED BELOW OR IN YOUR DESIGN JOURNAL.

+ Which hardware or extension did you explore?

+ How did you incorporate the digital and the physical?

+ What was difficult?

+ What was surprising?

ACTIVITY DESIGN

NAME: _____

How can you help others learn more about Scratch and creative computing? Design an activity that helps other people learn Scratch. It can be an off-computer activity (like Creature Construction), project idea (like Build-a-Band), or challenge activity (like Debug It!). You could even develop a new type of activity or handout! Brainstorm using the questions below, and then use the activity and handout planners to give more detail.

WHO IS THIS FOR?

Who is your audience? Who do you want to help learn more about Scratch and creative computing?

WHAT WILL THEY LEARN?

What are the learning goals? What new things do you hope people will learn from using your activity?

WHAT DO THEY NEED?

What supplies will people need? What other types of support will help people successfully engage in your activity?

MY ACTIVITY

(TITLE)

SUGGESTED TIME
__-__ MINUTES

OBJECTIVES

(2 LEARNING GOALS)

By completing this activity, learners will:

+

+

ACTIVITY DESCRIPTION

(PROJECT INSTRUCTIONS)

❑ What will learners create? How will they do this?

❑ How will learners share their work with others?

❑ How will learners reflect on their designs?

RESOURCES

(2 PROJECT RESOURCES - studios, handouts, etc.)

❑

❑

REFLECTION PROMPTS

(3 REFLECTION QUESTIONS)

+

+

+

REVIEWING STUDENT WORK

(2 WAYS TO CHECK IF A LEARNER COMPLETED THE ACTIVITY)

+

+

NOTES

(TIPS AND TRICKS)

+

+

+

NOTES TO SELF

❑ .....

❑ .....

❑ .....

❑ .....

(TITLE)

(PROJECT OVERVIEW)

(PROJECT DESCRIPTION)

(PROJECT PICTURE)

START HERE

(PROJECT INSTRUCTIONS)

- ❑
- ❑
- ❑
- ❑

(ILLUSTRATED PROJECT INSTRUCTIONS)

THINGS TO TRY

(3 THINGS TO DO IF THEY GET STUCK)

- ❑
- ❑
- ❑

FINISHED?

(3 THINGS TO DO IF THEY HAVE EXTRA TIME)

- +
- +
- +

ACTIVITY DESIGN REFLECTIONS

NAME: _____

RESPOND TO THE FOLLOWING REFLECTION PROMPTS USING THE SPACE PROVIDED BELOW OR IN YOUR DESIGN JOURNAL.

UNIT 5 REFLECTION

+ Who do you envision using your activity or resource?

+ What do you hope people will learn from using your activity or resource?

+ What challenges might learners experience in doing the activity or using the resource? How might you further support them in dealing with these challenges?

MY DEBUG IT!

IT'S TIME TO DESIGN YOUR OWN DEBUG IT PROGRAM. WHAT WILL YOU CREATE?

In this activity, you will create your own Debug It! challenge for others to investigate, solve, and remix.

START HERE

- ❑ Reflect back on the different kinds of bugs you've encountered in creating and debugging your own projects.
- ❑ Generate a list of possible debugging challenges you could create. A Debug It! can focus on a specific concept, block, interaction, or some other programming challenge.
- ❑ Build your Debug It! program.

PLANS FOR MY DEBUG IT!

NOTES TO SELF

- ❑ .....
- ❑ .....
- ❑ .....
- ❑ .....
- ❑ .....

FINISHED?

+ Add your debugging challenge to the My Debug It! studio: http://scratch.mit.edu/studios/475637
+ Swap Debug It! programs with a neighbor and try to solve each other's buggy programs.
+ Help a neighbor.
+ Try debugging other programs in the My Debug It! studio.

MY DEBUG IT! REFLECTIONS

NAME: _____

RESPOND TO THE FOLLOWING REFLECTION PROMPTS USING THE SPACE PROVIDED BELOW OR IN YOUR DESIGN JOURNAL.

UNIT 5 REFLECTION

+ What was the problem?

+ Where did your inspiration come from?

+ How did you imagine others investigating and solving the challenge?

+ Did others have alternative approaches to finding and fixing the problem than what you expected? What were their strategies?