

# UNIT 4, LESSON 3

## DECOMPOSITION

5TH & 6TH GRADE



Award #1837380

Lesson created by the GMU-ODU CSforAll Team. For more information about this lesson and our CSforAll initiative, contact Dr. Amy Hutchison at [ahutchison1@ua.edu](mailto:ahutchison1@ua.edu)

# SUMMARY AND STANDARDS

## Summary:

In this lesson, students will use Coco and Scratch to write and animate a summary of a story.

## ELA Standards

The student will write in a variety of forms to include narrative, descriptive, opinion, and expository.

- a) Engage in writing as a process.
- b) Identify audience and purpose.
- c) Use a variety of prewriting strategies.
- d) Use organizational strategies to structure writing according to type.
- e) Use transition words to vary sentence structure.

## CS Standards:

The student will break down (decompose) a larger problem into smaller sub-problems, independently or collaboratively.

- The student will construct programs to accomplish tasks as a means of creative expression using a block or text based programming language, both independently and collaboratively
- a. using sequencing;
  - b. using loops (a wide variety of patterns such as repeating patterns or growing patterns); and
  - c. identifying events.

# MATERIALS AND RESOURCES NEEDED FOR THIS LESSON:

- Chromebook/Laptop
- Internet Access
- [Teacher Slides](#)
- [Coco Link](#)
- [Scratch link](#)

## Reminder:

In this lesson, every student should be **assigned a story in CoCo** using **Level 5**.

The story should be titled **“Unit 4 Summary.”**

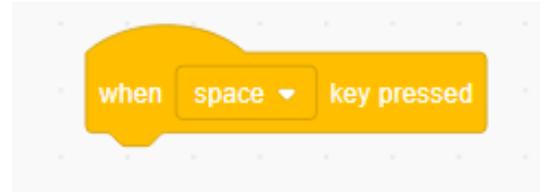
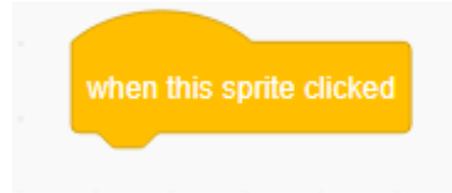
Each student should save their work using this naming strategy: **“Student Name + Unit # + Descriptor”**, for example, **“Johnny Unit 4 Summary.”**



## LESSON OBJECTIVES: I CAN...

- Review new blocks
- Code and run your animation in Scratch Debug, as needed
- With a partner, check that your writing and animation match
- Self-evaluate in Coco

# NEW BLOCKS



# REVIEW: COCO LEVEL 5

Story: Tutorial

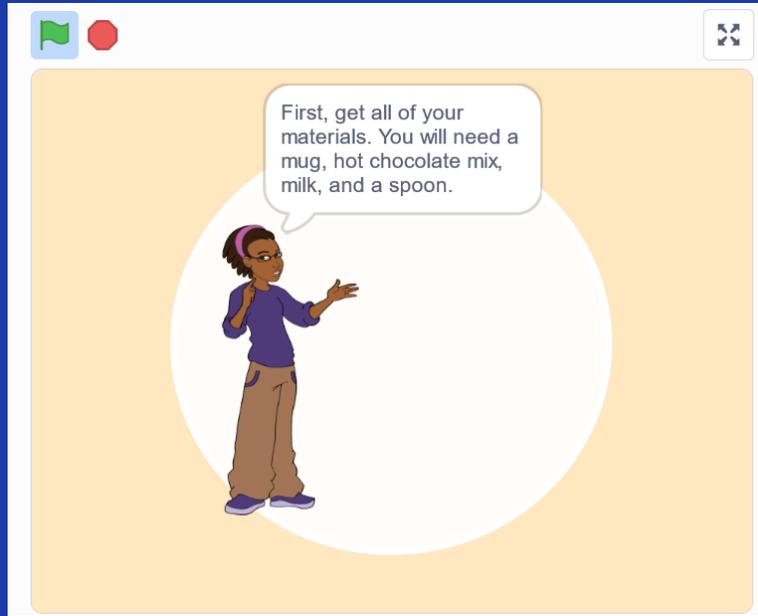
My topic:

My Ideas:	What I Want to Do:	Blocks & Icons I will need:	Self-monitoring:
          	 Do I need to add a start block? <input type="radio"/> No <input type="radio"/> Yes  Do I need to add a sprite or object? <input type="radio"/> No <input type="radio"/> Yes  Do I need to add or change a background? <input type="radio"/> No <input type="radio"/> Yes  Do I need to make my sprite talk? <input type="radio"/> No <input type="radio"/> Yes ...		
          	 Do I need to add or change a background? <input type="radio"/> No <input type="radio"/> Yes  Do I need to make my sprite talk? <input type="radio"/> No <input type="radio"/> Yes  Do I need to make my sprite think something? <input type="radio"/> No <input type="radio"/> Yes  Do I need to create a costume? <input type="radio"/> No <input type="radio"/> Yes ...		
          	 Do I need to add or change a background? <input type="radio"/> No <input type="radio"/> Yes  Do I need to make my sprite talk? <input type="radio"/> No <input type="radio"/> Yes  Do I need to make my sprite think something? <input type="radio"/> No <input type="radio"/> Yes  Do I need to create a costume? <input type="radio"/> No <input type="radio"/> Yes ...		
          	 Do I need to add or change a background? <input type="radio"/> No <input type="radio"/> Yes  Do I need to make my sprite talk? <input type="radio"/> No <input type="radio"/> Yes  Do I need to make my sprite think something? <input type="radio"/> No <input type="radio"/> Yes		

# BEFORE YOU BEGIN TO CODE....

- MAKE SURE YOU HAVE A TOPIC SENTENCE
- MATCH YOUR ANIMATION TO YOUR WRITING
- BE CONSISTENT
- MATCH YOUR VISUALS TO YOUR TEXT

# GOOD ANIMATIONS CAN BE SIMPLE OR COMPLEX!

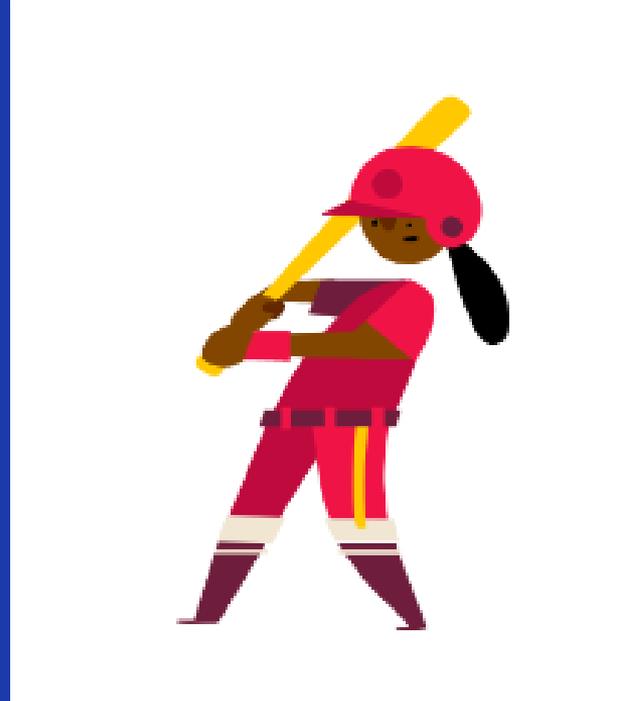


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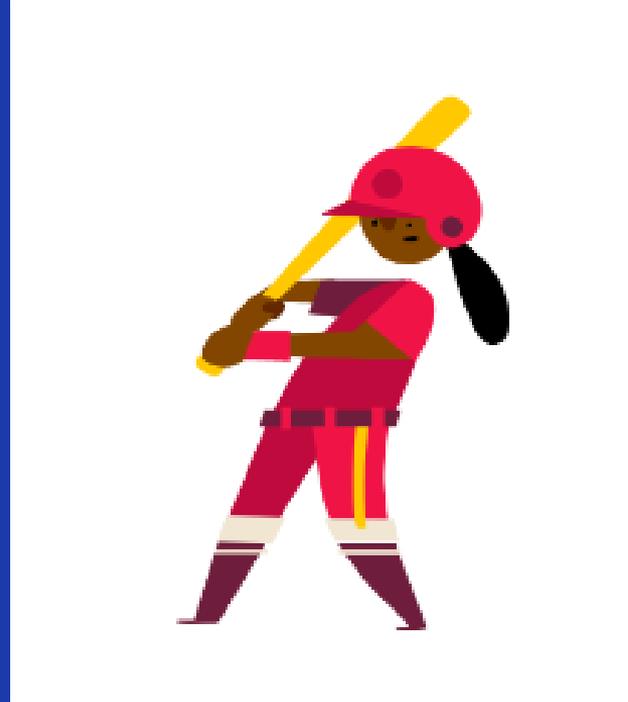


<https://www.dropbox.com/s/nh93dmdkphd4n0z/Screen%20Recording%202023-09-19%20at%201.45.13%20AM.mov?dl=0>

**“ONCE UPON A TIME THERE LIVED A PRINCESS...”**



“ONCE UPON A TIME THERE LIVED A PRINCESS...”



**“ONCE UPON A TIME THERE LIVED A PRINCESS IN A CASTLE.”**



**“ONCE UPON A TIME THERE LIVED A PRINCESS WHO PLAYED  
BASEBALL.”**



Choose a Backdrop

Search

All

Easy

Music

Sports

Outdoors

Indoors

Space

Underwater

Patterns



Arctic



Baseball 1



Baseball 2



Basketball 1



Basketball 2



Beach Malibu



Beach Rio



Bedroom 1



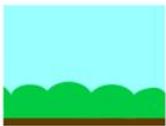
Bedroom 2



Bedroom 3



Bench With...



Blue Sky



Blue Sky 2



Boardwalk



Canyon



Castle 1



Castle 2



Castle 3



Castle 4



Chalkboard



Circles



City With W...



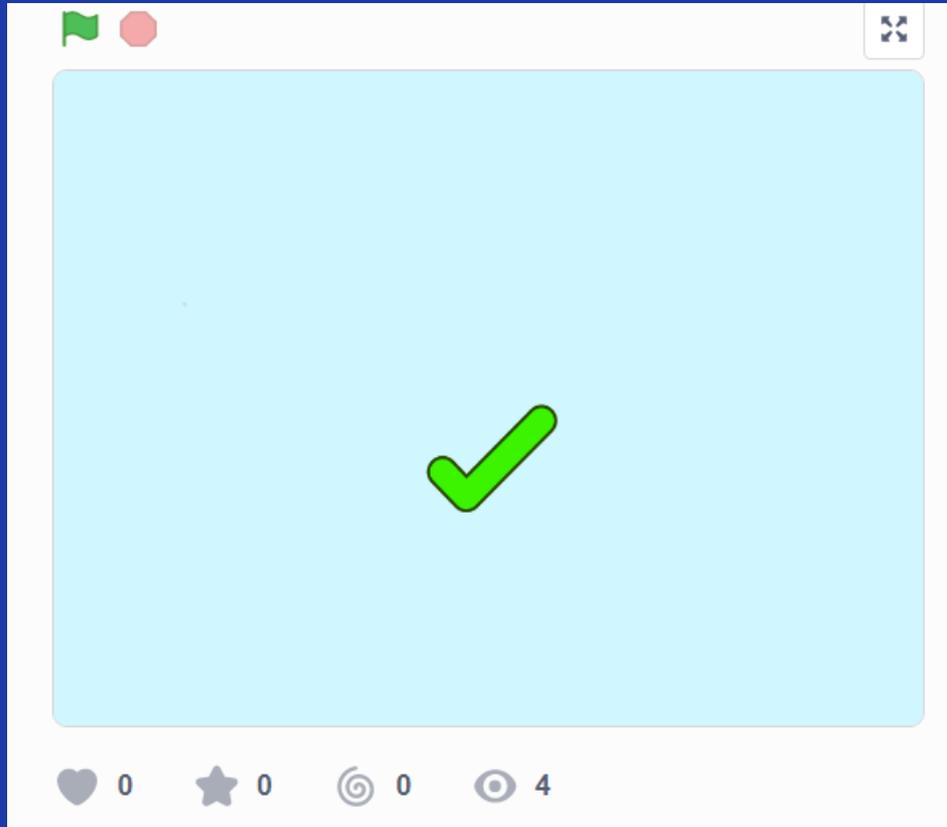
Colorful City



Concert

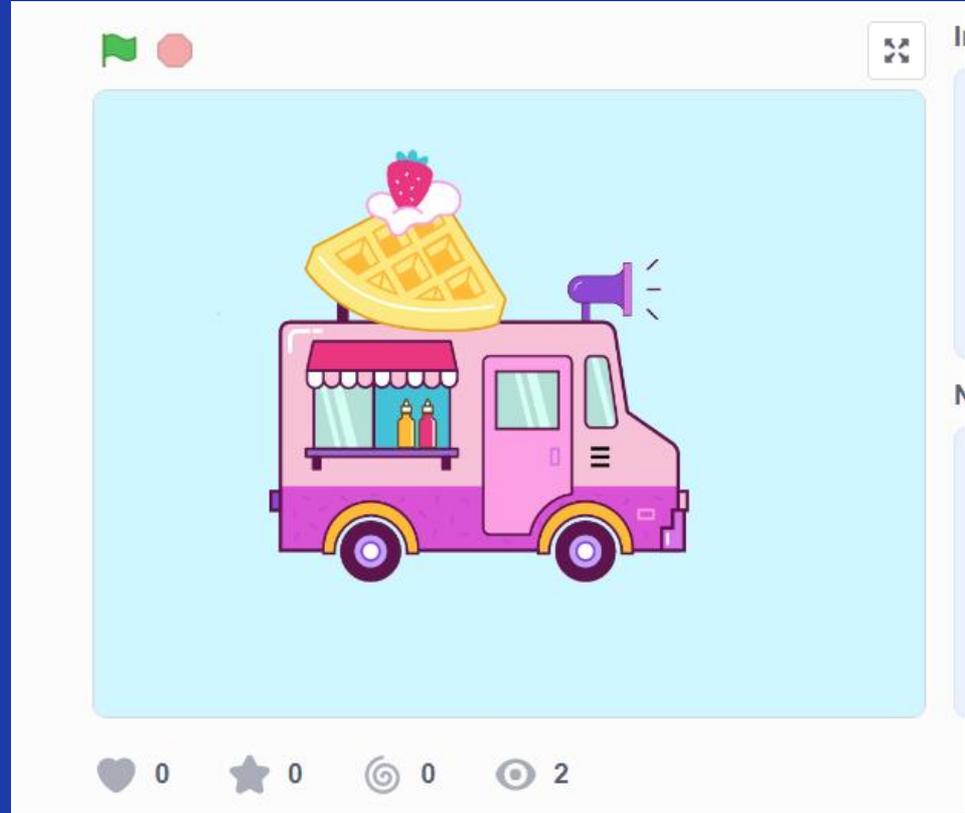
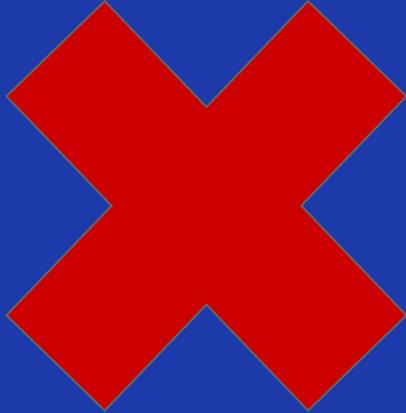


 LIKE  
THIS



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**NOT LIKE THIS**

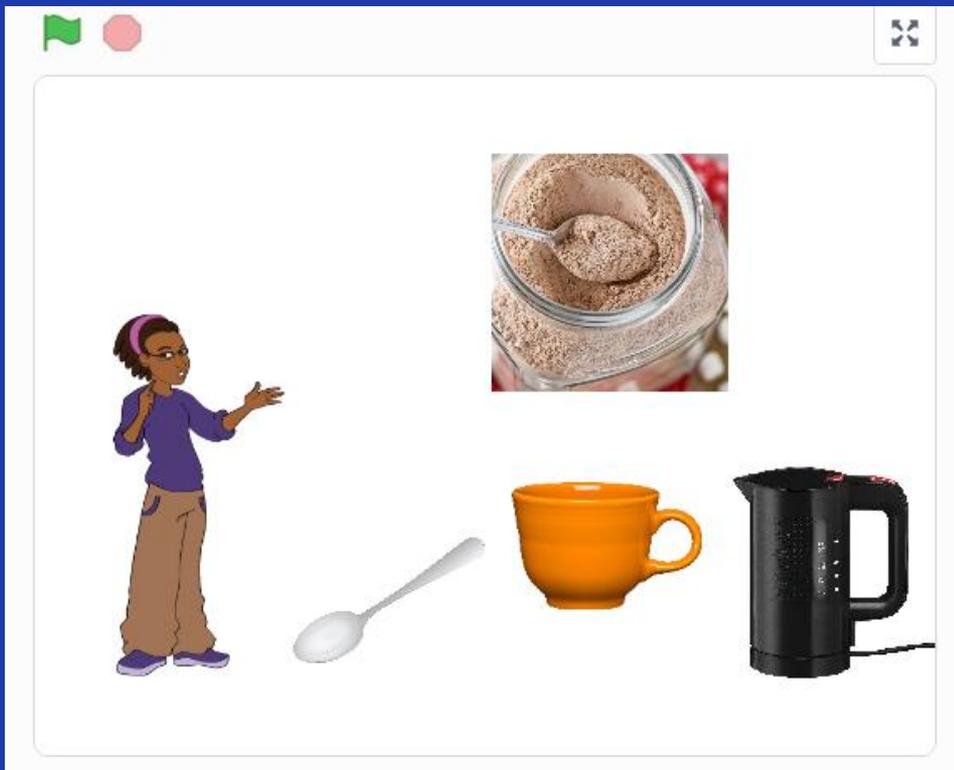


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**☐ YOU CAN USE SCRATCH TO ENHANCE YOUR ANIMATION**

**☐ ALL ADDITIONAL DETAILS MUST BE RELEVANT!**

 LIKE  
THIS:

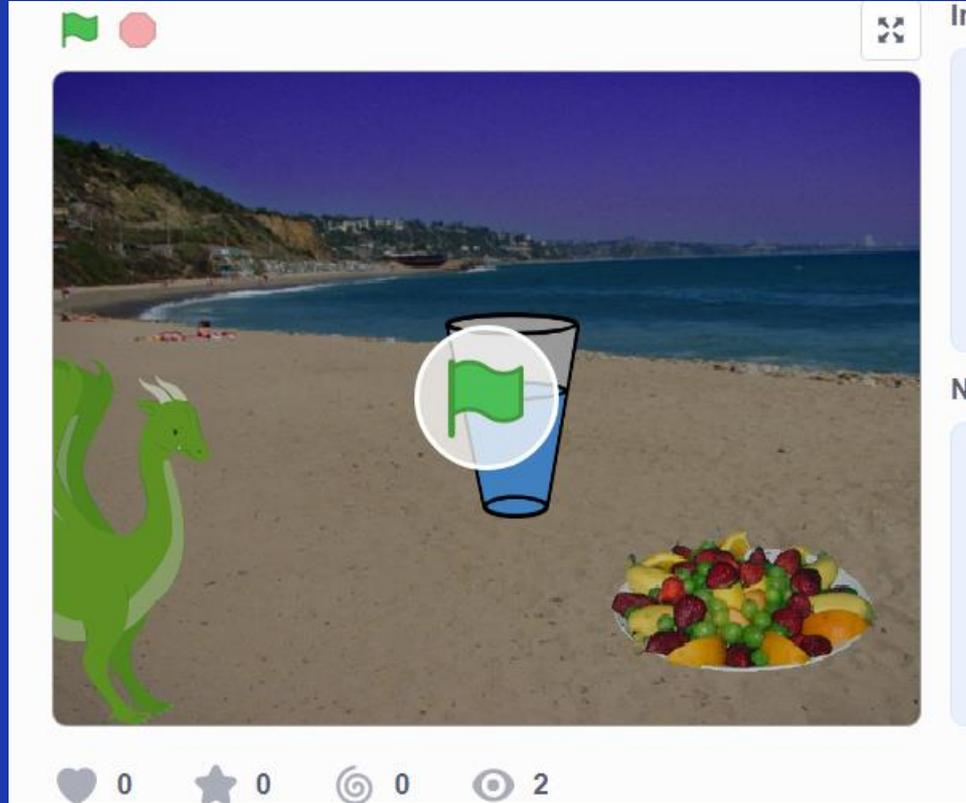
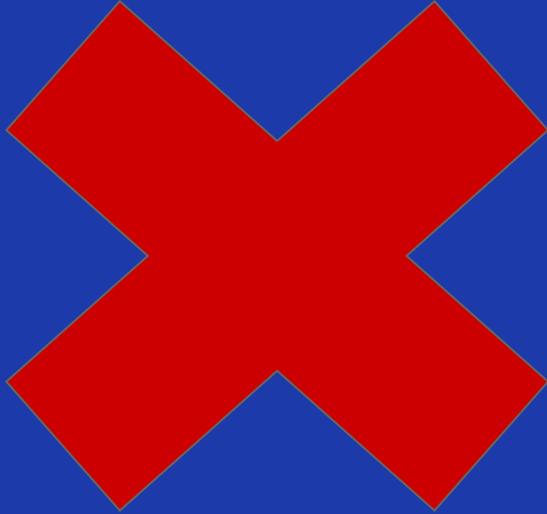


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**HOWEVER!**

**☐ TOO MANY VISUALS CAN BE **CONFUSING****

**NOT LIKE THIS**



[https://www.dropbox.com/SCL/FI/AKCXG1WU83Q7SMJZFLJ31/HOW-TO-MAKE-HOT-CHOCOLATE\\_DISRUPTIVE.MP4?RLKEY=BXI9OWL96G1D3FOKDT06ZTICE&ST=I780ZD8X&DL=](https://www.dropbox.com/SCL/FI/AKCXG1WU83Q7SMJZFLJ31/HOW-TO-MAKE-HOT-CHOCOLATE_DISRUPTIVE.MP4?RLKEY=BXI9OWL96G1D3FOKDT06ZTICE&ST=I780ZD8X&DL=)

# NAMING YOUR SCRATCH ANIMATION

When you create your animation in Scratch, please name it using the following formula:

- **Your Name + Unit # + Topic**
- For example:
  - “Johnny Unit 4 Summary”

## INDEPENDENT PRACTICE:

1. Open **Scratch** on one tab, **CoCo** on another
2. Use CoCo to code your Scratch animation
3. Don't forget to **self-monitor** as you go!

Make  
sure you  
are using  
CoCo!



**CoCo**  
COMPOSE & CODE  
DEPICT-CS

**PAUSE HERE. (5-10 MINUTES)**

## ASK YOURSELF AND A PARTNER:

- Does my topic sentence orient my reader and help set the scene?
- Does my animation in Scratch convey what I planned? Does it match my writing?
- Have I enhanced my writing in any way in Scratch?
- Is there anything distracting or unnecessary in my animation that I should remove?
- Is there anything in my animation that would make it harder for a viewer to understand my purpose?

# **WRAP UP: SCRATCH PUBLISHING PARTY**

**By receiving feedback on your *Explanatory Writing Scratch* project, you can make it better.**

A. Share your screen with your elbow partner.

B. Ask them to name two things they  about your Explanatory Writing project.



The part I liked best was...



I like the way... because...



You should keep doing...

C. Request feedback on one aspect of your Scratch project you could improve



How about if you...



You might want to consider...



You might want to try...

D. Switch Roles

**PAUSE HERE (10 MINUTES)**

# SHARING YOUR .SB3 FILE FROM CS FIRST TO COCO

1. Create the file in CS First
2. In the Scratch editor, find the word “File” in the top-left corner.
3. Click on “File” menu and you’ll see some choices pop down.

1. Choose “Save to your computer.” This will download your Scratch project.

1. Look in your “Downloads” folder. That’s where your saved project might be.

1. Go to the CoCo website and log in to your [account. https://wego.gmu.edu/scratchgo/login.php](https://wego.gmu.edu/scratchgo/login.php)

1. Click proceed on the correct story in CoCo.

Ready To Work on Your Story?	
first story	(Locked)   <a href="#">View it</a>
second story	<a href="#">Proceed</a>
Story 3	<a href="#">Proceed</a>

1. Navigate to the section of CoCo where you can upload your project. (only sb3 type and 10Mb max).

**Uploading your coding file (only sb3 type and 10Mb max):**

No file chosen  Uploaded file: [n/a](#)

1. Click “Save”.



HERE IS AN OPTIONAL VIDEO TO LEARN HOW TO SHARE YOUR PROJECT IN SCRATCH.

Pause here.

**ANYONE CAN BE A COMPUTER  
SCIENTIST**

# CAREERS IN COMPUTING

