The Basics

Ground rules, internet safety, variables
& Radia Joy Perlman

01

GROUND RULES

What to expect in Girls Code Club for the next year!

OUR RULES

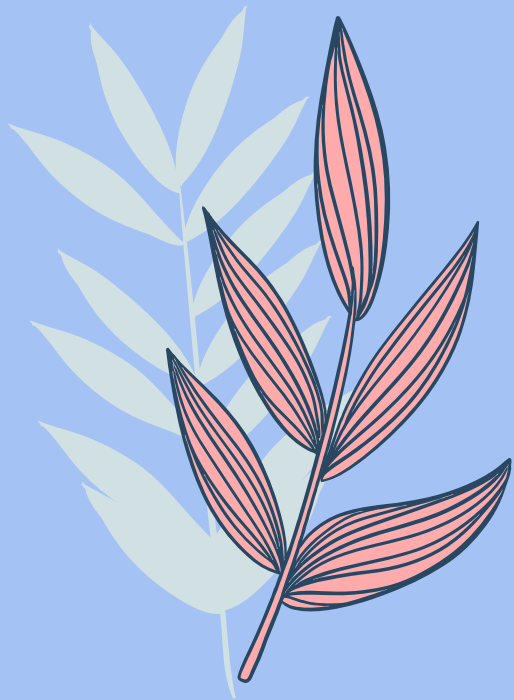**In Girls Code Club, we:**

- Show kindness to other coders.

- Try our best, and learn from our mistakes.

- Are active listeners, and ask questions.

- Encourage our peers, and help them learn.

girls code club

ANCASTER SCIENCE F

02

ICE BREAKER

What's an Ice Breaker?

Ice Breaker

A way for each coder to get a little more comfortable around their peers.

Algorithms

In code, we sometimes have things called **sorting algorithms**. Algorithms are a set of instructions. **What does sorting mean?**

Sort Animals By Size (Silently)

The Game

- Each coder will get a piece of paper with an animal name on it.

- **Goal:** Sort yourselves from largest to smallest animal!

- **Rules:** You cannot say any words, or make any sounds. You cannot show anyone your piece of paper.

03

INTERNET SAFETY

Internet Safety

Once you put something online, it's there forever. You can take it down, but someone may have already seen it and saved it. Because of this, we shouldn't be putting anything personal online.

What is an example of personal information that should not go on the internet?

- Safety Video

- Quiz #1

- Quiz #2

https://cliqz.com/en/magazine/10-tips-better-internet-safety

Internet Safety (Exercise)

Come up with a username! This will be used on anything public-facing that we make in Girls Code Club. It can be anything you want it to be, but should **not include personal information.**
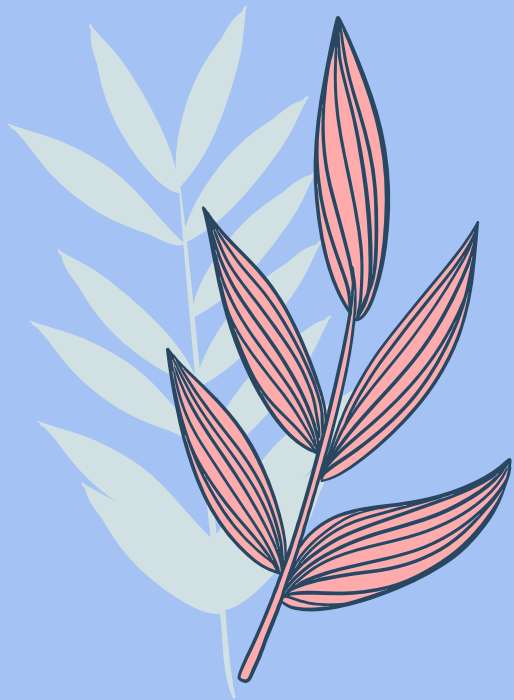
Do NOT Include Your:

- Name
- Nickname
- Age
- Birthday
- Address
- School or grade level

You COULD Include Your:

- Pet's name
- Favorite Animal
- Favorite # or color
- What you want to be when you grow up
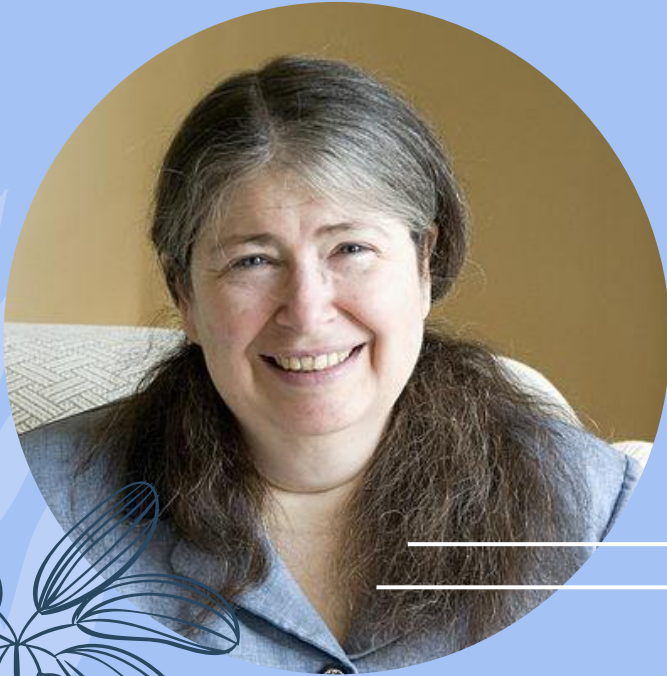- A username you already use

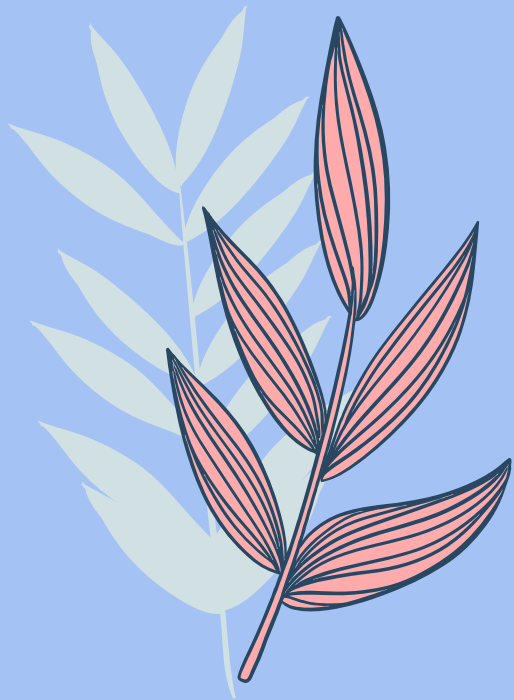Example Username: **blue_f0x_C0der**

04
SHERO OF THE MONTH

Radia Joy Perlman

Radia Joy Perlman, "Mother of the Internet"

- From New Jersey, and still alive today!

- Only girl in her college classes

- Created a kid-friendly coding language, and pioneered teaching young kids how to code!

- Spanning Tree Protocol created network/internet security

05

SHEro Plaque

SHEro Plaque in Hall of Heroes

Each year, we have the opportunity to get a plaque created in the Lancaster Science Factory that will be dedicated to this years' Girls Code Club! Because a lot of you are returning coders, you get to vote on the plaque we make this year.

- Hedy Lamarr
- Carol Shaw
- Anita Borg
- ENIAC Women
- Gladys West (typo in the handout)
- Shaffi Goldwasser
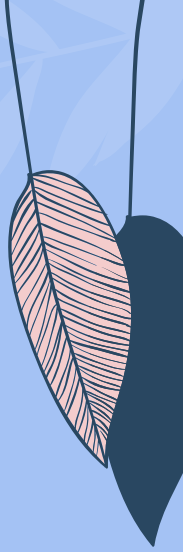
06

Variables

Using Python!

Variables (Video)

A variable...

Stores information so you can use it later. The **value** of your variable can change, but the **type** must stay the same. Types:

- Number
- String (text)
- Boolean (true or false, yes or no)

Variables - Continued

JavaScript

var apples = 3

Python

apples = 3

A variable...

- Is called a "var" (short for variable)

- "var" is used a lot in JavaScript, but we're learning Python!

- Python doesn't need any of that (:

Variables

A variable...

Is also kind of like putting something in a box!

cats = 1;

How many cats do I have in my box?

Variables

What if...

cats = 5;

How many cats do I have in my box now?

Variables

A variable can also...

Be a string. Strings are just text wrapped in quote marks – " ".

Let's use **dogCostume** to describe what my dog is wearing!

dogCostume = "hot dog"

Variables

Another example…

dogCostume = "harness"

Question: Can I change the variable **dogCostume** to **false**, to show that she doesn't have clothes on anymore?

Answer: No! That would be changing the variable **type** from a string to a boolean. Now that **dogCostume** is a string, it must always be a string.

Variable Expressions

Variables can be written as an **expression**, just like in math! See if you can figure out what the values of these variables are:
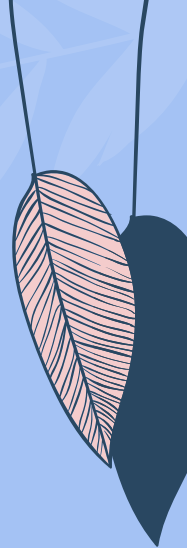
apples = 5 + 3

cats = 4

dogs = 1

geckos = 1

pets = cats + dogs + geckos

Variable Expressions
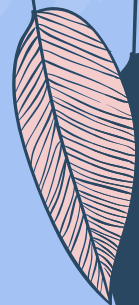
Even though strings are text, you can add them too!

color = "green"

food = "bean"

word = color + food

That makes "greenbean", but what if I want to include a space between the words "green" and "bean"?
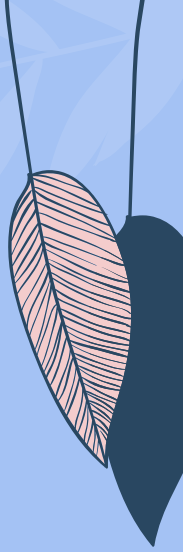
Try it Yourself!

Using the interactive editor on W3Schools, **tell us how many pets you have.**

Then, **create the following sentences using Python!**

- Emma has 5 pets.
- The year is 2022.
- There are 6 colors in the rainbow.
- Girls Code Club has 9 sessions.
- If my parents were going to adopt a cat tomorrow, I would name it ___.
- My favorite thing I did this summer was ___.
- I want to learn ___ in Girls Code Club this year.
- My favorite food is ___.
- My favorite number is ___.
- I know the following coding languages ___, ___, ___.

THANKS!