

# Variables

NYS COMPUTER SCIENCE  
STANDARDS:  
4-6.CT.1.2, 5, 7, 10

Topic:  
Computational Thinking

Lesson 1

Lesson 2

# Let's Play a Classic Game of Tic Tac Toe

- As you walked into the classroom, you grabbed a folded piece of paper.
- Unfold it to discover who your Round 1 partner is.
- In pairs, play tic tac toe using a P5-JS gameboard provided.
- Round 1 ends when your teacher calls "Time!"
- Round 2 begins shortly after.

# Tic Tac Toe Game board

Jamboard

**Round 1**

**Brian and  
Benson**



**Round 1**

**Steve and  
Liam**



### **Tic - Tac -Toe**

- 1. What went well?**
- 2. What was challenging?**
- 3. What suggestions can enhance our game experience?**

# Essential Questions

How is storing information useful to programs we play/create?

How is storing information useful in everyday life?

# Learning Objectives:

**1**

**I can identify a  
variable as a  
placeholder**

**2**

**I can explain that  
a variable has a  
name and a value**

**3**

**I can recognize  
that the value of a  
variable can be  
changed**

An open notebook with a dark cover is shown against a blue background. The notebook has two cream-colored pages. A purple rectangular sticky note is placed on the left page, featuring the word "Keywords" in a bold, black, sans-serif font. A red paperclip is attached to the top-left corner of the sticky note. On the left edge of the notebook, there are several colorful tabs: a purple one at the top, followed by red, green, and yellow ones. On the right edge, there is a blue tab and a green rounded tab below it.

**Keywords**

1a

# variable

something  
that can change  
(vary)

## Examples

Day of the week...

Emotions...

Soup of the day...





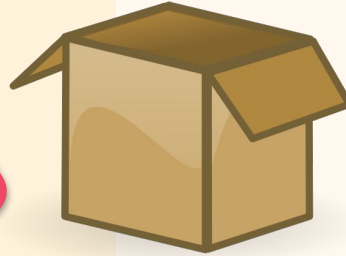
1b




# variable

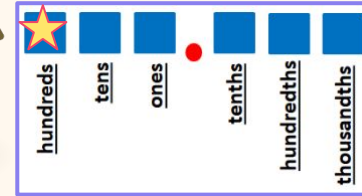
It is  
a container for  
storing a value  
a.k.a.

placeholder

A substitute  
for something  
that is  
unknown



	Email address 
	Password



Students, write your response!

1b

# variableName


A variable needs a  
name to organize  
the information

placeholder

What is Ms. Best's plan for the  
boxes below?



Students, write your response!



Once a variable is  
created, it is stored in  
the computer's memory



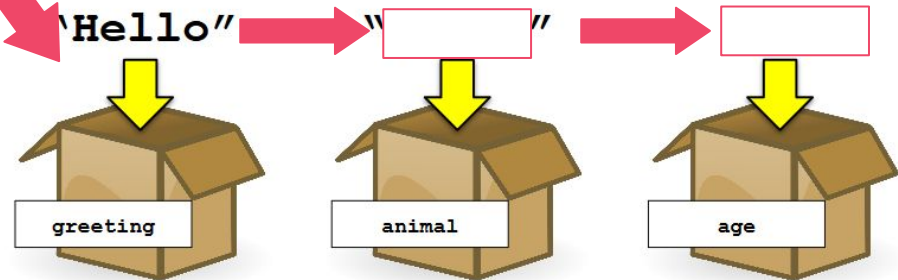
**This permits us to give  
the variable... values.**



2

# value

Represents the  
**name**  
of the variable



Students, write your response!

**In Review...**



## **Variable (placeholder)**

**Variable name:**

**Value:**

Let's  
Explore

## Our Task:

Our class is creating avatars for the Metaverse world.

If you could create a world or be put into a Metaworld (like Ryan Renold in the movie Free Guy),...

- Who would you be? Name?
- What is your purpose?
- What career would you have?
- What could you do?
- Would you have any pets? How many?

Using your P5-JS created avatars, we have a choice to create/select your avatar in this video game using variables.

# Brainstorm with Me!

## Our List



*Variable Name*

*Value*

-Name

Goldstar

-Career

Publist

-Cool Ability

Tutor

-





# Brainstorm with Me!

Continue...



Variable Name	Value
-	
-	
-	
-	



# Independent Activities

**Hot!**

Play the Game of  
Life-MASH Game



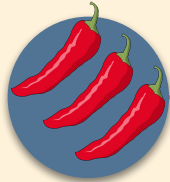
**Hotter!!**

Create your  
avatar's features



**Hottest!!!**

Convert these scenarios  
into variables and values



**Partner Up!**

Use your knowledge of variables,  
variable names and values to  
complete one activity.

If you've completed one, select  
another :)

I'm finished, Click Me!

# Avatar?

step 1



Variable Name	Value
-	
-	
-	
-	

Avatar Pic Here

# Avatar?

step 1



Variable Name	Value
-	
-	
-	
-	

Avatar Pic Here



**How can make our Tic-Tac-Toe class game more enhanced?**

Students, write your response!

# Pick One!

## Choice Board

