

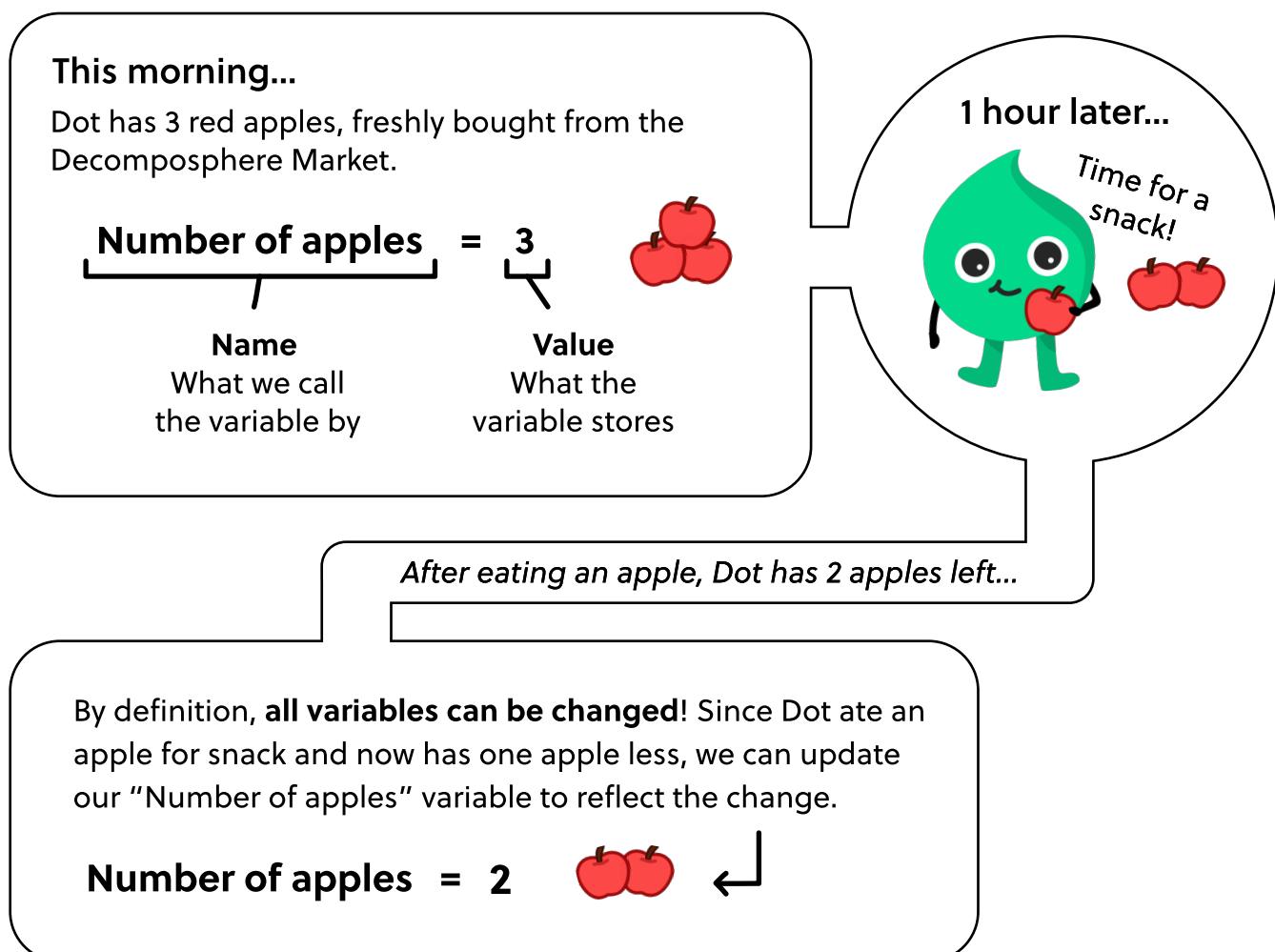
# Vivid Variables

## Welcome to Decomosphere!

Ready, set, learn! Dive into the bright green grasses of Decomosphere with Dot and learn how to break down problems into smaller parts. Today, we'll be starting our journey on Decomosphere with variables!

## What are variables?

In computer science, we use **variables** to **store information**. Variables have a **name** that we call it by and a **value** it stores. Let's take a look at how Dot's favorite fruit, apples, can be represented by a variable!

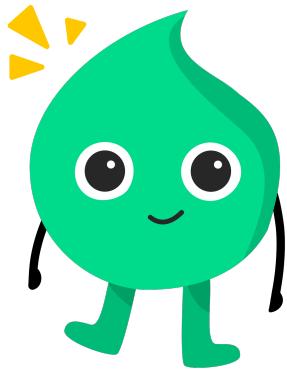


## More Variables!

In addition to numbers, variables can also store words, names, etc!

Here are several variables used to describe Dot:

### All About Dot!



#### Dot's Variables

Name = Dot

Home = Decomosphere

Favorite color = Green

Favorite fruit = Apples

Number of siblings = 2

Lucky number = 35

In our next example, we'll explore how these variables can be split into different categories.

## Trash Sort

In computer science, variables are split into categories based on their value. To explain this, let's take a look at how we separate waste into three bins: Trash, Compost, and Recycle.

All of our waste either belongs in the Trash, Compost, or Recycle bin.

Below each bin are a couple examples of what belongs where!

#### Trash



Straws



Plastic bags



#### Compost



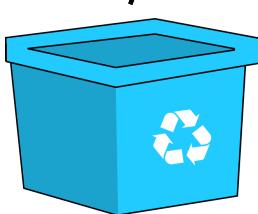
Apple core



Banana peel



#### Recycle



Paper



Newspaper



Similar to how we sorted waste into the Trash, Compost, and Recycle bins in our trash sort example, we also sort variables into different categories.

## Vast Variety of Variables

There are many different variables used in computer science, but they most often store either words or numbers. Therefore, we can categorize variables into the “word” or “number” group to show what type of information the variable stores.

Word variables store words and sentences: ex. “Cheetahs run very fast.”, “What’s up?”  
Number variables store any kind of number: ex. 1, 3, 100

Below, each bucket represents the **word** and **number** categories. Inside each bucket are variable values to describe Dot’s two apples from our previous example.

Ex. To store the color of apples, we use a word variable with the value ‘Red’. To store the price of two apples, we use a number variable with the value \$1.50.



## Snowball Fight!

Using your knowledge of variables and variable categories, you will be filling in your own silly paragraph!

### Setup

- On your ‘Silly Paragraph Variables’ page, you will find ten rectangles. **Each rectangle will represent a variable** from the Variable Names List below (You will have ten variables in total).

- Assign each variable a **name** from the Variable Names List, a **value**, and a **category** (word or number) based on its value. The order of the 'Variables Names List' should match with the numbers on each rectangle found on the next page. (Ex. The sport variable belongs on the 2nd rectangle.) When finished, carefully cut out the rectangles along dotted lines.

### Variable Names List

(Assign each variable a **name** from this list)

- |                    |                           |
|--------------------|---------------------------|
| 1. Weather         | 6. Past-tense action verb |
| 2. Sport           | 7. Price                  |
| 3. Outdoor place   | 8. Adverb                 |
| 4. Plural animal   | 9. Plural animal 2        |
| 5. Favorite number | 10. Adjective             |

### Categories

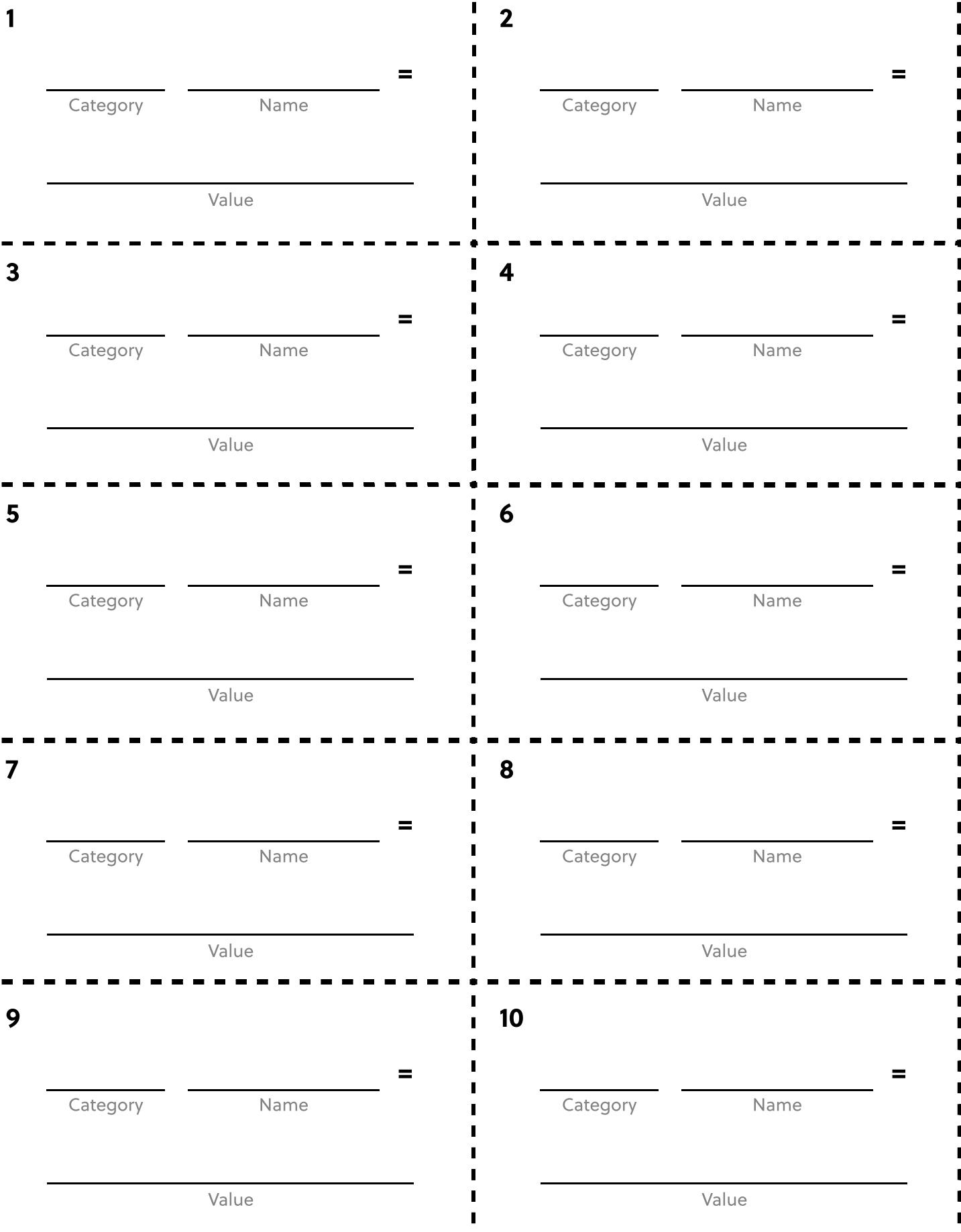
(Assign each variable a **category**)

- Word  
Number



## How to Play

- Sit in a circle with a group of 4-10 people.
- Crumple and ball up the first variable from your stack to form a "snowball". (Check the number on your snowball—This should be the same for everyone!) When everyone has their snowballs ready, throw them into the center of your circle.
- Take one snowball from the center of your circle. (Don't open it up yet!)
- Repeat the process of throwing and taking snowballs with your other nine pieces of paper. After this, everyone should have ten snowballs each!
- It's finally time to open all of your snowballs! On the 'Silly Paragraph' page, use your snowballs to fill in the missing variables in the paragraph. When you finish, read aloud your silly paragraph to your group!



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## Silly Paragraph: A Day in Decomosphere

To complete your silly paragraph, use your snowballs to write in the value of each variable (the variable names are below the missing blanks)!

It was a nice, \_\_\_\_\_ day in Decomosphere—the perfect weather  
Weather

for outdoor sports! I quickly gathered my friends to play some

\_\_\_\_\_ and enjoy the summer breeze. But when we finally arrived at  
Sport

the \_\_\_\_\_ to play, it started to rain \_\_\_\_\_. It  
Outdoor Place Plural Animal

was crazy, to say the least, not even a minute has passed and I had already seen

\_\_\_\_\_ of them! Since it was raining so heavily, I  
Favorite Number

\_\_\_\_\_ to the nearest store to buy a sturdy umbrella for a striking  
Past-tense Action Verb

price of \_\_\_\_\_. With my new umbrella, I  
Price

\_\_\_\_\_ returned home, only to find that it was now raining  
Adverb

\_\_\_\_\_. What a(n) \_\_\_\_\_ day!  
Plural Animal 2 Adjective