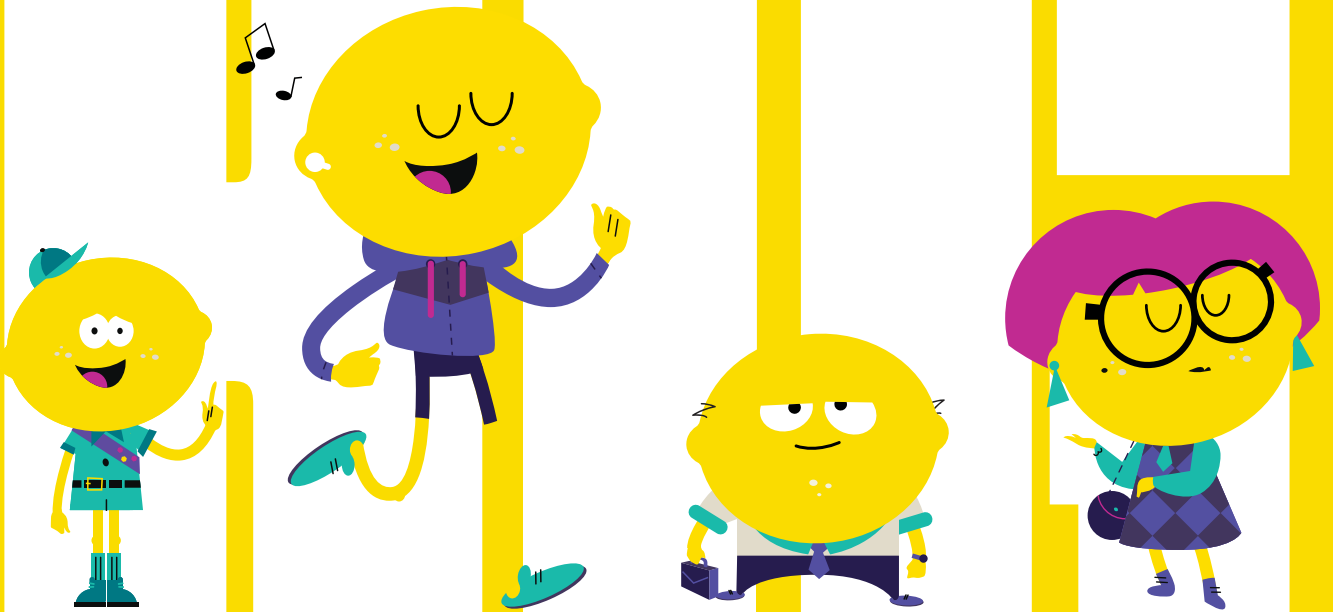


little

LEMONS IN THE



APPLE



Citrovia is a fantastical lemon garden in the heart of Manhattan. It's a place to cool off with your fellow New Yorkers and take in all the larger-than-life and stranger-than-fiction sights and smells that the garden has to offer. Squeeze more out of life.

### **The Salvardori Center:**

The Salvardori Center is a non-profit organization that uses the buildings, bridges, and skyscrapers all around us to help students understand math and science concepts.

In partnership with:



**MANHATTAN  
WEST**

**Welcome to Citrovia!**  
The Citroviaans want to help you design  
your own magical world.

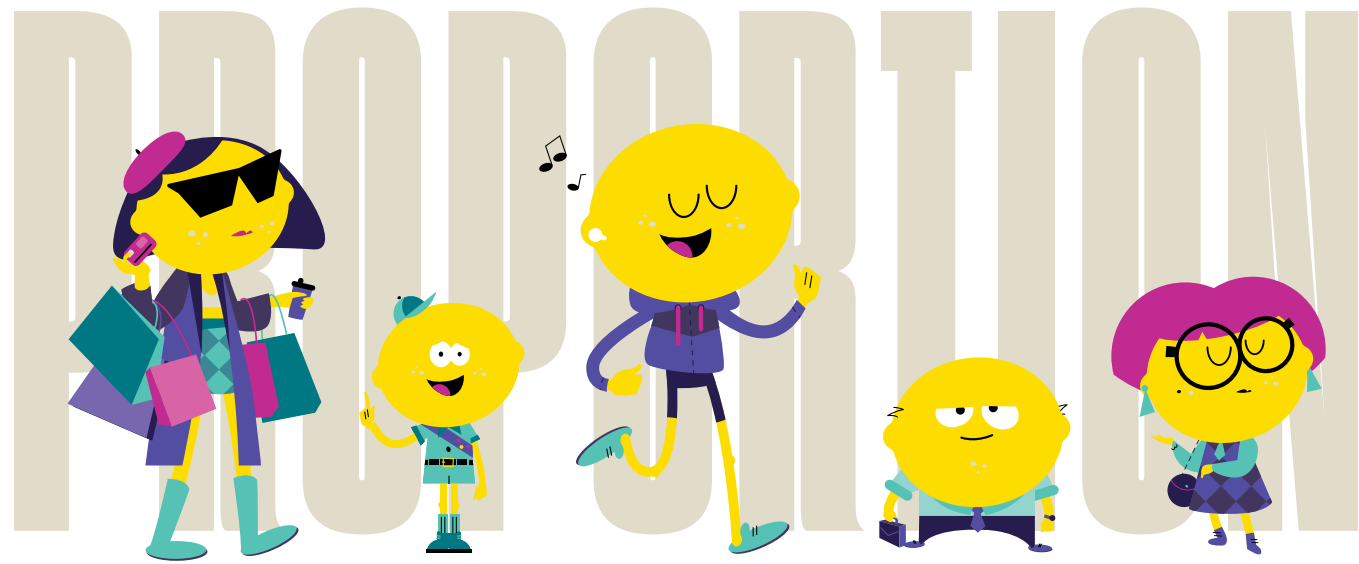
### **In this activity you will:**

**1**  
Learn about proportion  
and scale.

**2**  
Discover how designers  
manipulate sizes of objects  
to evoke different emotions!

**3**  
Draw an object at  
miniature, human, and  
monumental scale.

**4**  
Create your own magical  
world using an object that  
is meaningful to you!



**Proportion refers to an object being the right size compared to the objects around it.**

## **QUESTION**

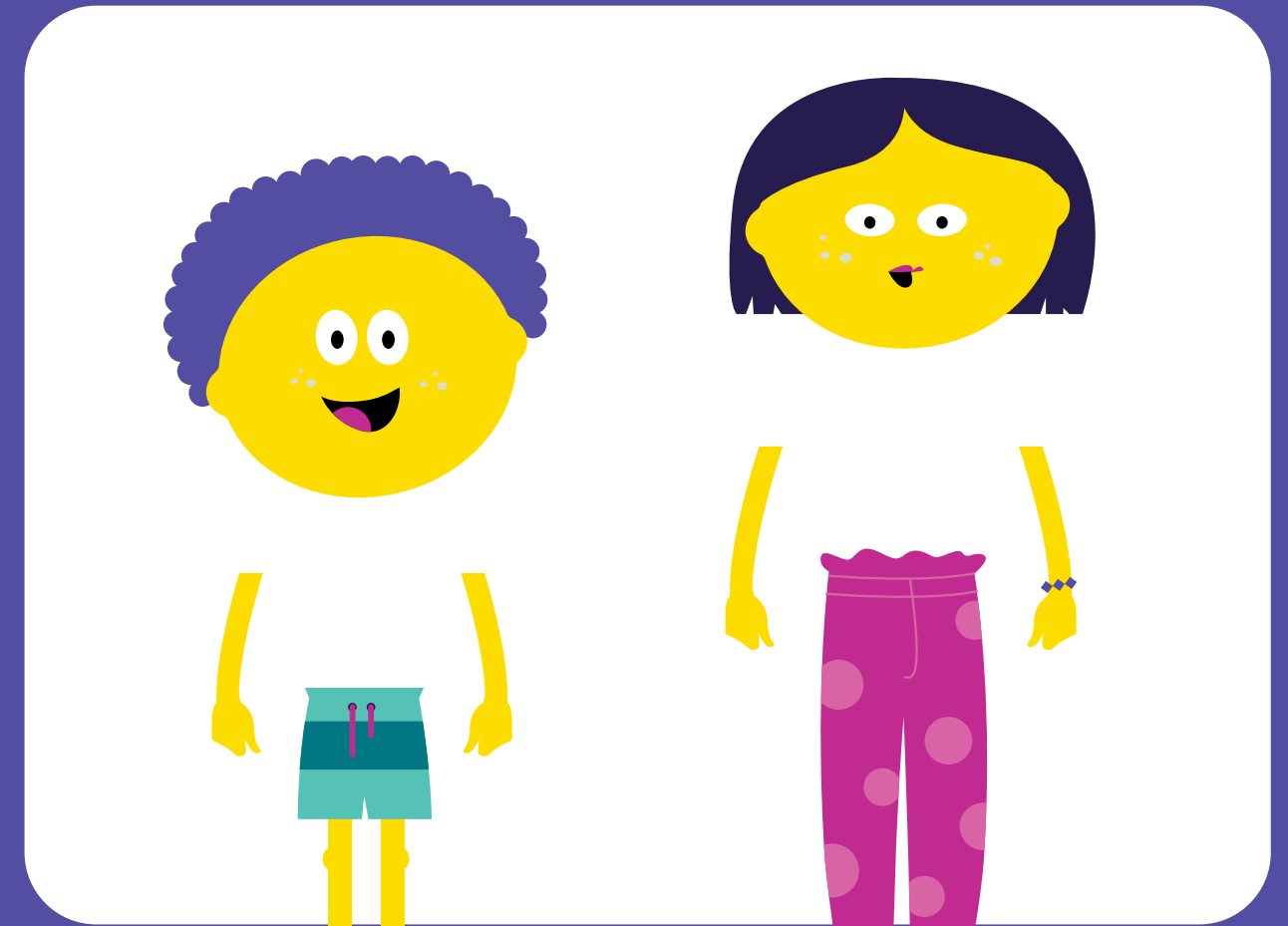
**For example, how do you know if a shirt is yours or an adult's?**

Write your answer:

Chances are...



your shirt would be too small for an adult and their shirt would be too big for you!



Draw the correct size shirt on the two Citrovia's



To know if something is the right proportion, you have to compare it to objects around it.

For example...

**QUESTION**

This bottle of hot sauce and toothpaste look like your average size, right?



Circle your answer

YES

NO



**But, when we compare them to a hand, we see that they are much smaller than what we would typically find!**

## **QUESTION**

**Think about Citrovia...  
are the lemons in the garden  
proportional to the people  
around them?**



**NO!**

They were much larger than a real life lemon would be. They are almost as big as a person, if not bigger than some people!



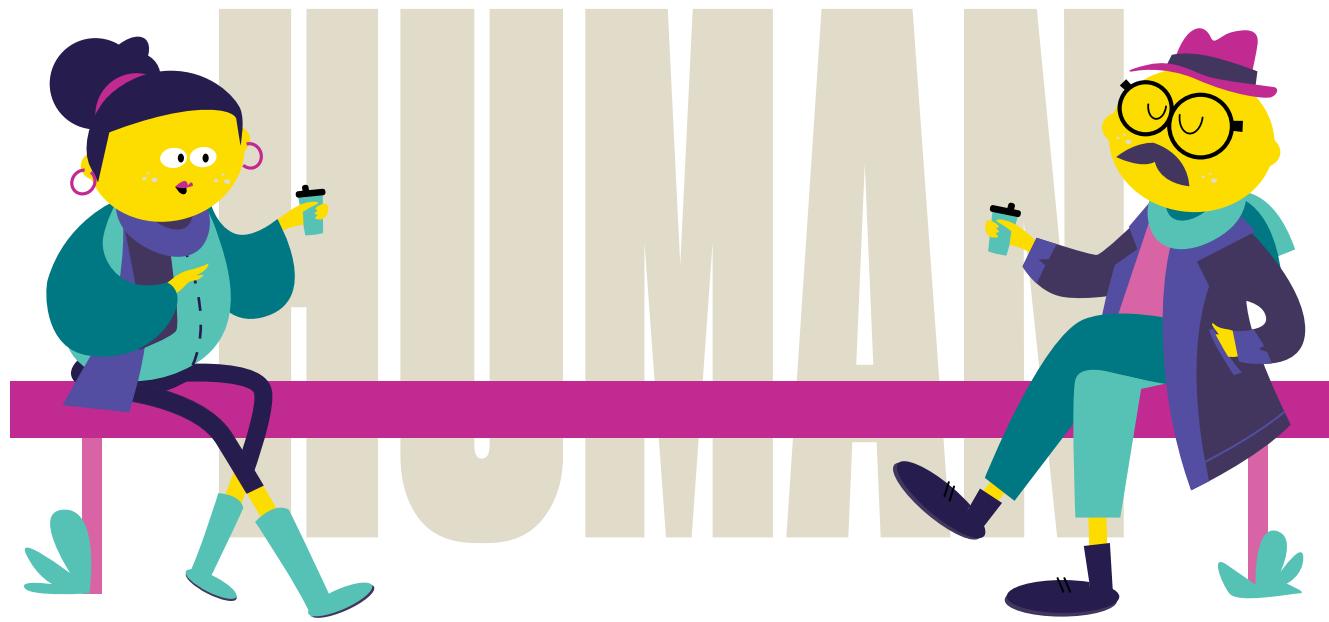
## Proportion and Scale

Typically we like to make things in proportion, but sometimes designers change the proportion to emphasize what they want the viewer to see.

This affects the “scale” of an object.

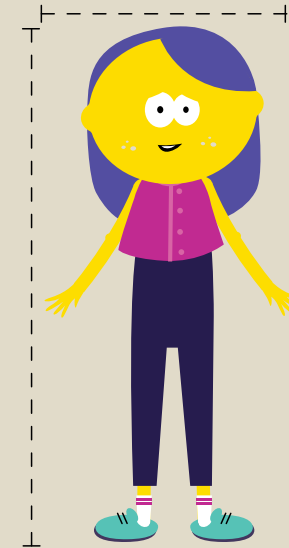
**Scale refers to how much bigger or smaller an object is compared to its size in real life.**

Next we will explore the difference between miniature, human, and monumental scale!



**Human scale refers to the size of an object when compared with our own human size.**

**In architecture and design, human scale is based on the proportions and size of the human body.**



**For example, most doors are a standard 3' x 7' and are based on human scale.**



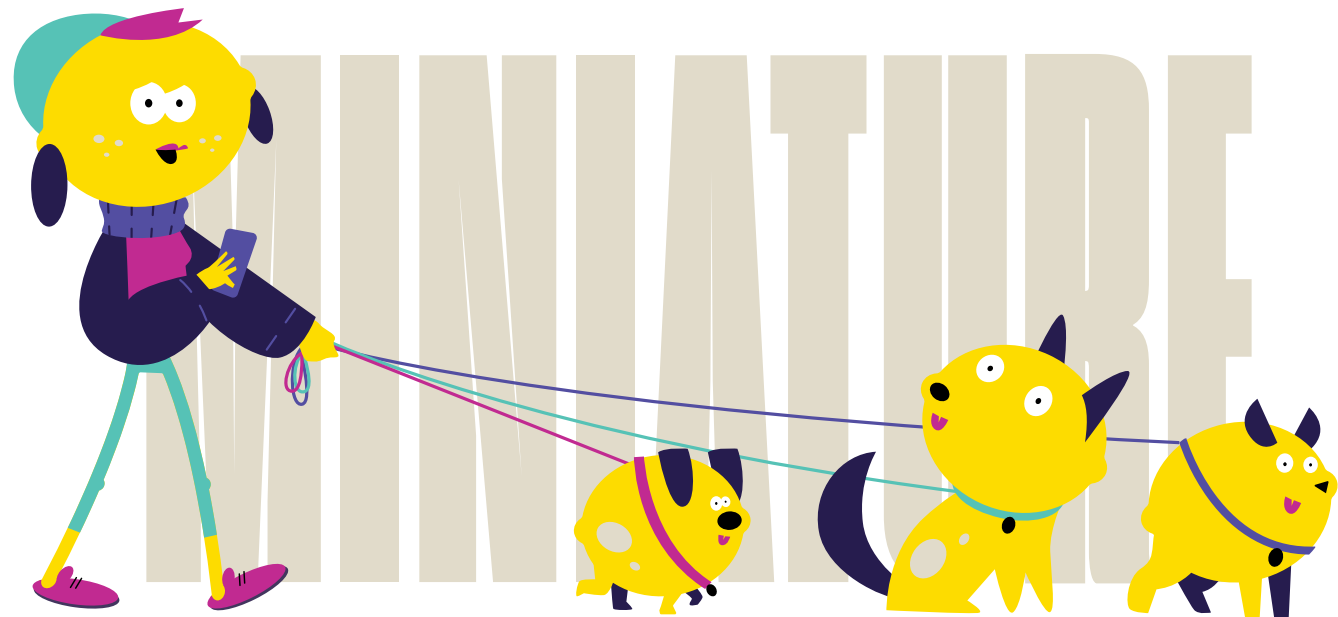


**If human scale is based on the proportions of a human...**

## **QUESTION**

**Do you think miniature scale would be bigger or smaller?**

Write your answer:



**That's right!**

**Miniature scale is based on much smaller proportions!**

**Take a look at this toy kitchen**



**QUESTION**

**Is this the same size as an actual kitchen?  
Could an adult cook comfortably here?**

Circle your answer

YES

NO

**NO!**

An adult would have a hard time cooking at this kitchen because it is much smaller than a human scaled kitchen.

Here are some other examples of miniature scale.  
Can you think of any others?

Write your answers



So if human scale is based on the size of a human and miniature scale is based on much smaller dimensions...



**QUESTION**

What do you think monumental scale means?

# MONUMENTAL

**Correct!**

**Monumental scale is much bigger than human scale and is designed to be much larger than its actual size. Monumental scale makes us feel small in comparison.**



Take a look at this photo of Citrovia



**QUESTION**

**What scale are the lemons in this photo?**

Circle your answer

MINIATURE

HUMAN

MONUMENTAL

If you said monumental, your answer is...

**CORRECT!**

Can you name 3 more examples of objects that are in monumental scale?

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Below are some examples that you may recognize!



**YOUR  
TURN!**

Now it's time for you to create your own fantastic world.

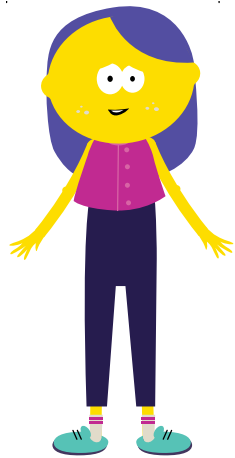
Think of an object *~just one~* that is meaningful to you and how you might re-imagine it like the lemons of Citrovia. Perhaps your favorite coat, your pet, or a building you pass on the way to school.

On the following pages, draw that same object in human, miniature, and monumental scale and finish the activities to complete the book!

# DRAW TO SCALE

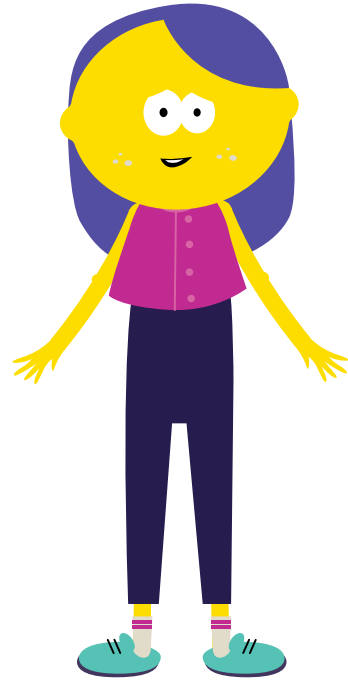
Draw the object you selected to the corresponding scale in each box. Use the Citrovia in the box as a guide.

## Human Scale



Was the object too big, too small, or just right for the Citrovia?

## Miniature Scale



Was the object too big, too small, or just right for the Citrovia?

## Monumental Scale



Was the object too big, too small, or just right for the Citrovia?

# LET'S RECAP!

Use the vocabulary words in the wordbank to fill in the sentences.

1.                      refers to objects being the right size for each other.

2. If an object is significantly larger than a person and makes them feel small, it is considered to be                     .

3. A toy stroller that is smaller than an average stroller would be considered to be                      scale.

4. In the picture below, is the car the right proportion to the person?

Yes or No

## WORD BANK

Human	Scale
Proportion	Monumental
Miniature	Size



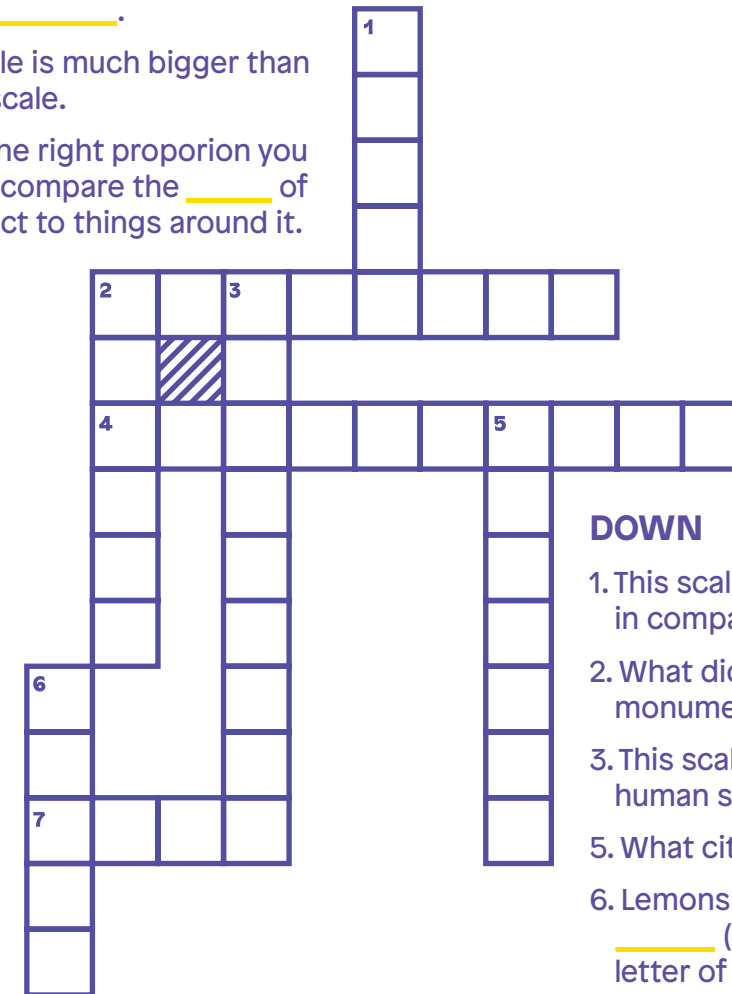
# CROSS WORD

## ACROSS

2. When life gives you lemons, make           .

4. This scale is much bigger than human scale.

7. To find the right proportion you need to compare the        of the object to things around it.



## DOWN

1. This scale refers to an object in comparison to a person.

2. What did you see in monumental scale at Citrovia?

3. This scale is much smaller than human scale.

5. What city is Citrovia in?

6. Lemons can be described as            (starts with the last letter of the alphabet).

# DESIGN CHALLENGE

The Citroviens have hired you to create a new fantasy land! Select an object that is meaningful to you and use human, monumental, or miniature scale to create a magical land for others to experience.

**Use the questions below to help design your land!**

**1**  
Why did you choose that object?

**2**  
Why is the object meaningful to you?

**3**  
What story do you want to tell using your object?

**4**  
What emotions do you want the visitors of your world to experience?

**5**  
Based on those emotions, what scale will you use to make your object: human, miniature, or monumental? Or use all three!

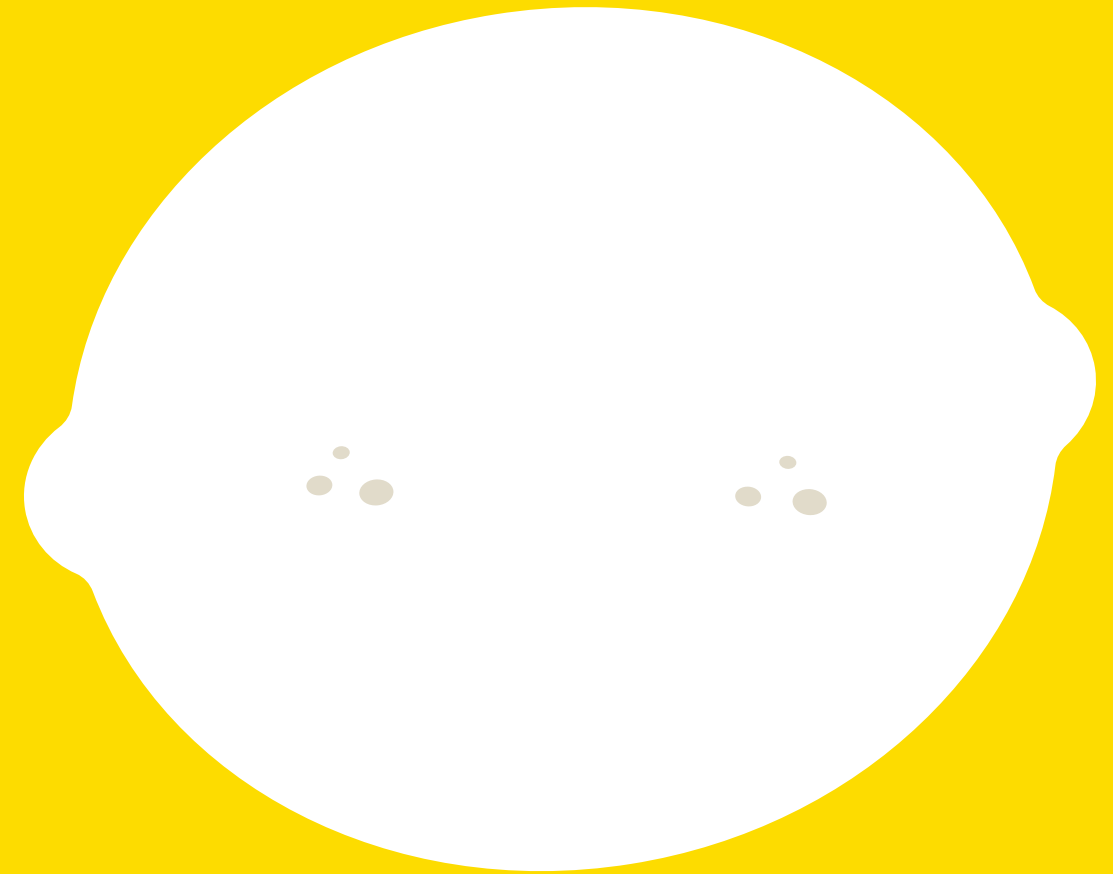
**Design your space here or use more sheets of paper. Share your design with friends or an adult!**



# WORD SEARCH

H M K S S I F K U J S V T S E  
M Y V R Q N N E Z H T R Y V S  
O B K K L L Y O S T U L W V I  
N G I N C O C I T R O V I A Z  
U E B G S Y F B I S S Z S L E  
M H U I M C G N B U M K C B X  
E U F Y X I A I E Z Q A P K F  
N M S S L Z N L F W V H L I D  
T A N N D I X I E O Y G E L K  
A N Q W N V Y Z A J O O N E Y  
L U K R S O H F F T T Y R Z F  
P R O P O R T I O N U M R K I  
Q T R J Z F L E R N C R R Q I  
R T R F H R J K K Q K S E Z J  
Q O I K V W K C V L Y D L H J

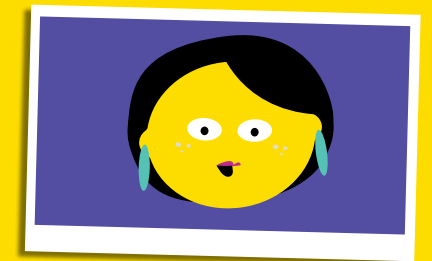
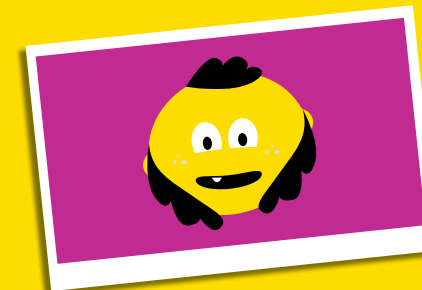
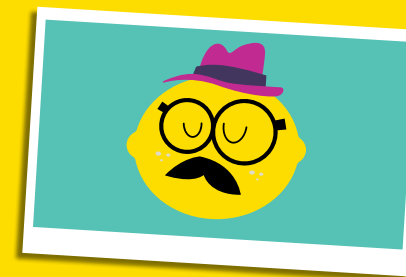
# CITROVIAN YOURSELF



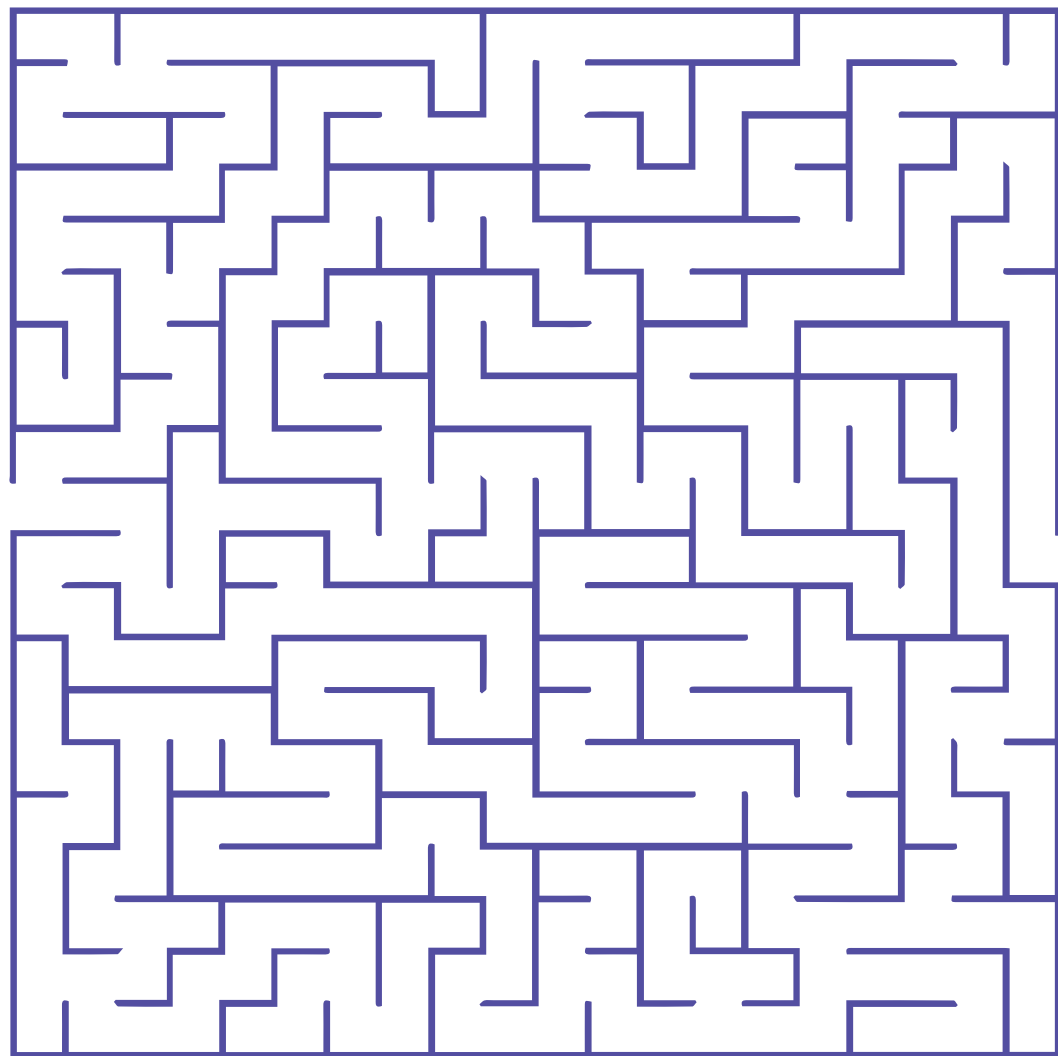
MONUMENTAL  
NEW YORK  
HUMAN

PROPORTION  
SCALE  
SIZE

MINIATURE  
SMALL  
CITROVIA



# RACE TO CITROVIA



# RECIPES

## LEMON BARS



### Directions

#### First, we'll make the crust!

- 1 Blend together your butter, flour, and sugar.
- 2 Once blended, press the mixture into the pan.
- 3 Bake at 325 degrees for 20 minutes until lightly brown.

#### Now, we'll make the filling and cream!

- 1 Blend together your sugar, eggs, flour, baking powder, and lemon juice
- 2 Pour-over the baked crust
- 3 Bake at 325 degrees for 25 minutes until set
- 4 While hot, sprinkle with confectioner sugar
- 5 Cool and Serve!

### Ingredients

- A pan (We're using a 9x13")
- 2 sticks of soft butter
- 2 cups of flour
- 2 cups of confectioner sugar
- 2 cups of sugar
- 4 eggs
- 2 tablespoons of flour
- 1 teaspoon of baking powder
- 6 tablespoons of lemon juice

# SUGARED LEMONS

## Directions

Have an adult help you, especially with cutting the lemons

- 1 Pick the largest lemon you can find
- 2 Wash it thoroughly with warm soapy water
- 3 Slice the lemon across the round part so you get lemon circles
- 4 Peel off all the white membrane and rind between the rind and the pulp
- 5 Separate the triangle wedges and gently roll each triangle in sugar
- 6 Place in a plastic bowl and put in the freezer to chill
- 7 Serve and enjoy!



## Ingredients

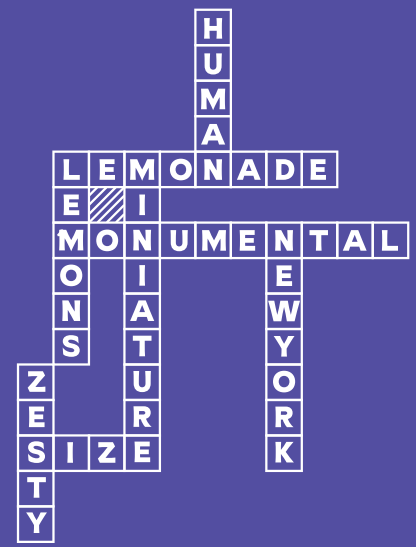
- Large lemons
- Sugar
- Plastic Bowl
- Access to a Freezer

Share your newly designed space on Instagram and hashtag **#Citrovia** and tag **@CitroviaNYC** and **@ManhattanWestNYC** for a chance to be featured on Citrovia's Instagram

## Recap Quiz Answers

1. **Proportion** refers to objects being the right size for each other.
2. If an object is significantly larger than a person and makes them feel small, it is considered to be **monumental**.
3. A toy stroller that is smaller than an average stroller would be considered to be **miniature** scale.
4. In the picture below, is the Blank the right proportion to the person? **Yes**

## Cross Word Puzzle Answers



**SQUEEZE  
YA LATER!**



For Visiting  
**THANK YOU**  
**CITROVIA**  
AT MANHATTAN  
WEST



**CITROVIA**  
AT MANHATTAN  
WEST