

Topic 1 Lesson 1
Describing Size

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Measurement

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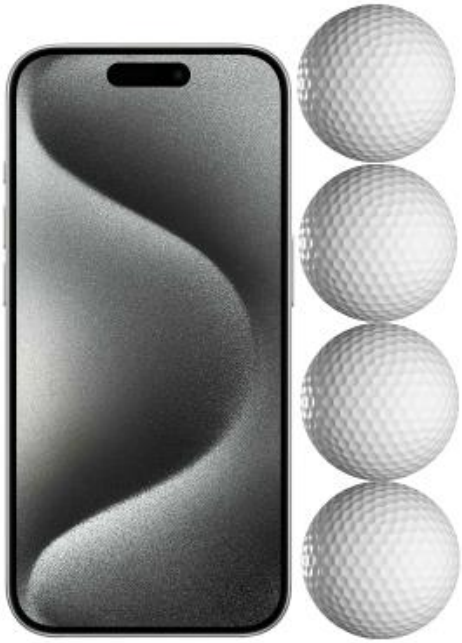
Part 1: SMART BOARD

sizeall.com

There are many ways to compare the sizes of two items. Thanks to technology, we no longer need to purchase the items to evaluate their dimensions.



SizeAll.com is a website that allows users to compare the sizes of everyday items. For instance, the diagram above shows that an iPhone is slightly smaller than four golf balls.



Part 1: SMART BOARD



Visit the same website to compare the sizes of an African elephant and a horse. Which one is larger? Then, allow your teacher to assist you in comparing the sizes of three additional pairs of items. Illustrate your findings below.



Part 2: Describe size

Long or Short?



is big and long.



is small and short.





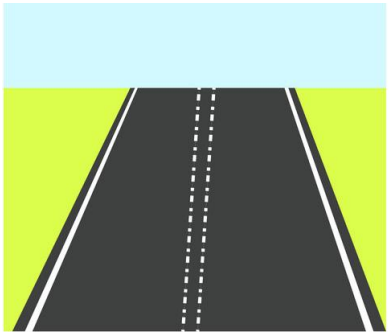
Can you find something very long/ short in this picture?



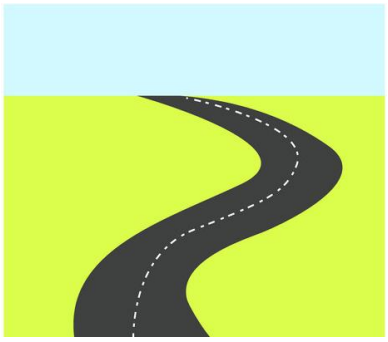
Can you find something long/ short in the classroom?

Part 2: Describe size

Wide or Narrow?



A wide road



A narrow road





Here are some road signs.
What do they mean?







Part 3: I spy with my little eye

Have you seen the following items in real life?

Which ones are long?

Which ones are short?

Which ones are wide?

Which ones are narrow?

Please color the long objects in red and the narrow objects in green.

It's okay if you don't color the objects you're unsure about.

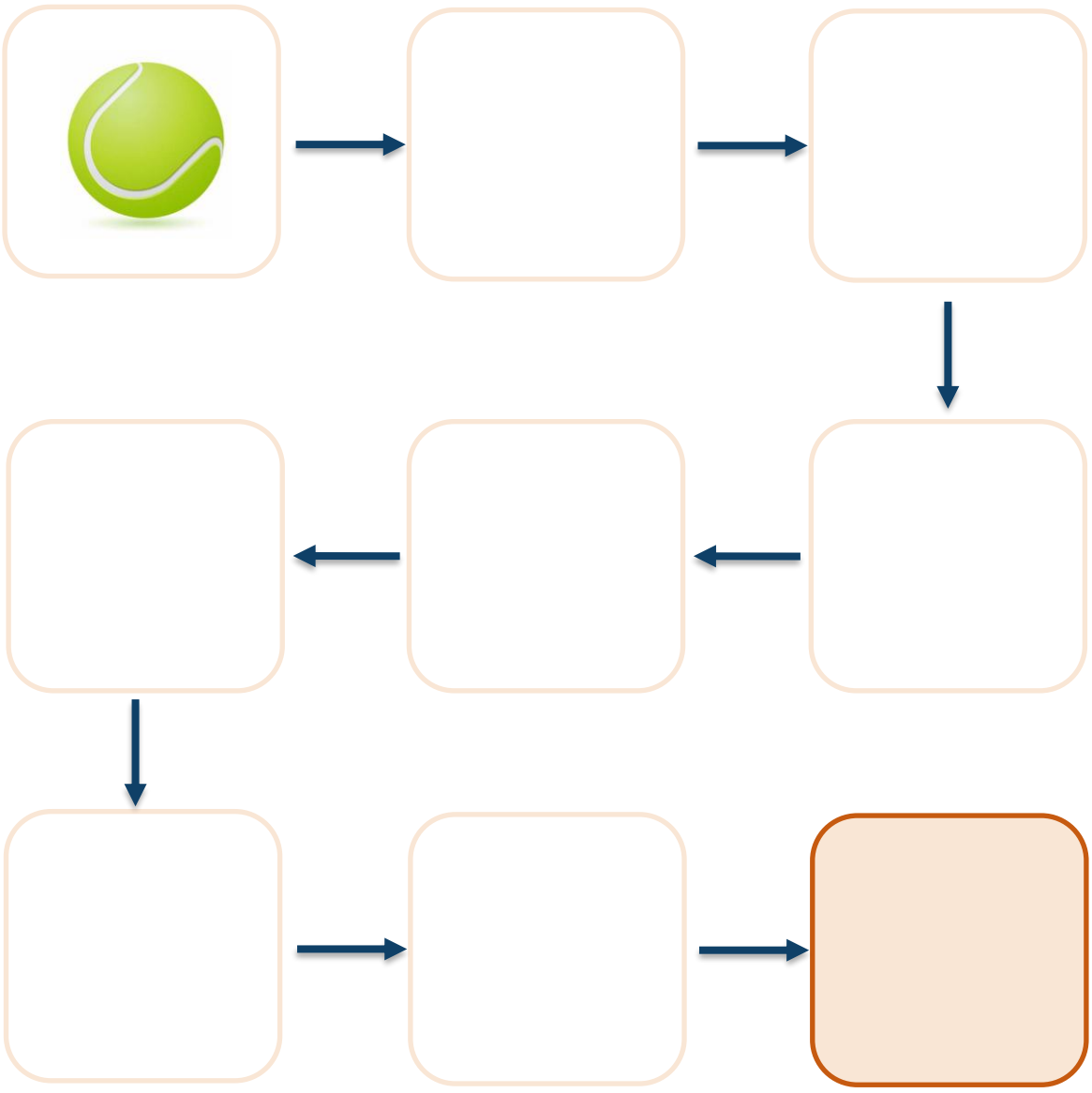
Did you find any objects that are both long and narrow? If so, why do you think they fit both categories?



Part 4: The biggest

The biggest

What do you think is the largest object in the world?
A car? A building? Or perhaps a city?
Complete the chart by drawing or writing down the name of something larger than the previous item.
What is the final, largest item you draw?
Can you think of anything even bigger than that?



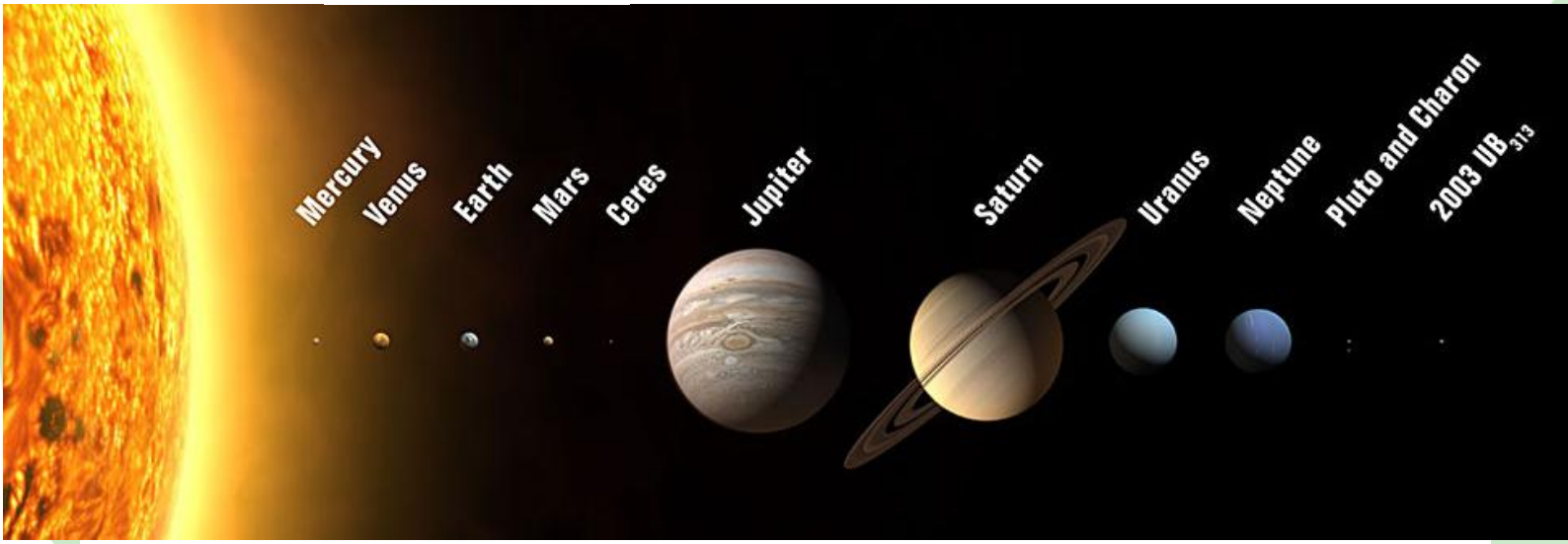
Part 4: The biggest

Visit sizeall.com and insert an image of an African elephant, one of the largest mammals in the world.

Next, insert an image of the planet Earth. Can you still see the elephant on the screen? Explain your reasoning.







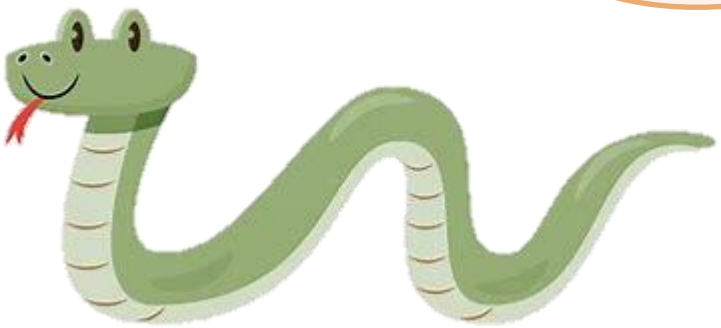
Is Earth the largest planet? No, there are planets much bigger than Earth.

Part 5: Homework



Select the best word(s) to describe the size of each item listed.

*** You may choose more than one word.**



The snake is	long short wide narrow



The chopsticks are	long short wide narrow



The door is	long short wide narrow



Topic 1 Lesson 2
Describing Size

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Measurement

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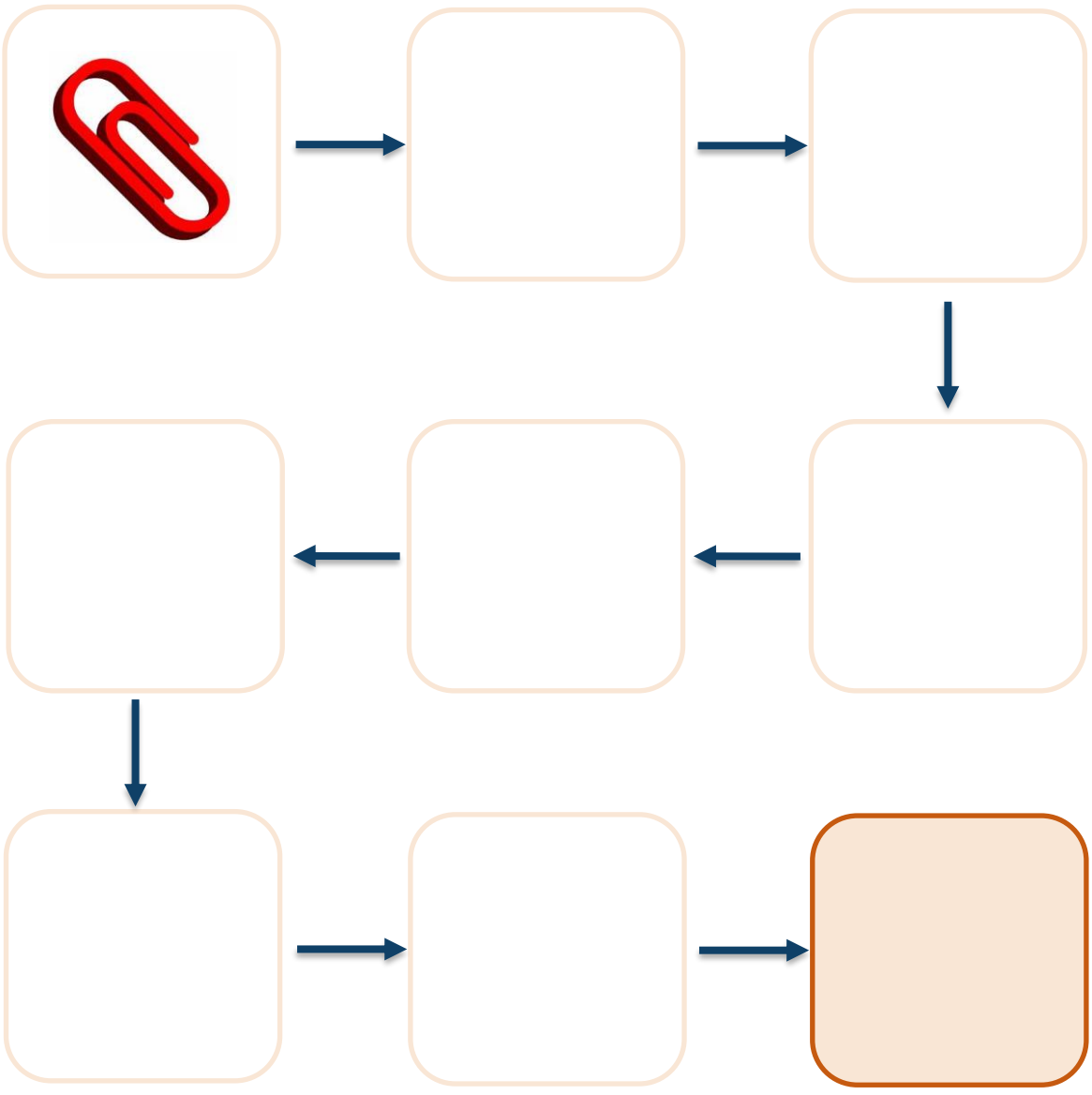
Part 4: SMART BOARD

The smallest

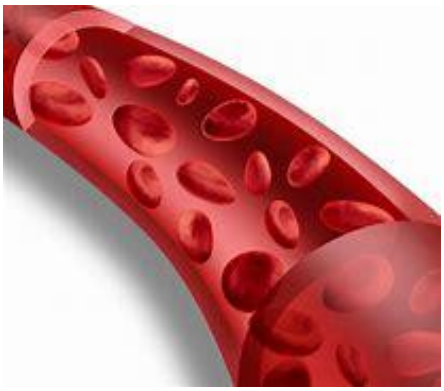
What do you think is the smallest object in the world?
A paperclip? An ant? Or perhaps a sand grain?
Complete the chart by drawing or writing down the name of something smaller than the previous item.
What is the final, smallest item you draw?
Can you think of anything even smaller than that?



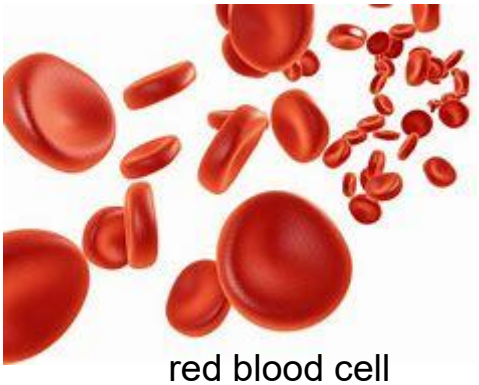
Part 1: The smallest

Why is blood red?

Blood is red because it is made up of cells that are red, which are called **red blood cells**.
They look like small red circles and they have a very important job.
These little cells carry oxygen to all parts of our body.
They travel through our blood vessels like tiny boats on a river.



vessel



red blood cell



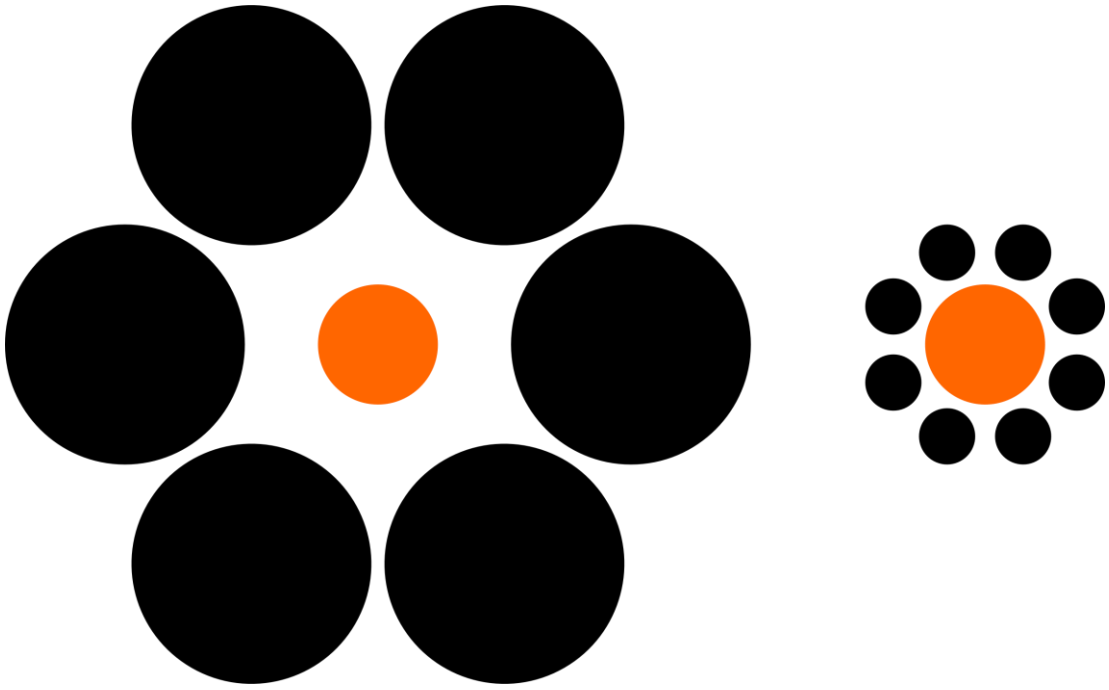




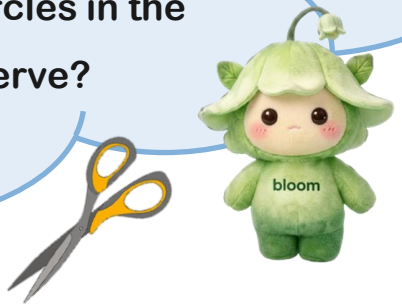
Visit sizeall.com and insert an image of a red blood cell.
Next, insert an image of an ant.
Can you still see the red blood cell on the screen?
Explain your reasoning.

Part 2: Visual illusion

Which orange circle is bigger?



The orange circle on the left appears smaller. But is that really the case? Please cut out the green circle below and place it on top of the orange circles in the image above. What do you observe?





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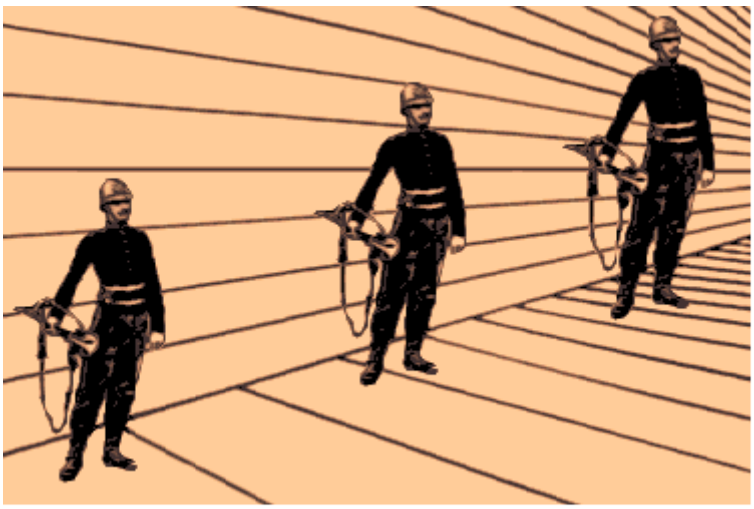
Part 2: Visual illusion

Sometimes, our eyes trick our minds!

This is known as a visual illusion.

There are many more examples of size illusions.



Which soldier is taller?

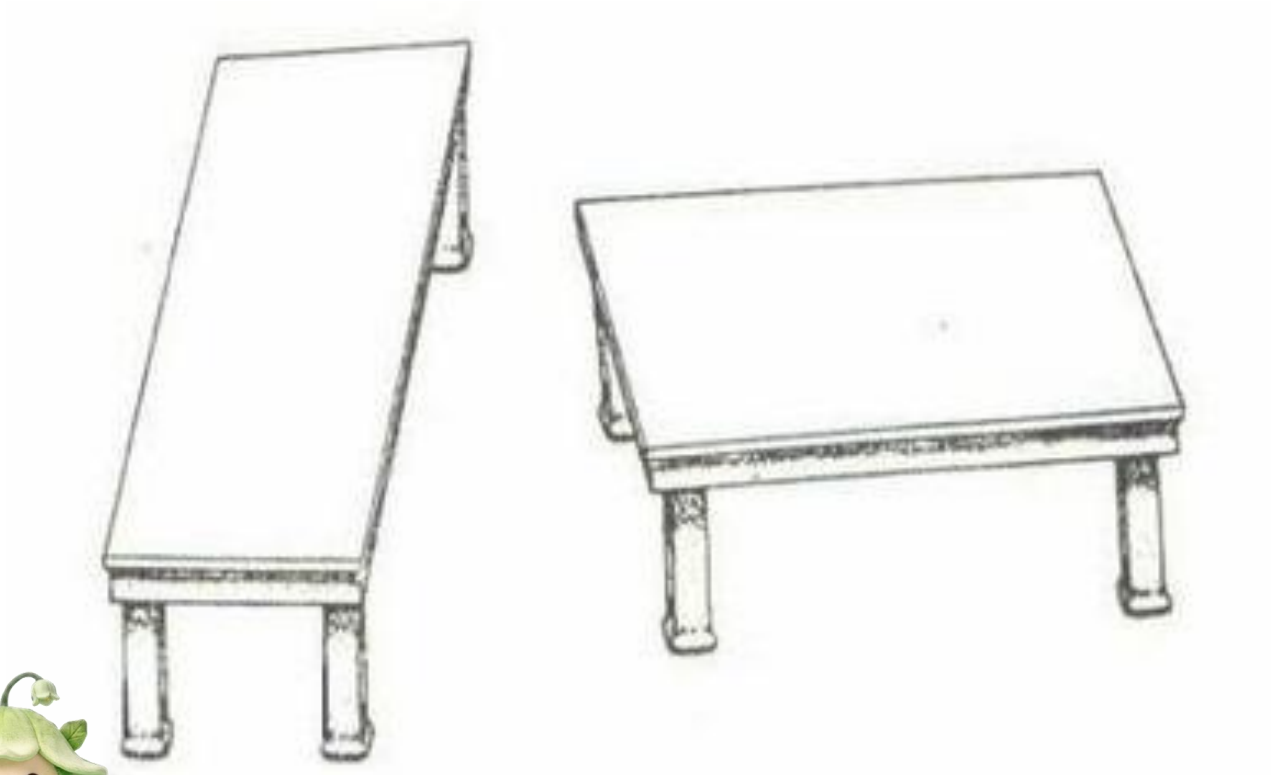


Which line (red or blue) is longer?

Part 3: Hands- on activity: visualize perimeter

Perimeter

Because our eyes can trick us, we can't always tell how big something really is just by looking at it. To find out the real size of something, we can measure it. One way to do this is by measuring its **perimeter** (the distance all around it).





Look at these two tables. **They might look like they are different sizes, but is that really true?** Let's find out by measuring their perimeters. Here's what you need to do:

- Get a piece of rope or string, a pair of scissors, and some tape.
- Tape one end of the rope to a corner of the first table.
- Carefully wrap the rope around the edge of the table until you get back to where you started.
- Ask your teacher to help you cut the rope where it meets the start.
- Do the same thing with the second table.

Part 3: Hands- on activity: visualize perimeter



Now you have two pieces of rope. Each piece shows the perimeter of a table. Compare the lengths of the ropes. What do you find out?



Rope around an item

The length of rope is the perimeter



Using a rope, measure the perimeter of the three items provided by your teacher. Then, compare the lengths and draw the items in order from largest to smallest perimeter.

Part 4: Reflection

I have learned...



I have learned to describe the size of an item using long, short, wide, and narrow.

☆☆☆☆☆

I can always find something bigger or smaller than an existing item.
(The concepts of big and small are always relative.)



☆☆☆☆☆

I know how to use a rope to measure the size (perimeter) of an item.



☆☆☆☆☆

Part 5: Homework



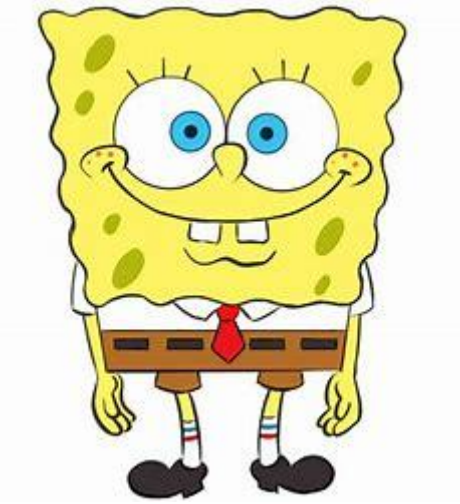
Use a rope to measure the perimeter of the following objects.

Which item has the biggest size (perimeter)?

*Keep your rope/s in the clear pocket provided.



A chocolate bar



SpongeBob (body)



A slice of pizza



A star



Topic 5 Lesson 1
Everyday pattern



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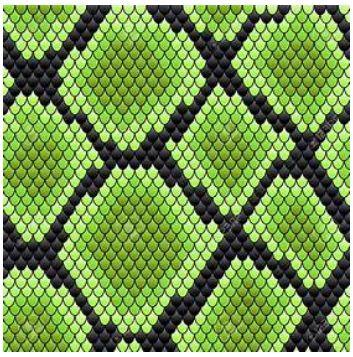
Part 1: Explore animal patterns

What is it?

Patterns are all around us, and the natural world is no exception. For example, take a look at the patterns below and see if you can match them to the animals they belong to.








What other patterns can you spot in the animal kingdom?

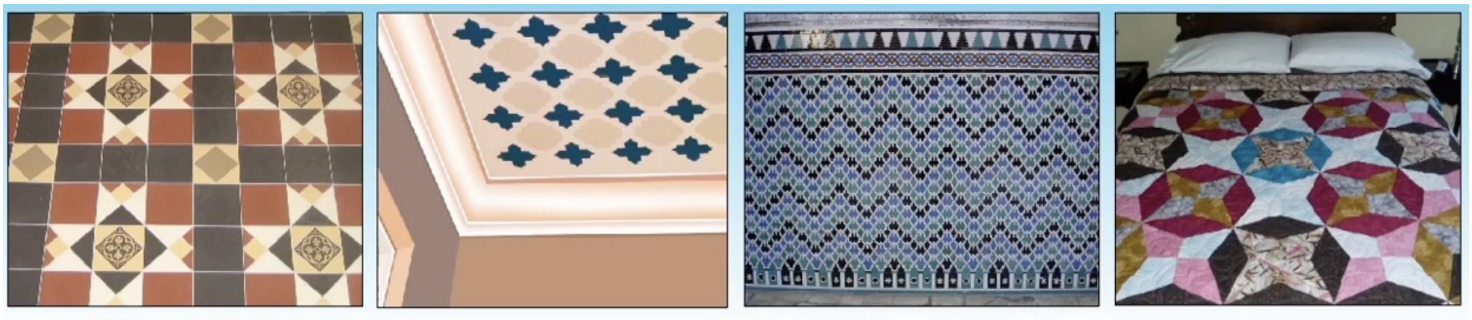


Part 2: Let's tile

Let's tile

Do you know what is tilling?





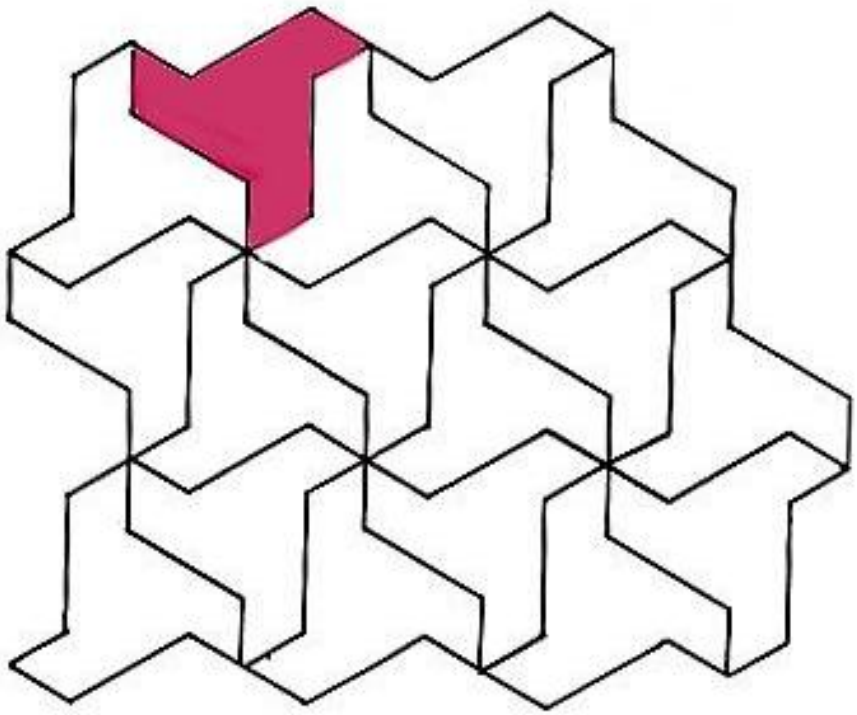
Source: https://www.youtube.com/watch?v=ZXU28FhYY_M



Part 2: Let's tile

Let's tile

Take a look at the example provided, where a single shape is used to create a seamless pattern.



Tilling is about using repeated shapes to fill a space without any gaps or overlapping edges.

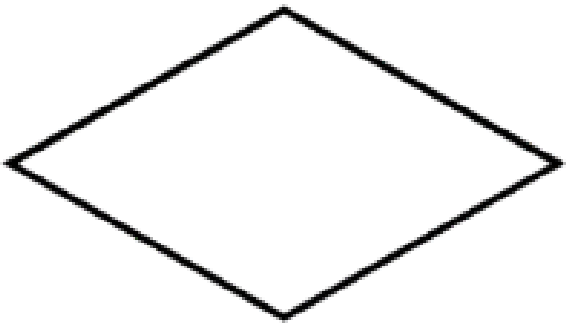


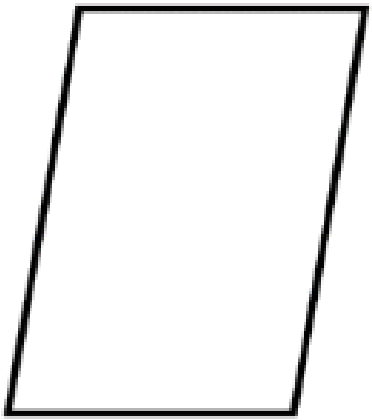
Part 2: Let's tile

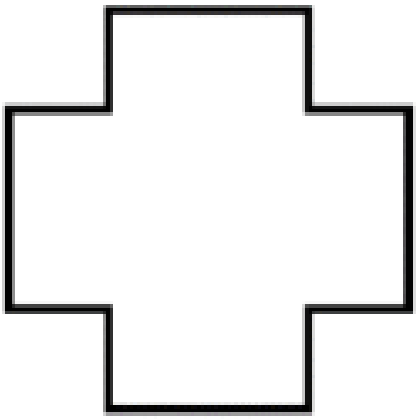
Let's tile

Creating **tiling patterns** with the three additional shapes provided.
Follow the same steps for each one.
How do the different shapes affect the overall pattern?



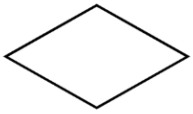


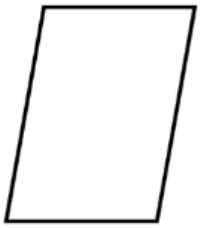


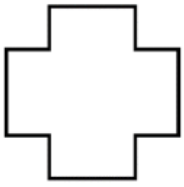


Part 2: Let's tile

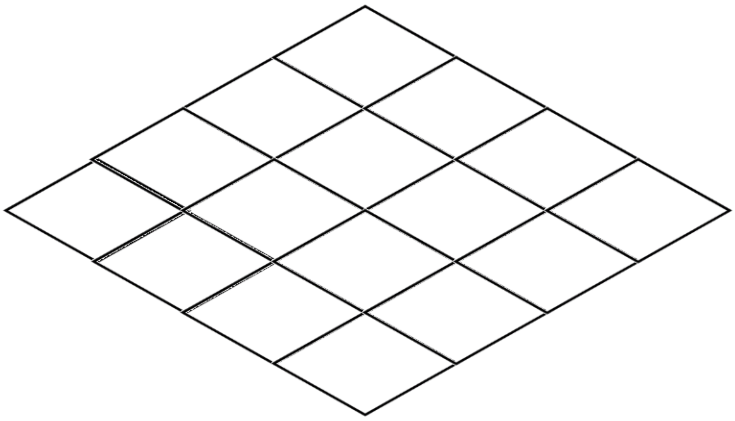
Try to draw the tiling pattern here.

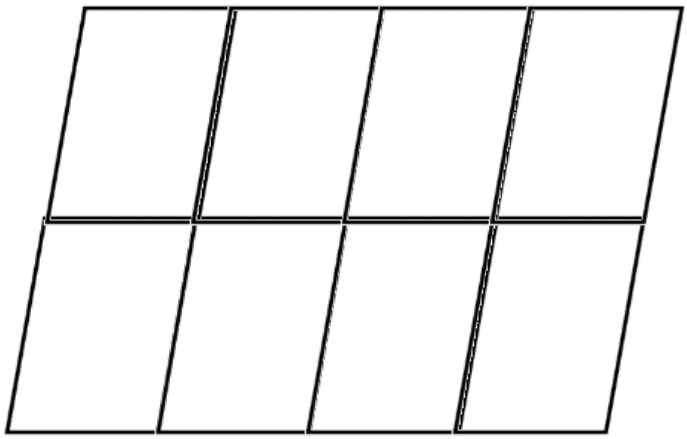


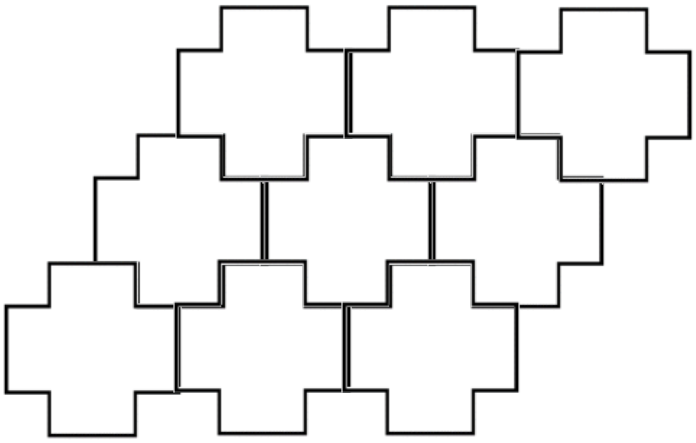




Part 2: Let's tile







Part 2: Let's tile

Let's tile

Step 1: Prepare Your Tile

Start with a pack of sticky notes. This will be the base for your tile design.

Step 2: Design Your Tile

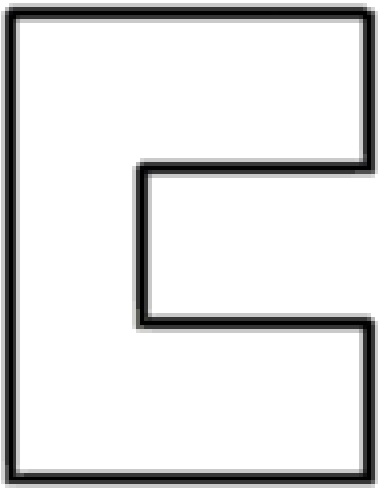
Draw the shape below onto your cardstock.

Accuracy is key, so consider tracing the shape from this page onto your cardstock for a precise outline.

Then, cut out your tile.

Step 3: Create Your Pattern

Arrange your identical tiles to create a perfect tiling pattern. Experiment with different orientations to see how the pattern changes.



Part 3: Pattern indoor

Tiling

Tiles come in many shapes, but squares and rectangles are the most common.

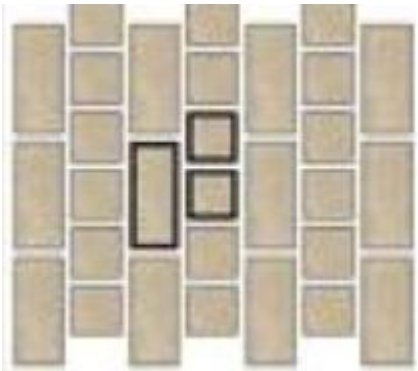
Source: https://www.youtube.com/watch?v=gAWbWdwGsAQ



Square tiles



Rectangle tiles



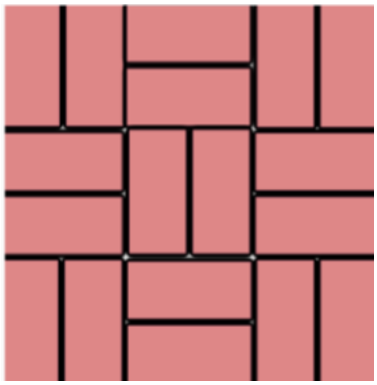
Two tile pattern

Part 3: Pattern indoor

Tiling

Have you ever wondered about the different ways tiles can be arranged?

Let's dive into some popular tiling patterns.



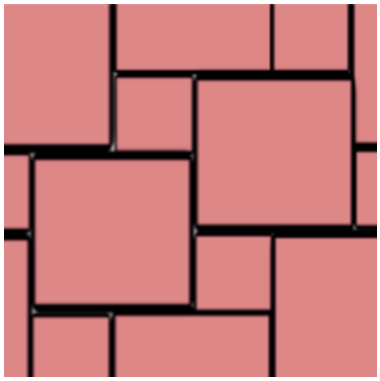
Basket weave



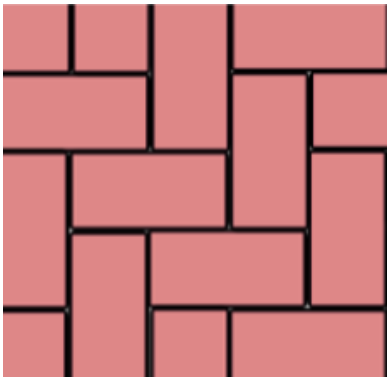
Diagonal herringbone



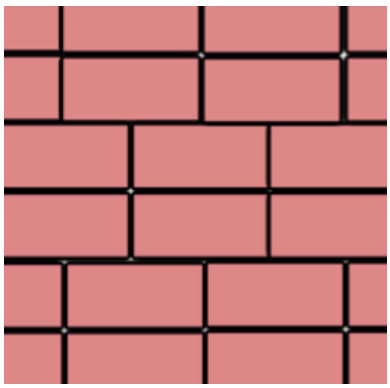
pinwheel



Herringbone



diagonal



Brick bond



Part 4: Tiling in nature

Bee honeycombs

Have you ever added honey to your morning milk or sweet drink? Let's explore where honey comes from and discover an interesting pattern.

Look at a picture of a honeycomb. What do you notice? Have you seen any familiar shapes?



Honeycomb is made up of many small, six-sided cells called hexagons.



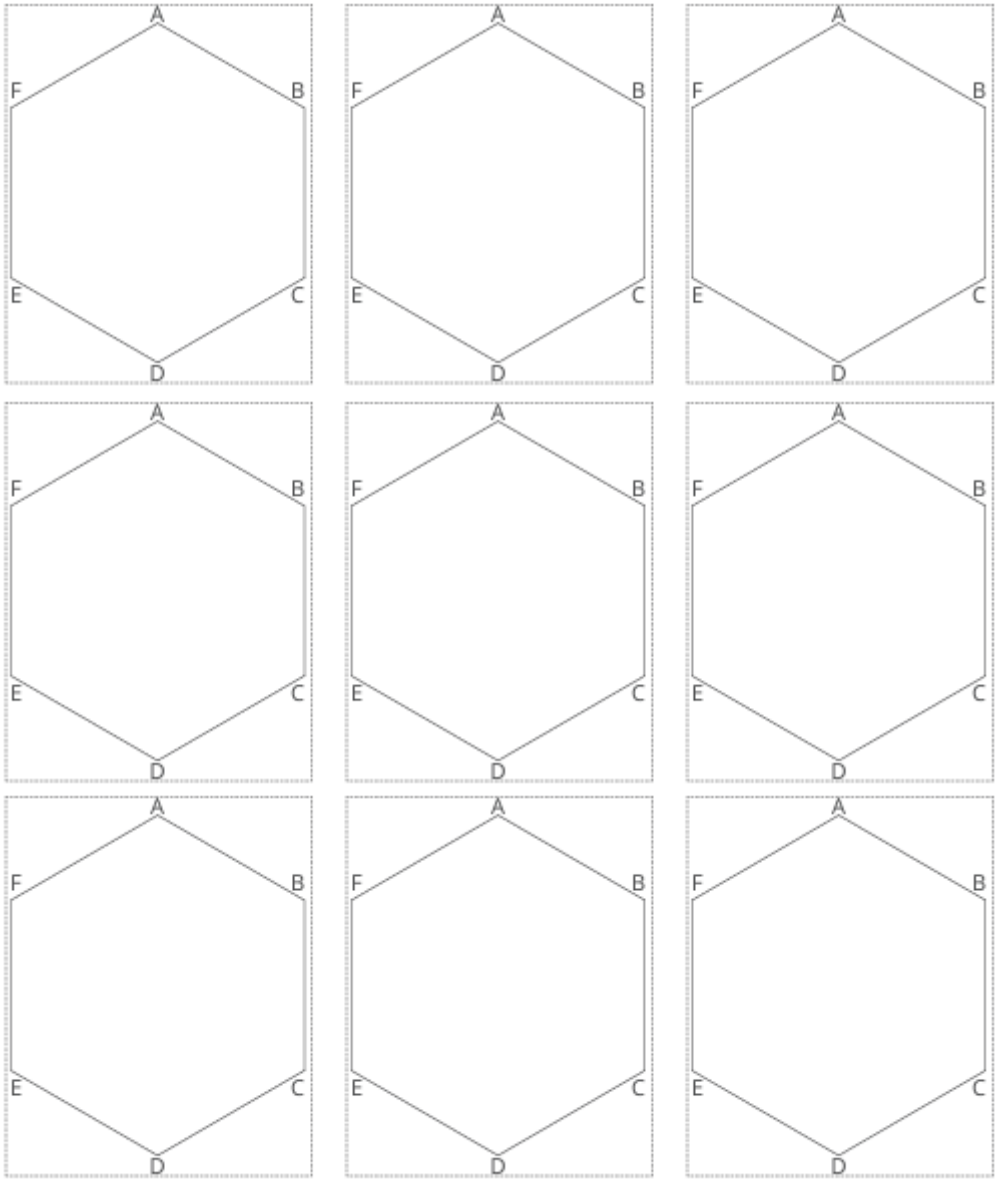


Part 4: Tiling in nature

Bee honeycombs

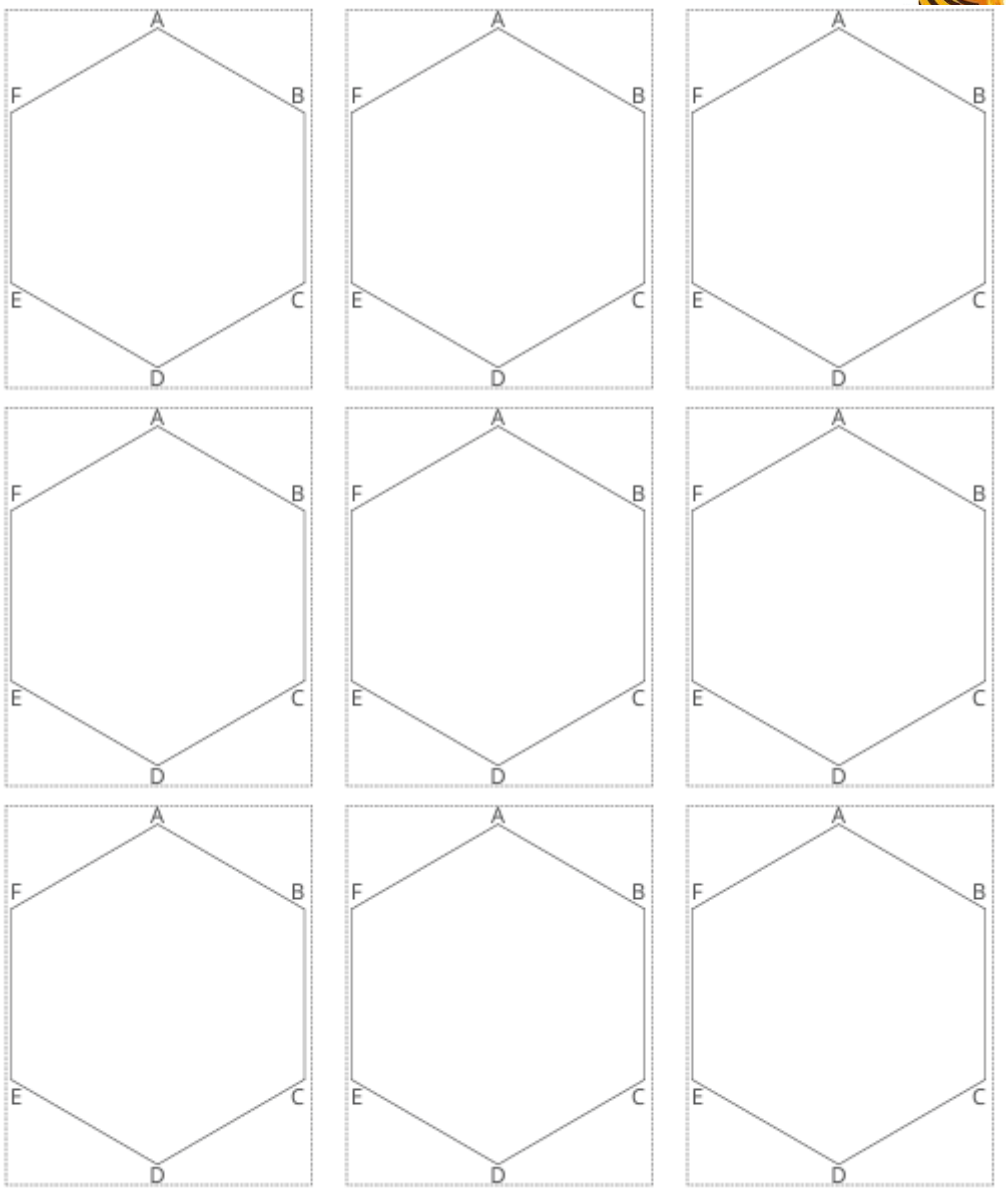


Can you use hexagons to create a honeycomb? If you'd like, color your honeycomb a golden yellow, just like real honey!





Part 4: Tiling in nature



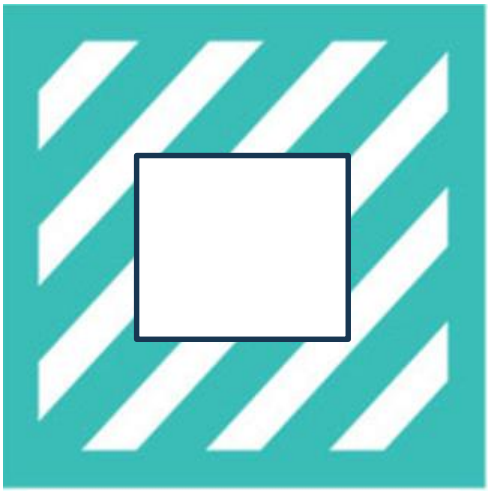


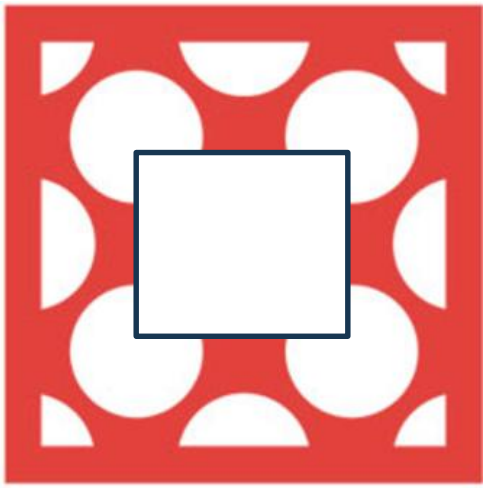
Part 5: Homework

Recognize everyday patterns

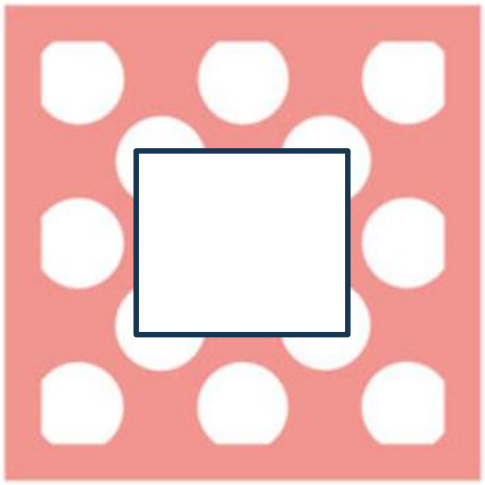
Do you know how to complete the following patterns?













Topic 5 Lesson 2
Everyday pattern

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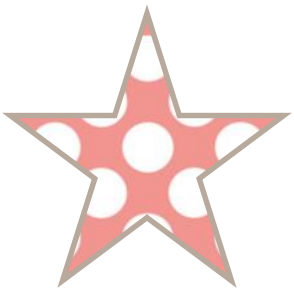
Part 1: Review

Pattern match game

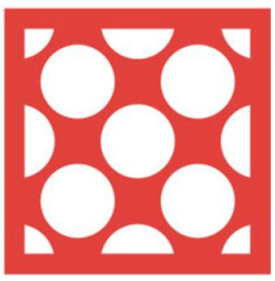
Draw a line to match the same patterns.







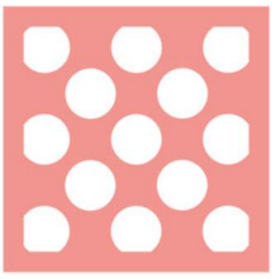












Part 2: Spirals in nature

What is a spiral

What do the following items have in common?













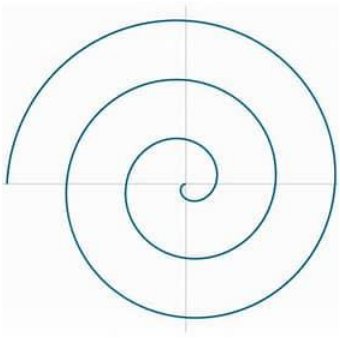
A spiral is a curve that winds around a point while moving away from it.



Part 2: Spirals in nature

Find the spiral

Take a moment to examine the objects below. Can you find and trace the spirals present in each one?





A calla flower



Aloe Vera



Sea shell

Once you've done that, compare the spirals you've identified. Do you notice any differences among them? If so, what are those differences?



Part 3: Stripes in nature

What is a stripe?

Zebras are famous for their black and white stripes but they're not the only creatures with this eye-catching pattern. Tigers, clownfish, and coral snakes all have striking stripes.



Bongo



Clownfish



Coral snake

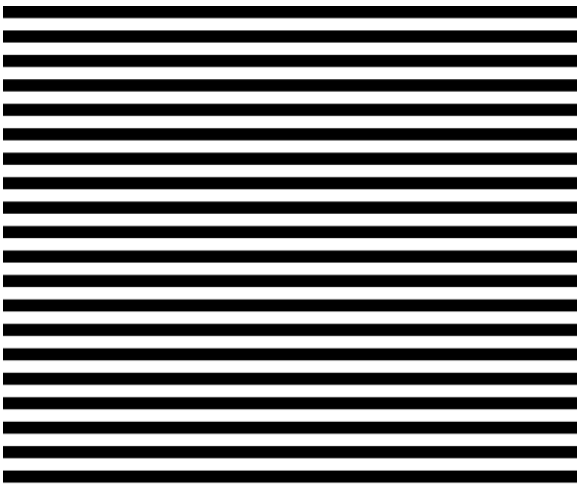
Stripes appear in the natural world and our everyday lives.



Part 3: Stripes in nature

Find the stripe

Study the objects below, and see if you can find and trace their stripes.





A bee



Bamboo leaves



A tiger

Can you think of any other animals, objects, or places that features stripes?



Part 4: Reflection

I have learned...

I have noticed nature has many patterns such as spirals on shells and stripes on zebras.



I know that honeycombs always have a hexagonal pattern.



I can identify patterns and figure out the missing parts



Part 5: Homework

A pattern designer

You are a fashion designer, and you are tasked with creating a signature pattern for your clothing brand



Draw inspiration from the provided patterns.









Part 5: Homework

A pattern designer

Not interested in fashion? How about designing your own F1 racing car instead?



