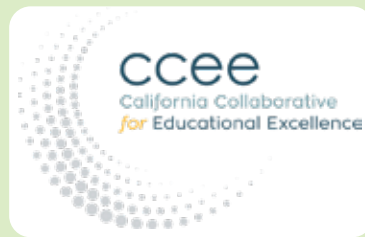


# AT-HOME SCIENCE LEARNING

## #9 SHAPES IN NATURE

### ***PARENTS***

*At-Home Science Learning is all about you and your children exploring science in a fun, hands-on way using simple supplies found around your home. Use the “Parent Guide” to help support your children through the activities plus see a list of required materials needed. Print out the “At-Home Science Journal” for your child to follow along with each activity. The activities are designed to take 15 – 30 minutes. Get your whole family exploring science together!*



This project is funded by the California Collaborative for Educational Excellence in collaboration with the Office of the Fresno County Superintendent of Schools.

## FOR THE PARENT:

# #9 SHAPES IN NATURE

**Overview:** All children love being outdoors! The focus of these activities is to help children use their observation skills to identify different shapes in nature as they explore. Children will use this knowledge to create their own representations of what's in the world around them.

### Materials/Supplies:

- Electronic device connected to the internet to watch videos and take pictures.
- An orange or apple, a pair of scissors, tape or glue.
- A copy of the “Student Science Journal” and a pencil.
- Optional supplies: colored pencils or crayons.

Each of the activities is designed to take 15–30 Minutes.

### Activity 1: Story

1. Ask your child: Have you ever seen a star in your orange? Listen to their response. Then ask your child: Have you seen a star someplace other than the sky?
2. Now, listen to the book read-aloud of “There’s a Star in My Orange” by going to this link on your electronic device: [tinyurl.com/starinorange](http://tinyurl.com/starinorange).
3. If you have an orange or an apple in your home, carefully cut the apple in half horizontally for your child to see if they can find the “star” inside the fruit.
4. After listening to the book, have your child go to their Science Journal – Activity 1 section. Have your child draw as many different shapes that they can. Help them write down the names of the shapes they drew.
5. Now, have your child count the sides of each shape they drew. Your child can write the number of sides next to each shape. Help them to compare the different shapes by asking questions such as:
  - a. What do some of the shapes have in common?
  - b. What makes some of the shapes different from each other?
  - c. How can you tell the difference between a circle and a triangle?



Encourage your child to speak using complete sentences. If they need help getting started, you can give them some sentence starters to help them begin. For example,

- a. Some of the shapes are similar because...
- b. Some of the shapes are different because...
- c. I can tell the difference between a circle and a triangle because...

## Activity 2: Shape Hunt

1. Now that you have found a star in an orange or apple, it is time to go on a “Shape Hunt” outside and see if your child can find other shapes in nature.
2. Use your electronic device to watch a video that will help your child get ready to look for shapes outside. Click this link: [tinyurl.com/video-shapes](https://tinyurl.com/video-shapes).
3. After watching the video, have your child go to their Science Journal – Activity 2 section. Show your child the list of shapes that they will be looking for outside which includes circles, triangles, ovals, squares, rectangles, diamonds, hearts, and stars.
4. Go for a walk around your backyard, neighborhood, or nearby green space. Encourage your child to draw or write what they find that matches the different shapes in their science journal.
5. Challenge your child to find as many different objects as they can for each shape. For example, your child might find a petal of a flower that is an oval shape and a leaf of a plant that is also an oval shape.

## Activity 3: Shape Hunt Challenges

1. Now that your child has become more observant about seeing shapes in nature, it is time for some challenges! Direct your child to their Science Journal – Activity 3 section and head back outside. Help your child draw or write what they find for these challenges:

- a. Has more than one type of shape
- b. Has more than 3 ovals
- c. Has more than 2 squares or rectangles
- d. Has at least one smaller circle and one larger circle

Have your child explain to you what they found and encourage them to speak using complete sentences. If they need help getting started, you can give them some sentence starters to help them begin. For example,

- a. I found...
- b. \_\_\_\_\_ has more than one type of shape
- c. I noticed \_\_\_\_\_ has more than 3 ovals

2. A fun extension activity is to have your child use an electronic device to take pictures of the objects they find. Then your child can show the pictures to another family member and see if they can identify the shapes your child saw in the different objects found outside.
3. Based on the two shapes hunts from Activity 2 and Activity 3, help your child answer the questions: What shape was easiest to find? Which shape was the hardest to find? Encourage your child to answer using complete sentences. If they need help, you can give them different ways to begin. For example,
  - a. The shape that was easiest to find for me was \_\_\_\_\_ because...
  - b. The shape that was the most difficult to find was \_\_\_\_\_ because...



## Activity 4: Tangrams

1. Use your electronic device to listen to the story “Grandfather Tang’s Story” by clicking on this link: [tinyurl.com/story-GrandfatherTang](http://tinyurl.com/story-GrandfatherTang). This story introduces tangrams to your child. A tangram is a Chinese geometric puzzle consisting of a square cut into seven pieces that can be arranged to make various other shapes.
2. After the story, your child will try to make some of the animals from the story using the tangram pieces found in their Science Journal – Activity 4 section. You will see the pieces at the bottom of the activity section. Have your child carefully cut out the pieces. If you have younger children, cut out the pieces for them. Here is a link to see all of the animals from the story: [tinyurl.com/tangramanimals](http://tinyurl.com/tangramanimals). Use your electronic device to show your child the different animals they can create. (For the solutions to these animal puzzles, click on the link: [tinyurl.com/tangramsolutions](http://tinyurl.com/tangramsolutions)).
3. Tangrams can be challenging! Work with your child to solve the animal tangram puzzles.
4. Optional: Here is an online version you can access to let you child explore more tangram puzzles [mathigon.org/tangram](http://mathigon.org/tangram).
5. When your child solves one of the puzzles, let them draw their solution in their science journal.

## Activity 5: Make a Butterfly

1. Have your child go to their Science Journal – Activity 5 section. Your child will carefully cut out the different shapes found on the bottom of this section. If you have a younger child, you can cut out the shapes for them.
2. If your child has crayons, colored pencils, or markers, give them time to color in the different shapes.
3. Have your child create a butterfly using the shapes they just cut out and colored by gluing or taping the shapes in a butterfly shape. HINT: Your child does not have to use all of the shapes they cut out. There were more shapes than they needed to allow for creativity in creating their butterfly. If your child wants to add more shapes, let them!
4. When your child’s butterfly is complete, have your child count how many of each shape they used and add up the total number of shapes used. Now your child can tape or glue their butterfly into their science journal.
5. Have your child tell you about their butterfly once it’s complete. Say, “Tell me about your butterfly.” If they need more encouragement to add details say, “Tell me more.”

## Activity 6: Drawing Animals with Shapes

1. If your child can find shapes in nature, then they can draw objects from nature using shapes. Have your child go to their Science Journal – Activity 6 and see if they can draw each of the objects listed using just shapes:
  - a. Draw a tree
  - b. Draw a flower
  - c. Draw a cat or dog
2. If your child is struggling, have them look at Activity 2 in their science journal to remind them of the different shapes they can use in their drawings. It is fun to draw along with your child!
3. Does your child want to learn how to draw different animals using shapes? Use your electronic device to access these two video tutorials:
  - a. Simple: [tinyurl.com/shape-animals1](http://tinyurl.com/shape-animals1)
  - b. More advanced: [tinyurl.com/shape-animals2](http://tinyurl.com/shape-animals2)

Your child can add their own animal drawings using shapes into their science journal.

## Activity 7: Shapes in the Clouds

1. This activity is best done on a day with clouds in the sky. Go outside with your child and find a comfortable spot to sit or lay down to observe the clouds in the sky.
2. Ask your child: What shapes do you see in the sky? Are the shapes changing? Do any of the cloud shapes look like something else?

Encourage them to respond using complete sentences. If they need help, you can give them some sentence starters to begin. For example,

- a. I see...
  - b. The shapes seem to be (changing/staying the same) because...
  - c. That cloud looks like...
3. Help your child tell a story based on the shapes or objects they see in the sky. If your child is struggling, you can start the story by pointing out a particular cloud in the sky and saying “Once upon a time...” and begin the story about that cloud in the sky. Then let your child add to the story. If they need some help connecting parts of the story, help them use connecting words like: “next, then, all of a sudden, afterwards, or finally” before they add the next part.
  4. A fun storytelling variation would be to make the story together, trying to use each of those connecting words in order to create the next part of the story. You say the next connecting word and your child has to add another part to their story that makes sense with that connecting word.
  5. When done making cloud observations, have your child go to their Science Journal – Activity 7 section and describe the shapes they saw in the clouds and retell the “Cloud Story” you created together.



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# AT-HOME SCIENCE LEARNING


## #9 SHAPES IN NATURE



NAME: \_\_\_\_\_

### Activity 1: Story



After listening to the story “There’s a Star in My Orange,” draw  as

many different shapes that you know. Write  the shape names, too!

Count the sides of each shape and write that number next to the shape.



# Activity 2: Shape Hunt

Write  or draw  as many different objects you find outside that have each of these shapes in the chart.



CIRCLE



TRIANGLE



SQUARE



OVAL



RECTANGLE



STAR





DIAMOND



HEART

# Activity 3: Shape Hunt Challenges

Many objects in nature have more than 1 shape. Write  or draw  what you find outside that matches each description in the chart.

Has more than one type of shape	
Has more than 3 ovals	
Has more than 2 squares or rectangles	
Has at least one small circle and one larger circle	

I noticed during my two shape hunt activities:

The \_\_\_\_\_ shape was the easiest to find in nature.

The \_\_\_\_\_ shape was the hardest to find in nature.





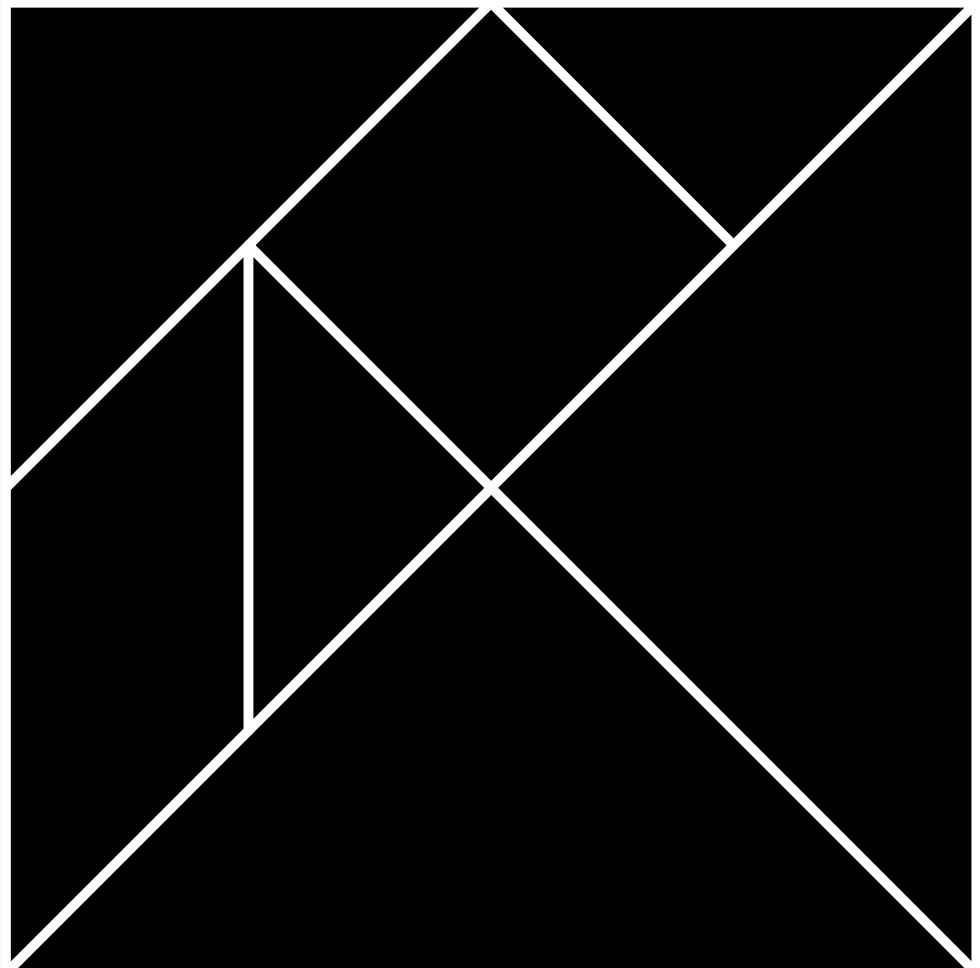
# Activity 4: Tangrams

Cut out the tangram pieces below and see if you can solve the animal puzzles from the story, "Grandfather Tang's Story."

Draw your solution here:



Cut out these pieces to solve the animal tangram puzzles.





# Activity 5: Make a Butterfly

Using the shapes below, make a butterfly and glue it here:

I made my butterfly using:

\_\_\_\_\_ oval

\_\_\_\_\_ triangles

\_\_\_\_\_ rectangles

\_\_\_\_\_ hearts

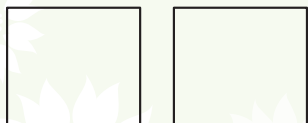
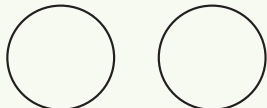
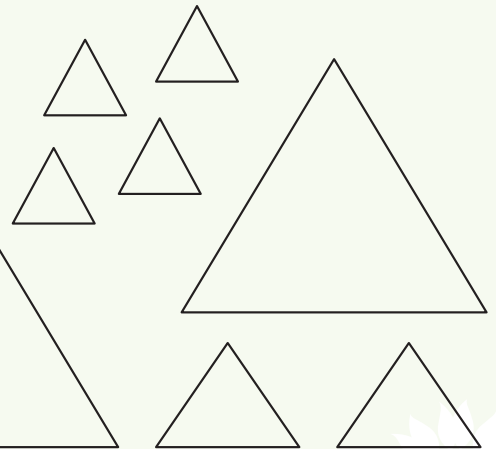
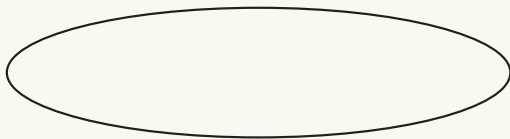
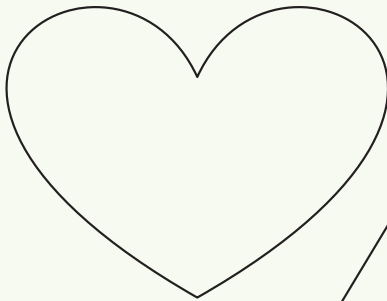
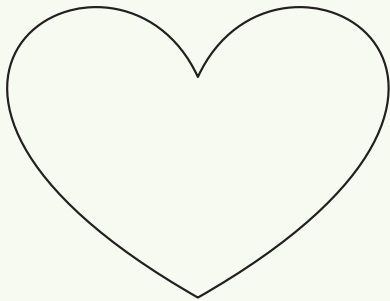
\_\_\_\_\_ squares

\_\_\_\_\_ circles

I used a total of \_\_\_\_\_ shapes to make my butterfly!



Cut out these shapes to make your butterfly:



# Activity 6: Drawing Animals with Shapes

Using shapes, draw  the following objects:

TREE	
FLOWER	
CAT OR DOG	

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Draw different animals from the video tutorials here:



# Activity 7: Shapes in the Clouds



These are some of the shapes I saw when I looked at the clouds:

Here is our “Cloud Story”...

