# SUMMER CAMP WITH THE FOOS

# What's Inside This Workbook?

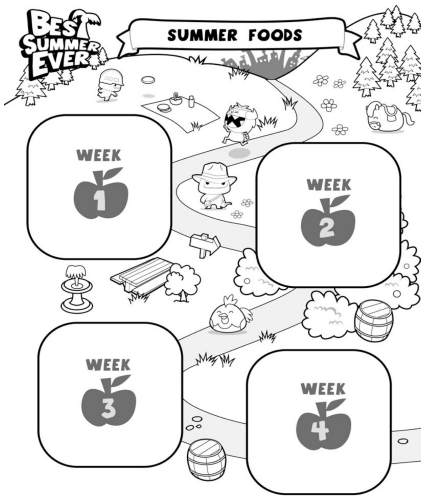
Heard of Summer Slide? No thanks! Let's make this the Best Summer Ever. Learning to code is a great way to increase problem solving and other essential skills that all children need to lead a successful academic life.

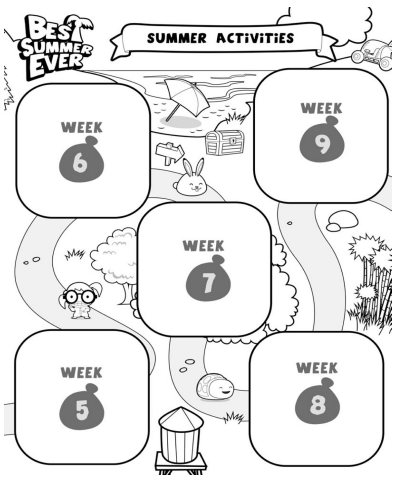
The next few pages are full of weekly in-app and unplugged activities to help your child practice coding fundamentals and inspire them to create something new inside codeSpark Academy.

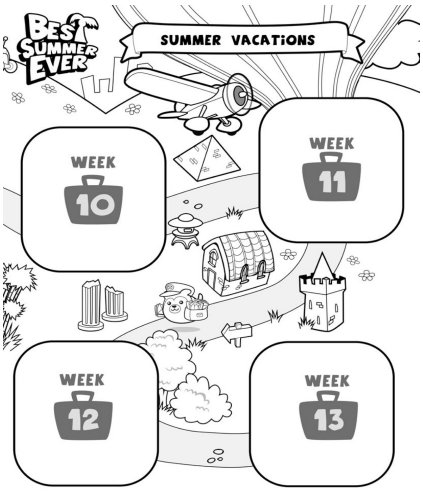
# Join Our Summer Coding Challenge!

Keep your child engaged in learning by joining our summer coding challenge. To join:

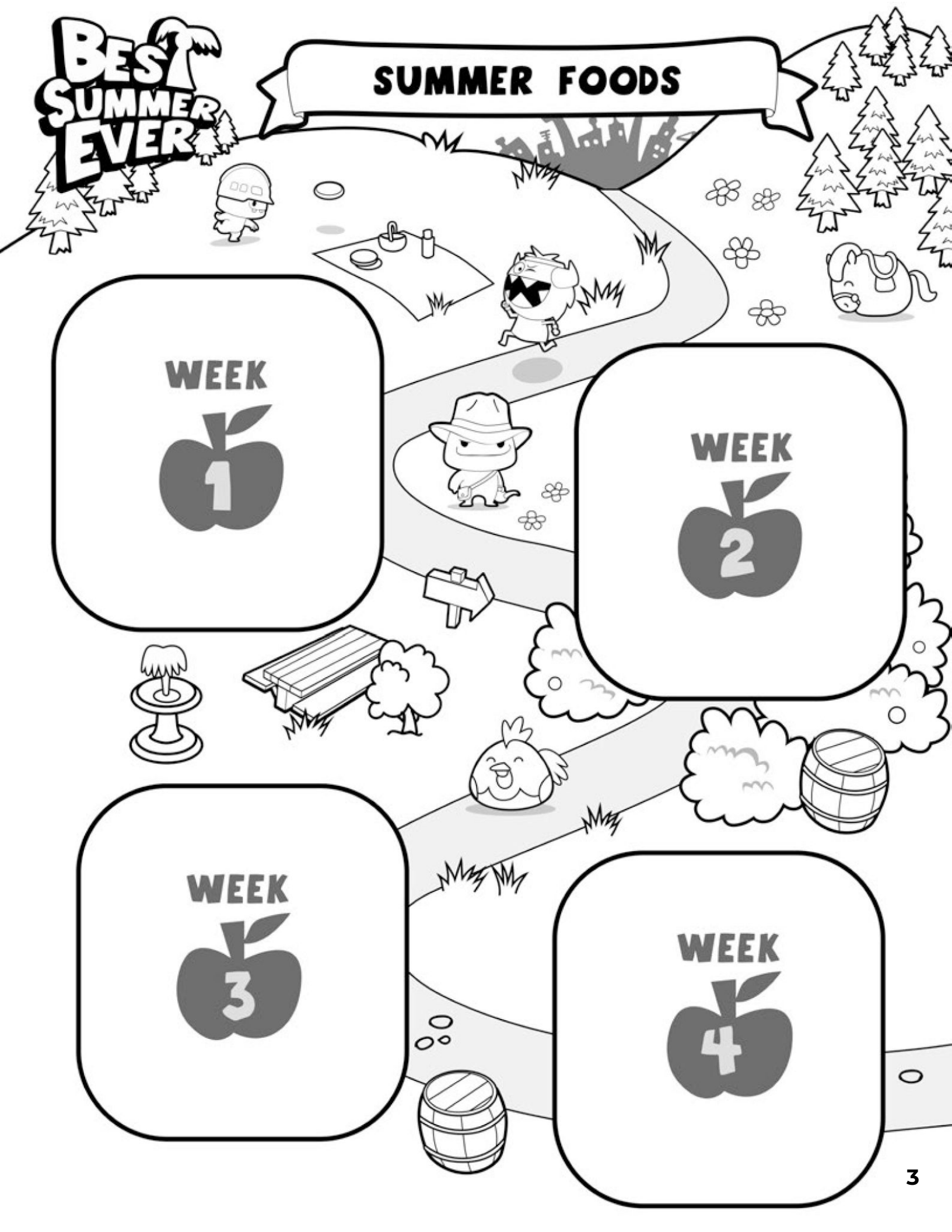
1. Print out the **Best Summer Ever Achievement Map** on **page 3**.
2. Display the map somewhere in your home and give your child a "badge" each time they complete that week's challenge.
3. Celebrate your child's accomplishments when they're done!
4. **BONUS:** Send a picture of your child's completed map to support@codespark.com for a chance to win 1,000 in-app coins!



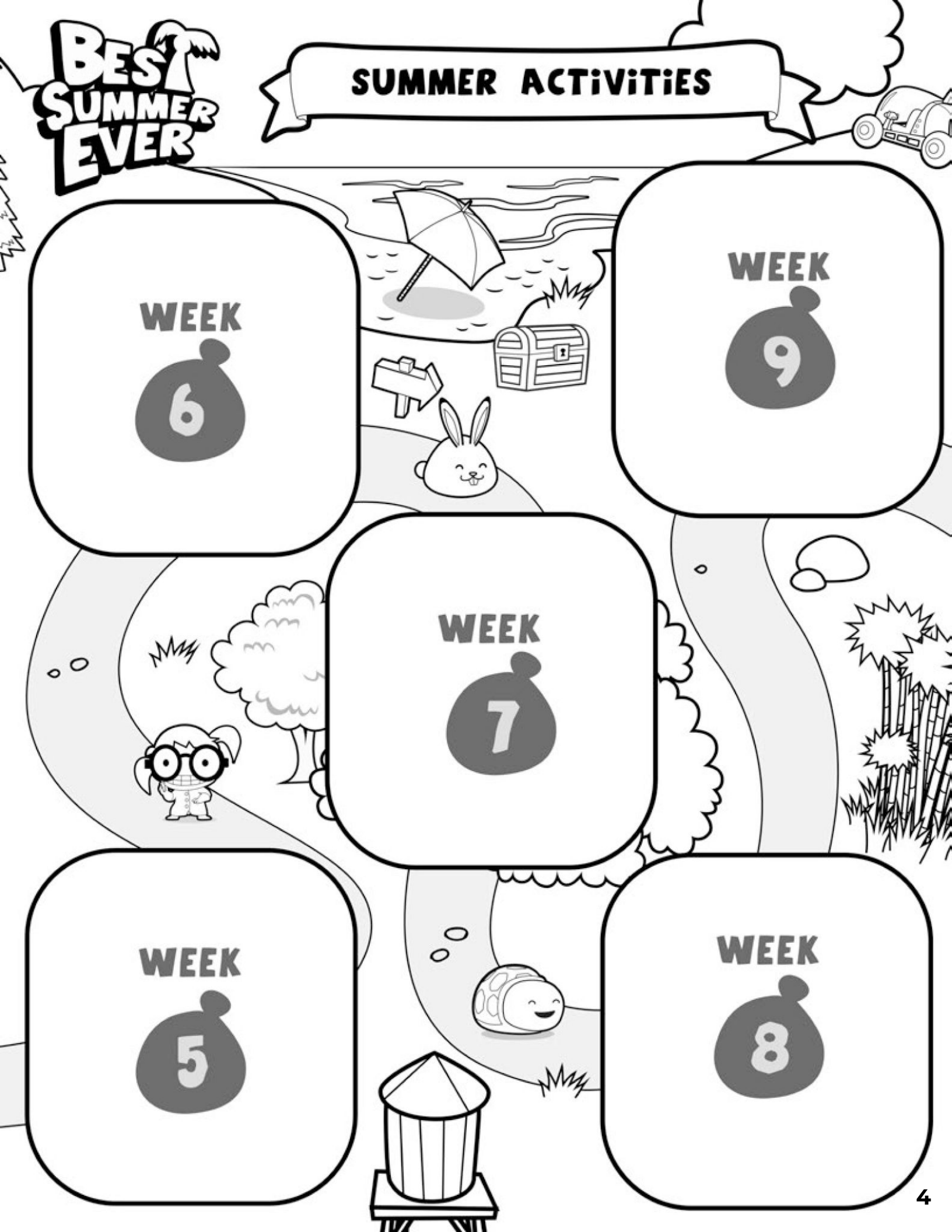



# Table of Contents


BEST SUMMER EVER
SUMMER FOODS
WEEK 1
WEEK 2
WEEK 3
WEEK 4

# BEST SUMMER EVER

## SUMMER ACTIVITIES



WEEK 6

WEEK 9

WEEK 7

WEEK 5

WEEK 8


BEST SUMMER EVER
SUMMER VACATIONS
WEEK 10
WEEK 11
WEEK 12
WEEK 13

# SUMMER FOODS

UPON COMPLETION OF EACH WEEKLY CHALLENGE, CUT THESE OUT AND PASTE THEM ON THE MAP.




# BEST SUMMER EVER

## SUMMER ACTIVITIES

UPON COMPLETION OF EACH WEEKLY CHALLENGE, CUT THESE OUT AND PASTE THEM ON THE MAP.





BEST SUMMER EVER

# SUMMER VACATIONS

UPON COMPLETION OF EACH WEEKLY CHALLENGE, CUT THESE OUT AND PASTE THEM ON THE MAP.





# AN iN-APP ACTiViTY

Your child's first summer challenge is to create a story about a picnic in codeSpark Academy. We've added new picnic themed items to the store that your kids can use in their story. These items include: a picnic basket, blanket, umbrella, and even ants!

If your child can't think of a story, consider sharing some of the topics listed below:

- What's the best thing that could happen at a picnic? The worst?
- Can you make a story about the last picnic you went on?
- Can you code a story about a nice ant that is invited to a picnic?
- Why wouldn't you want ants to join your picnic?

Use the **Story Planner** worksheet on the next page to help your child plan their story.

Need help coding a story? Learn how on **page 42.**

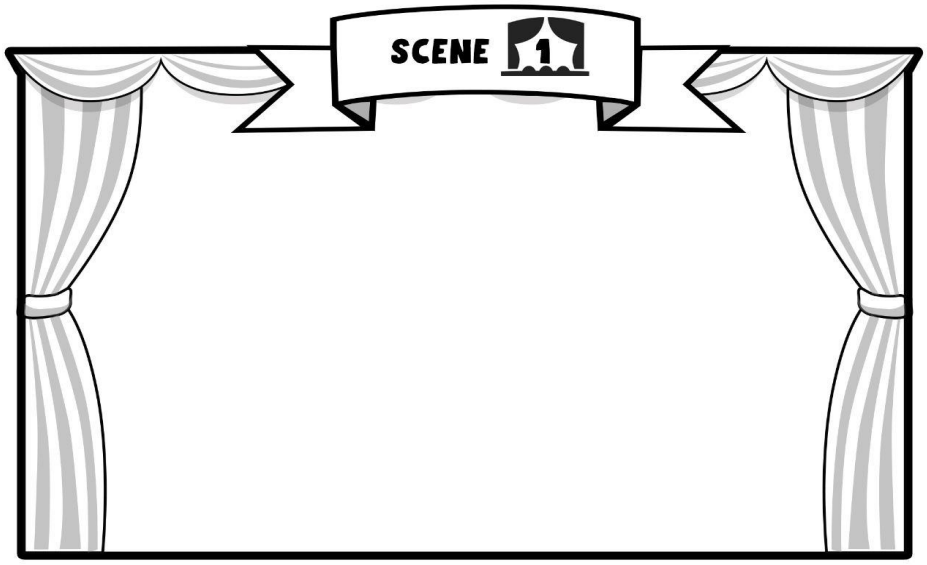
## Brain Power:

This activity reinforces SEQUENCING, an important concept not just in coding but also in early literacy!

_____'S STORY PLANNER

Print Name

STORY NAME: _____

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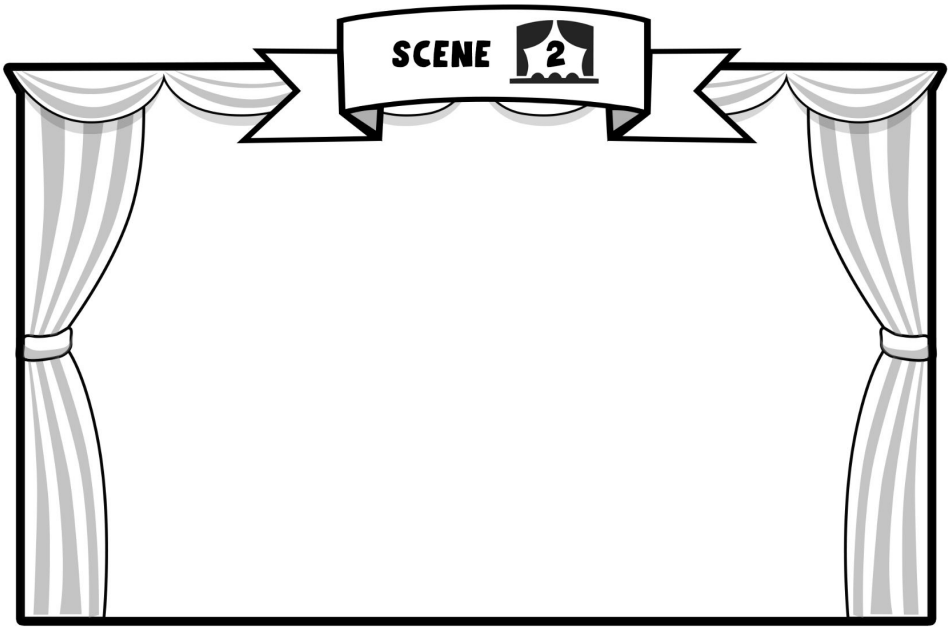


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Find all 10 food items on our Scavenger Hunt checklist on the next page. Print off the checklist for your child so they can cross off the items when they find them. Consider the following ideas for ways your child can find the items:

- Bring the checklist when you and your child go grocery shopping
- Bring the checklist with you to a BBQ
- Give the checklist to your child and have them look through your pantry/fridge

## Brain Power:

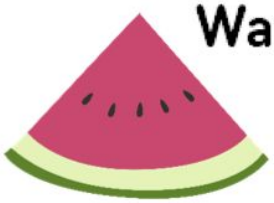
Power up your child's summer by extending the scavenger hunt to a story about food. Have your child create a new story in codeSpark (Create => New => Create Story => Create Story). As your child finds each food item in the Scavenger hunt, instead of just crossing it off the list, have them take a picture of the item and add it to their food story.

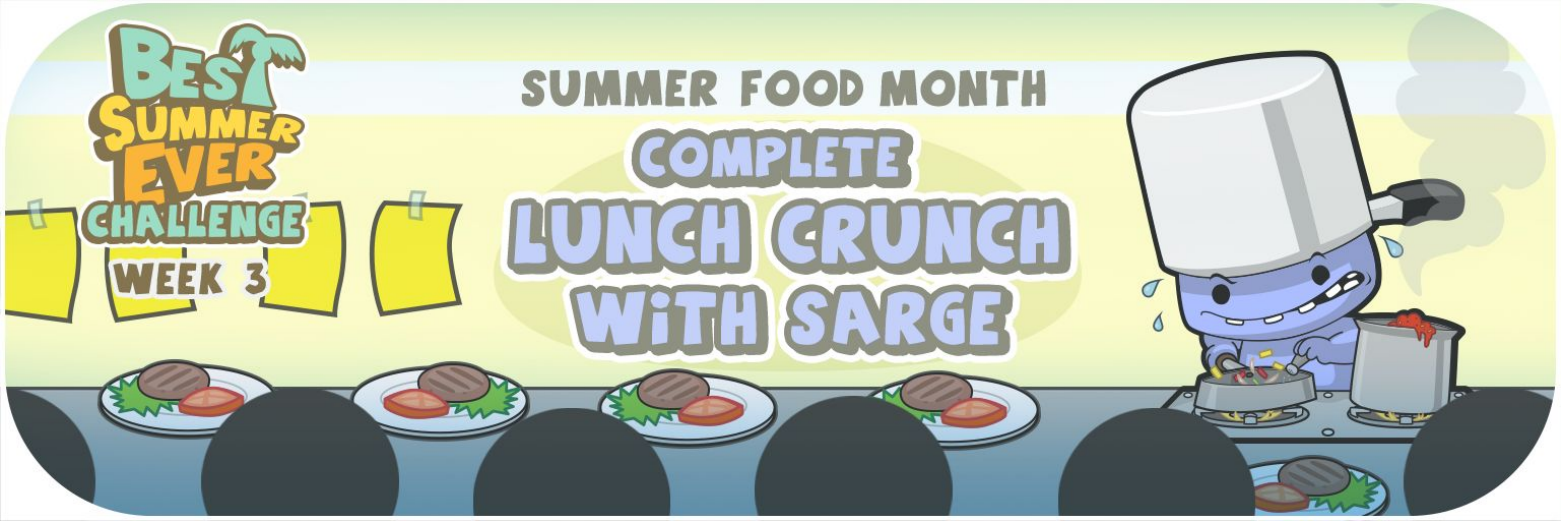
Also, remind your child that they can easily add their own images to their story by taking a picture of it (see below).

# SUMMER FOOD SCAVENGER HUNT

## INSTRUCTIONS

Hunt for each food item and cross it off the list when you find it.

-  Corn on the Cob
- Watermelon 
-  Strawberry
-  Something Grilled
-  Lemonade
-  Tomato
-  Cherry
-  Lettuce
-  Green Beans
-  Ice Cream




# AN iN-APP ACTiViTY

The challenge for this week is to complete the “Lunch Crunch” puzzles in codeSpark Academy. After earning all 3 stars, your child can extend their learning by creating a game that uses conditional statements and features Sarge (the Chef Foo).


If your child has already completed Lunch Crunch, or if they are unable to complete it this week, check out the unplugged activity on the next page.

## Brain Power:

The Lunch Crunch puzzles introduce CONDITIONAL STATEMENTS, an important concept in coding that makes programs more powerful!

# BEST SUMMER EVER

# iFFY DiCE GAME

## HOW TO PLAY

**Gather some friends and some dice to play the Iffy Dice game! Use the CONDITIONAL STATEMENTS below to learn the rules of this game!**

**IF** you are the youngest player, **THEN** you get to go first.

**IF** you are done with your turn, **THEN** pass the dice to the person to your right.

**IF** you have 10 strawberries*, **THEN** you are the winner!

**IF you roll...**  you add 1 point to your score.

**IF you roll...**  you steal a point from your neighbor to the right.

**IF you roll...**  you subtract 1 point from your score.

**IF you roll...**  you have to do 10 jumping jacks.

**IF you roll...**  give a point to your neighbor on the left.

**IF you roll...**  you lose a turn.

*You can also play with chocolate chips, blueberries, popcorn, or any other small food item.

PLAY LUNCH CRUNCH WITH SARGE TO CODE WITH CONDITIONALS


The challenge for this week is to follow a recipe and make something yummy with your child.

An algorithm is a set of steps to complete a task. A recipe is a great example of an algorithm.

As you follow the recipe with your child, talk about how you are following the steps precisely and in order. Consider asking your kiddo what they think would happen if they did some of the steps out of order, or if they added more or less than the specified amount of an ingredient.

## Brain Power:

Algorithms are the foundation of coding. Check out our progression of learning about algorithms and think about what your child has mastered and what they should work on next:

I can...

1. ...follow 3 instructions (not necessarily in order; e.g. put your dishes in the sink, brush your teeth and get ready for a bath)
2. ...follow a set of instructions to complete a task (in order; e.g. 1) put away your toys 2) get out three books 3) read the books on the couch 4) put the books away)
3. ...give a set of instructions to complete a task (in order; e.g. provide instructions to a friend or sibling on how to build something, do something, play a game...)
4. ...program a Foo to reach a goal in the Puzzle section of codeSpark Academy (Donut Detective, Tool Trouble, Kite Plight...)


## Recipe for _____

## Ingredients

- 
- 
- 
- 
- 
- 

## Directions (Algorithm)

**Step 1:** _____

_____

**Step 2:** _____

_____

**Step 3:** _____

_____

**Step 4:** _____

_____

**Step 5:** _____

_____


This week's challenge is to:

1. Find 5 things that you use during the summer that are run by computers
2. Find 5 things that you use during the summer that are NOT run by computers.

Use the Computer Hunt worksheet on the next page for your child so they can use it to write down the items when they find or think of.

Ask your child:

- How do the things run by computers help us?
- How do the things not run by computers help us?
- Do you think the things run by computers or more helpful than the things not run by computers? Why?

# Brain Power:

The point of this week's activity is to take the first step to understanding how technologies impact our lives and society by simply recognizing what technologies we interact with around our home.

Technology in daily life can be a great thing! However, it's also important to weigh the possible negative side-effects. For example, social media helps you connect with friends; however, your information on social media may be used in ways that you don't like.

# COMPUTER HUNT

## INSTRUCTIONS

Find 5 things that you use during the summer that are run by computers and find 5 things that you use during the summer that are NOT run by computers.

Run by a computer:

Not run by a computer:


# AN iN-APP ACTiViTY

This week's challenge is to create a story about your ideal day at the beach or pool in codeSpark Academy (Create => New => Create Story => Create Story). We've added new beach themed items to the store that your kids can use in their story. These items include: a sandcastle, beach chair, conch shell, and more!
If your child can't think of a story, consider sharing some of the topics listed below:

- What's the best thing that could happen at the beach/pool? The worst?
- Can you make a story about the last time you went to the beach/pool?
- Can you code a scene from a book or movie that took place at the beach?

Use the **Story Planner** worksheet on the next page to help your child plan their story.

Need help coding a story? Learn how on **page 42.**

## Brain Power:

This activity reinforces SEQUENCING, an important concept not just in coding but also in early literacy! When kids code their own story, they not only have to sequence the story, they have to sequence the code to tell the story.

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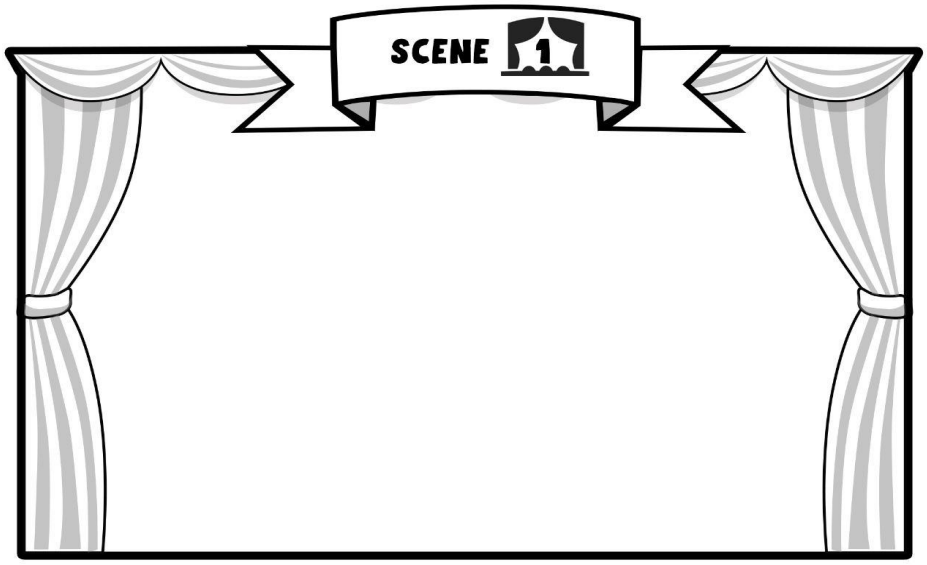


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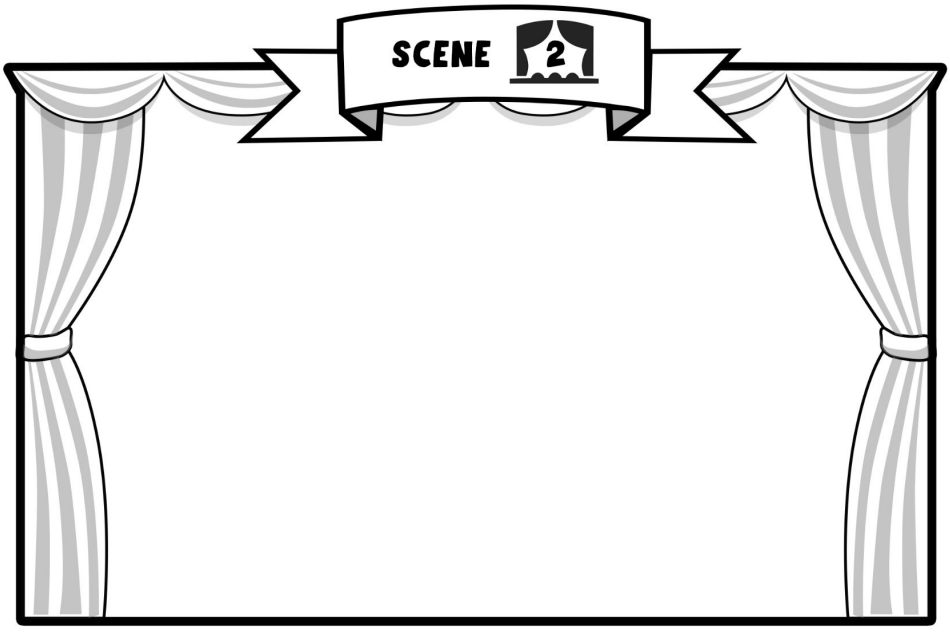


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The challenge for this week is to find 5 different bugs and see how they are similar and different. Print the Bug Hunt activity on the next page so your child can use it to draw the bugs they find and write down the similarities and differences of their bugs.

Ask your child:

- What is the same about the bugs?
- What is different about the bugs?
- Could you group (classify) the bugs into different categories based on their similarities (e.g.-color, number of legs, wings, etc.)?

## Brain Power:

This activity reinforces CLASSIFICATION. Classification is used in computer science in a variety of ways. For example, an artificial intelligence robot could use classification as it learns what types of bugs eat tomato plants.

# BUG HUNT

## INSTRUCTIONS

**Go find 5 bugs then draw them in the green boxes below. Next, in the yellow box write how your 5 bugs are similar to each other. Last, in the blue boxes, write one thing that is unique for each bug.**

*STEP 1: Draw 5 bugs below*

*STEP 2: Write how to bugs are similar*

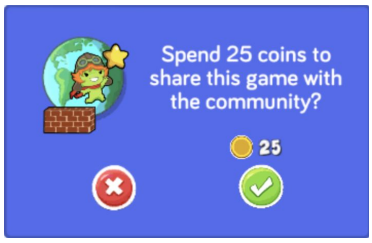
*STEP 3: Write how each bug is unique*


# AN IN-APP ACTIVITY

The challenge for this week is to make a game in codeSpark that features water balloons (Create => New => Create Game). We've added a new character, Surfer Glitch, who can throw water balloons. Your kid(s) can make the Surfer Glitch the main character or the enemy in their game.

Use the Game Maker Level worksheet on the next page to help your child plan their game. After they finish creating their game, encourage your child to share it with the community!

To share a game, first play it and win. After you win, a share button drops down from the top of the screen (arrow pointing to a world). Click the share button then confirm. The game is now shared to the community.

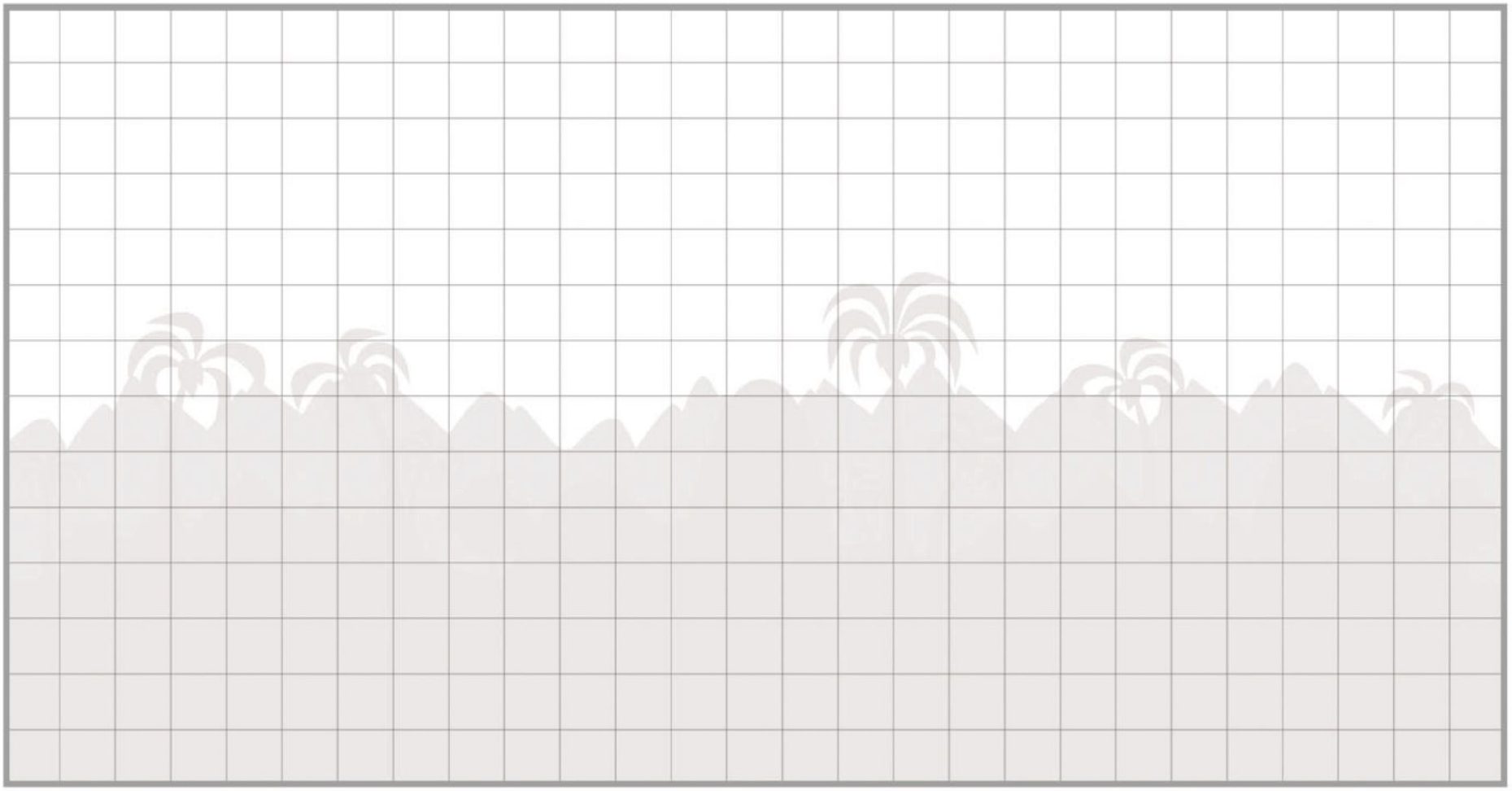

Be sure to check out your child's game and ask them about what new features they programmed or created compared to previous games they've made.

## Brain Power:

Research shows that working on a project is a superior way to learn something. Every time your kid makes a new game they encounter new problems they are motivated to solve. For example, elementary school teachers have gleefully reported that when their students program games in codeSpark the students come to them and ask about what variables are and how they can use them to do things like open doors (noting that during math lessons their students never come to them asking about what variables are and how they can use them to solve for X).

# DESIGN YOUR GAME MAKER LEVEL


**Before creating a level on Game Maker, it is always wise to plan ahead. Fill up this grid with your favorite traps, blocks, and creatures!**




The challenge for this week is to draw what the moon looks like then identify the phase it is in. Print the **Moon Phases** sheet on the next page for your child to complete this activity.

You can print multiple copies of the worksheet to have your child make observations over time (e.g.- observing the moon at the beginning of the week and observing the moon at the end of the week). Make sure they add the date to each observation.

Ask you child:

- What do you notice about how the moon looks?
- Why do you think the moon changes over time?
- What is today's date? When do you think the moon will look like this again? Why?

## Brain Power:

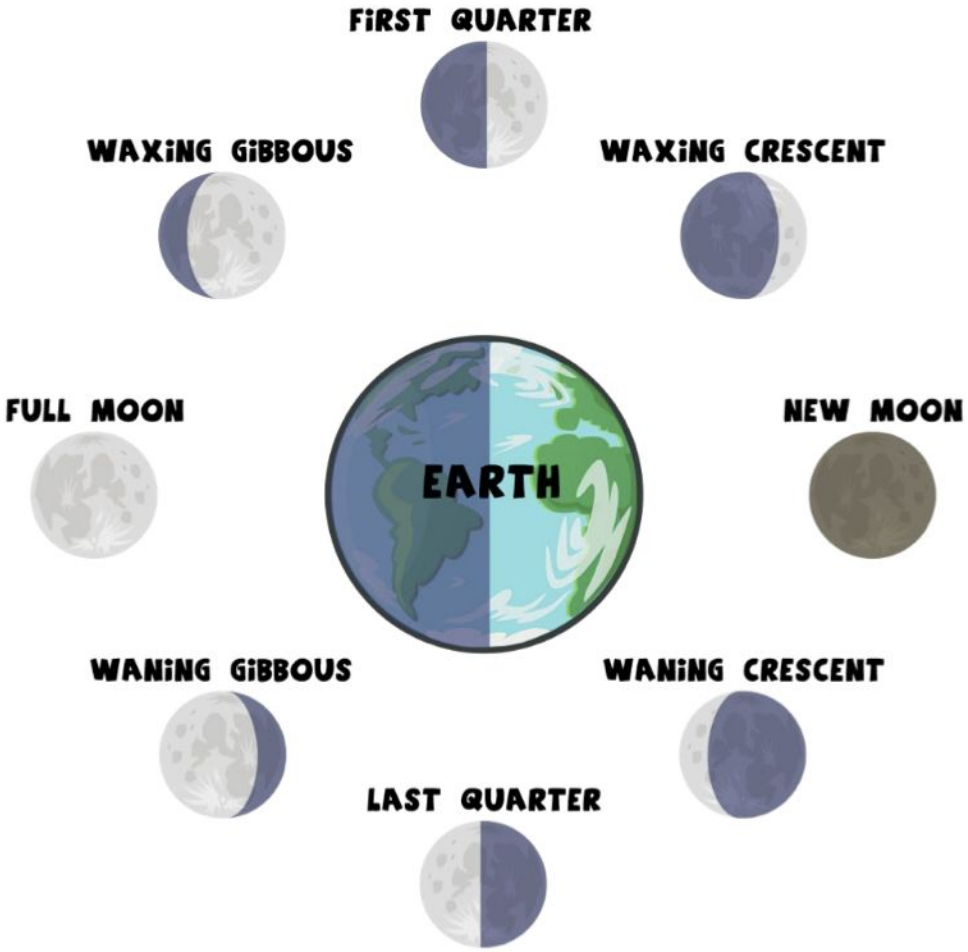
Don't forget that computer science is a science and that a big part of science is making OBSERVATIONS! This week's activity will help your child make an observation and use what they see to make a conclusion.

# MOON PHASES

## INSTRUCTIONS

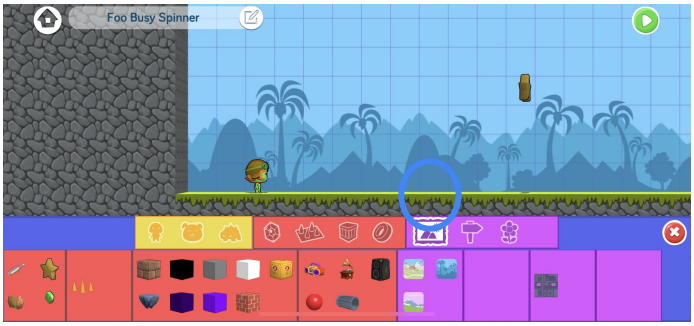
**Go outside tonight and look at the Moon. Draw in the empty box what the Moon looks like. Use the chart below to identify what phase the Moon is in.**

Tonight, the Moon looks like:




# AN iN-APP ACTiViTY

This week, the Foos are spending their vacation exploring from Inner Earth to Outer Space. Now kids can create games in dark caves or float around in space! This week we're challenging kid coders to create their own games in these fun new places. We've added new backgrounds, items, and stickers to make the ultimate summer travel games!




Be sure to check out your child's game and ask them about what new features they programmed or created compared to previous games they've made.

## Brain Power:

Research shows that working on a project is a superior way to learn something. When kids create their own projects, they learn the 5Cs of 21st Century learning — collaboration, communication, creativity, critical thinking, and computational thinking.

# DESIGN YOUR GAME MAKER LEVEL


Before creating a level on Game Maker, it is always wise to plan ahead. Fill up this grid with your favorite traps, blocks, and creatures!


The challenge for this week is have your child pack 5 things for a pretend trip! Here are the instructions for this activity:

1. Specify what type of trip you're pretending to go on together (beach, overnight, grandparents, roadtrip...)

2. Talk about what kinds of activities you'll be doing on the trip

3. Talk about what kinds of items you'll need for the activities or for the trip in general (clothes, swimsuit, snacks, pajamas...)

4. Instruct your child to get a bag and pack 5 items for the trip (for older kids ask them to pack more items)

5. After they're packed ask them about each item and how they'll use it on your pretend trip

## Brain Power:

This activity reinforces DECOMPOSITION. Decomposition is used in computer science to break down a problem into smaller, more easily solved parts. By understanding the smaller parts of a program we are more capable of building a solution.


# AN IN-APP ACTIVITY

This week's challenge is to create a story about friends telling tales around a campfire in codeSpark Academy (Create => New => Create Story => Create Story). Your child can use the many characters, campfire, and various nighttime backgrounds for their story.

If your child can't think of a story, consider sharing some of the topics listed below:

- Can you code a story where friends are telling a scary story around a campfire?
- Can you code a story where friends are telling stories around a campfire and something interrupts them?
- Can you code a memory of a time you told stories around a campfire?

Use the **Story Planner** worksheet on the next page to help your child plan their story.

Need help coding a story? Learn how on **page 42.**

## Brain Power:

This activity reinforces SEQUENCING, an important concept not just in coding but also in early literacy! When kids code their own story they not only have to sequence the story, they have to sequence the code to tell the story.

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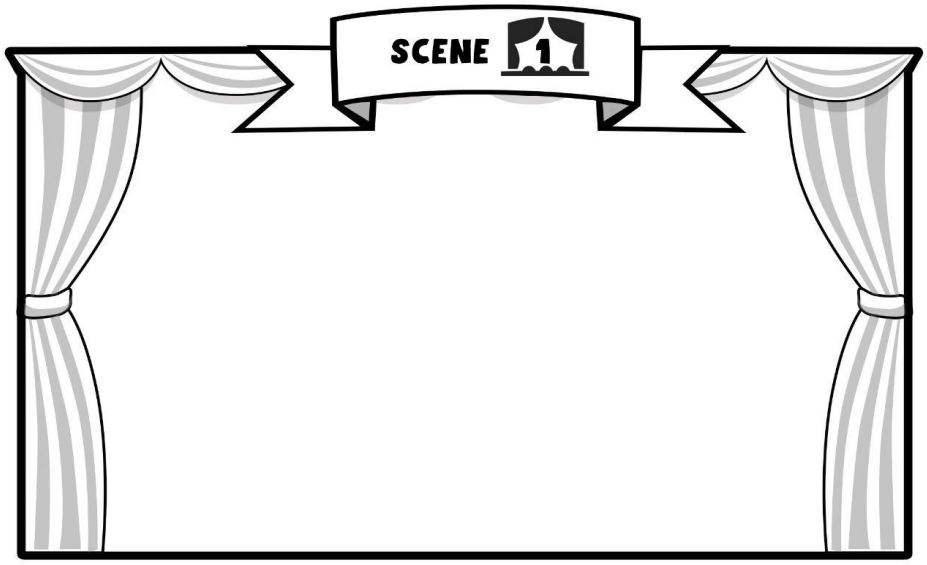


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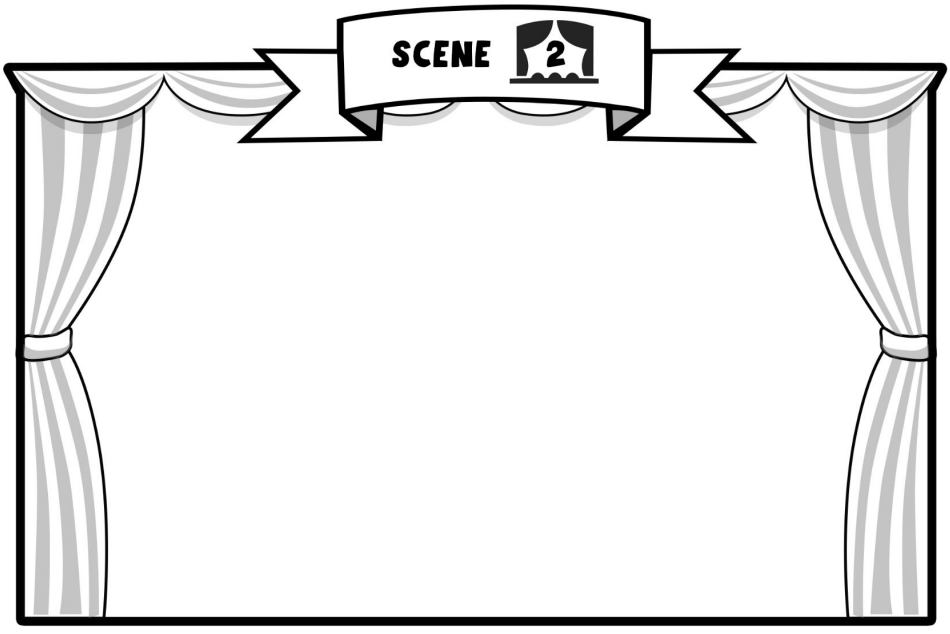


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# AN iN-APP ACTiViTY

The final challenge of the Best Summer Ever is to create a story about this Summer (Create => New => Create Story => Create Story)! Use the Story Planner on the next page to help your child reflect on the fun they've had during their break from school.

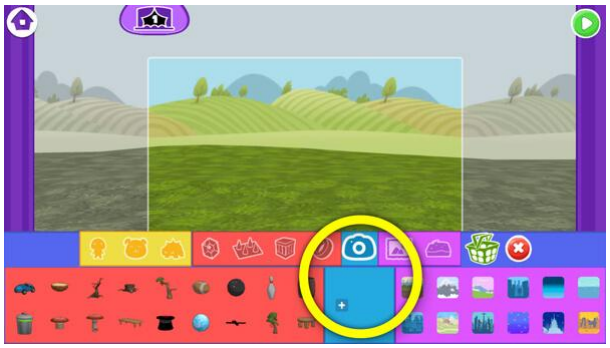
If your child can't think of a story, consider sharing some of the topics listed below:

- What adventures did you have?
- What places did you visit?
- What was your favorite thing about the Summer?
- Which day was so fun that you'd like to repeat it?

Use the **Story Planner** worksheet on the next page to help your child plan their story.

Need help coding a story? Learn how on **page 42.**

Also, remind your child that they can easily add their own images to their story by taking a picture of it (see below).



## Brain Power:

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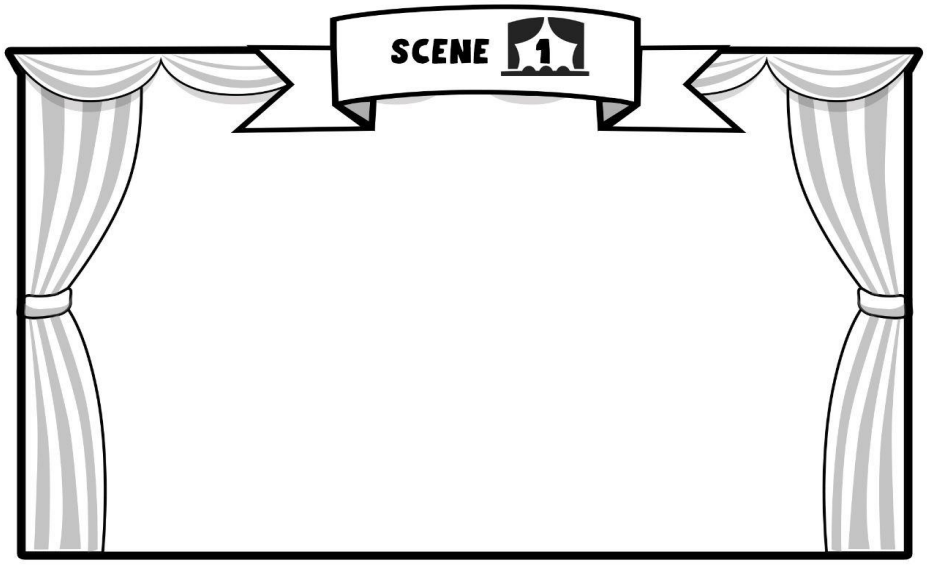


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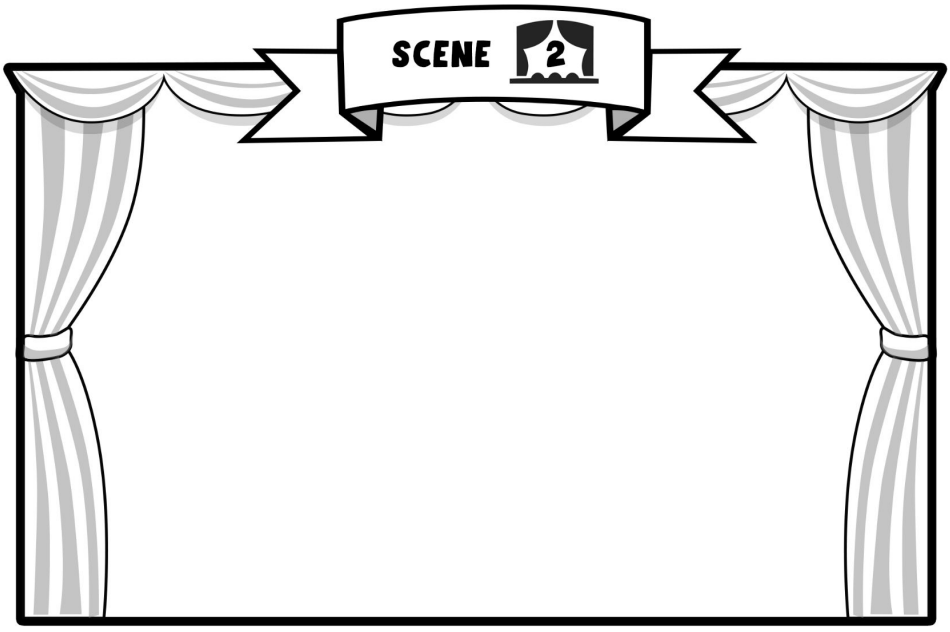


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# ADDITIONAL RESOURCES

# Glossary of Coding Terms

**Algorithm**- steps to complete a task

**Classification**- how computers group information together based on categories

**Code**- Instructions that tell a computer what to do

**Computational Thinking**- thinking and solving problems like a computer scientist

**Conditional Statement**- An "if...then..." statement that only runs under certain conditions or situations

**Decomposition**- breaking down a problem into smaller parts

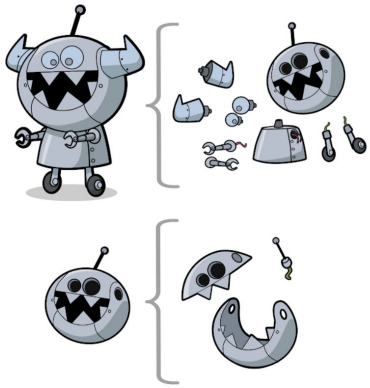
**Observation**- using your senses to learn about something

**Sequence**- the order that commands are performed by a computer

**Variable**- a place where a program can store a single value that can change


**Algorithm**


**Conditional Statement**



**Decomposition**

# How to Code Your Own Story


Creating a story in codeSpark Academy is easy! Plus, it's a great way for kids to explore their creativity and sharpen their logic while learning how to code. Here's a quick guide to help you get started.

## Learn and Get Inspired With Story Ideas

If your kid coder is new to coding their own projects in codeSpark Academy, we recommend heading over to **"Create"** and clicking the **"Ideas" icon** for stories. Here they'll find some starter tutorials designed to help kids understand how to add code to their own stories.

Looking for even more story ideas? Head over to our YouTube channel where Katie, our friendly and savvy Gameplay Programmer, will show kids step-by-step how to make more fun stories with code. Plus, watch Katie play games made by kids and then reveal how those games were made.

## Create Your Own Project

Once kids are ready to bring their own unique story ideas to life, they can head back over to the **"Create"** screen and click the **"Create Story" icon**.

Using our word-free coding interface, kid coders can program The Foos to walk, eat, and more in interactive scenes. Kids can further personalize their stories by adding voice recordings or speech bubbles to make their characters speak. (To ensure the safety and privacy of our kid coders, our team carefully pre-moderates every story requested to be shared.)

# VISIT CODESPARK.COM FOR MORE FUN!