

# FOLLOWING DIRECTIONS

A STORYTIME ABOUT ALGORITHMS

## OVERVIEW

STORYTIME ELEMENT	COMMENT
<b>Opening Song</b>	Use the same song every time.
<b>Introduction</b>	Today's storytime is about algorithms, or following a set of direction in order. We'll talk a lot about understanding sequences as a way to help children understand algorithms and develop narrative skills, which are important for early literacy.
<b>Letter of Day:</b> "S, s"	S for sandcastle, sequence, sun, sift, sway
<b>Book 1:</b> "How to Code a Sandcastle" Written by Josh Funk, Illustrated by Sara Palacios	In this book, a girl and her robot build a sandcastle together. It's a great introduction to many coding concepts, particularly sequencing.
<b>Flannel Activity:</b> How to Code a Sandcastle	Retell some or all of the book using flannel pieces
<b>Book 2:</b> "The Little Red Hen" Written and Illustrated by Paul Galdone	The Little Red Hen works very hard to bake a cake without any help from her friends. Follow her steps as she makes the cake from planting the wheat to eating the cake.
<b>Writing Activity:</b> The Little Red Hen	Write or draw the steps that The Little Red Hen takes to make her cake. Have the kids help you remember the correct sequence of events.
<b>Song:</b> "Five Little Monkeys Jumping on the Bed"	Make sure to count down from 5 to 0 in order.
<b>Book 3:</b> "We're Going on a Bear Hunt" Written by Michael Rosen, Illustrated by Karen Oxenbury	This is another fun book with a great sequence of events.
<b>Song:</b> We're Going on a Bear Hunt	Use hand motions and dancing to illustrate the actions of this song. Movement can help children better remember the events in a song or story and help develop narrative skills.
<b>Closing Comment</b>	Today we read books and did activities that involved following directions. This is an important skill for all kids to learn, and it also is a foundational concept of computer science.
<b>Closing Song</b>	Use the same song every time.
<b>Extension Activity:</b> Pretend Kitchen	Set up a play area for kids to pretend to cook and write or draw their own recipes.

## A DEEPER DIVE

### OPENING SONG

Use the same opening song during each storytime so that families know what to expect. Consistent elements of your storytime create an environment where kids know the rules (or the code!) for your program.

### INTRODUCTION

Welcome to storytime! This is a special computer science storytime where we will introduce all of you to the concept of algorithms. An algorithm is a fancy word for a set of directions – like a recipe! Machines, like phones, computers or robots, all use algorithms to tell them what to do. It's very important that their directions are clear and followed in order. Today, we will talk about following directions and putting things in order so that we understand what an algorithm is.

### LETTER OF THE DAY: S

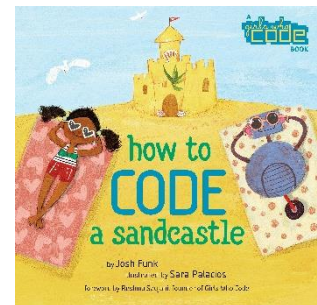
Our letter of the day is "S." What sound does "S" make? *Show an upper-case and lower-case "S."* **Ask:** Do they look the same? Do they sound the same? What are some words that begin with "S"? *Write down some of the words they suggest and include the words "sandcastle" and "sequence."*

**Say:** During today's storytime, we will talk about sequence, which means putting things in order: first, second, last. We'll read a book about sandcastles to help us understand what a sequence is, and we'll talk about other ways to follow directions and put things in order.

### BOOK 1: "HOW TO CODE A SANDCASTLE"

WRITTEN BY JOSH FUNK, ILLUSTRATED BY SARA PALACIOS

This book explains basic computer science concepts as a girl and her robot try to build a sandcastle on the beach. You can use the section at the end called "Pearl and Pascal's Guide to Coding" to help explain the concept of sequencing to children.



**After the book is over:** Review with the group what small problems Pearl and Pascal needed to solve to build their sandcastle.

**Say to Caregivers:** This book does a great job at introducing basic coding concepts to preschoolers. Sequencing is an especially important skill to learn and also helps children develop narrative skills, which is the ability to retell a story. Children with strong narrative skills tend to have an easier time learning to read.

### FLANNEL ACTIVITY: HOW TO BUILD A SANDCASTLE

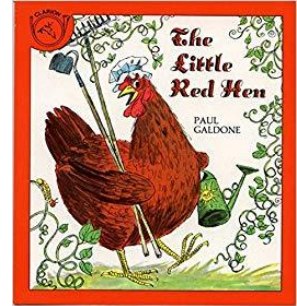
Create flannel pieces based on the book "How to Build a Sandcastle," and have the kids help you retell the story, including the proper sequence of problems that needed to be solved. **[Some suggestions for flannel pieces to get you started:** the ocean, the beach, the parking lot, a bucket, piles of sand, seashells, seaweed, a lifeguard stand, a pacifier, an ocean wave, a moat, a sandcastle]

## BOOK 2: "THE LITTLE RED HEN"

WRITTEN AND ILLUSTRATED BY PAUL GALDONE

During this book, the little red hen has to follow a lot of steps before eating her cake, and she can't get any of her friends to help her. It's a lot of work, but it's worth it in the end.

**After the book:** Review with the group all the things that the little red hen had to do before she could eat the cake. What did all of her friends say when she asked them for help?



### WRITING ACTIVITY: BAKING A CAKE

On a large piece of paper or white board, write out the sequence of baking a cake, based on the book "The Little Red Hen." Make sure to use numbers at the beginning of each direction (ex: 1. plant the wheat). After you have written out all of the steps (with help from the kids), ask the children what would happen if we did the steps out of order? Could we grind the wheat into flour before planting it? Could we eat the cake first and then bake it in the oven?

**Say to Caregivers:** Practice putting things in order at home, even if it's just creating a list of what you did today: got out of bed, brushed teeth, put on clothes, etc.

### SONG: "FIVE LITTLE MONKEYS JUMPING ON THE BED"

Make sure to count down from 5 to 0, and then review the sequence with the kids.

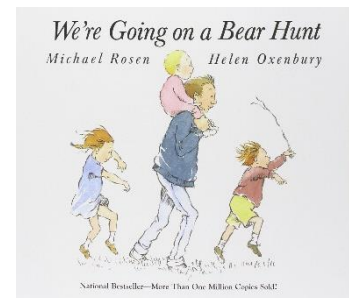
## BOOK 3: "WE'RE GOING ON A BEAR HUNT"

WRITTEN BY MICHAEL ROSEN, ILLUSTRATED BY HELEN OXENBURY

This is another great book for talking about sequencing, and the repetition makes it easy to recall.

### SONG: "WE'RE GOING ON A BEAR HUNT"

Sing "We're Going on a Bear Hunt" and use hand motions to illustrate the different parts of the song.



**Say to Caregivers:** Adding actions to a song makes it easier to children to remember it when they sing it again (or retell the story). It can help children understand a sequence and build narrative skills.

### CLOSING COMMENT

Today we read books about following directions. A set of directions is also called an algorithm in computer science. Learning about following directions and putting things in order not only helps your child build a foundation of basic computer science skills, it can also help them develop early literacy skills that will help them learn to read when they are ready.

### CLOSING SONG

Just as with your opening song, use the same closing song during each storytime so that families know what to expect. Consistent elements of your storytime create an environment where kids know the rules (or the code!) for your program.

### **EXTENSION ACTIVITY: IN THE KITCHEN**

If you are able to, create a play station with a toy kitchen. Let kids pretend to make their own recipes – create space for them to write or draw a recipe of their own. You can also provide easy no-bake recipes for kids to pretend to make at the library and make for real at home (like ants-on-a-log, or even play-dough!).