

FIX THAT BUG!

INTRO TO TESTING AND DEBUGGING STORYTIME

OVERVIEW

STORYTIME ELEMENT	COMMENT
Opening Song	Use the same song every time.
Introduction	Often, programmers need to retrace the steps of their code to find out where they went wrong and how they can fix it. To develop this skill, children need to learn that failure is part of learning, and that it's important to review your work and figure out how to fix your mistake. This is called tenacity.
Letter of Day: "F, f"	F is for fix, froggy, fortitude, find
Book 1: "How to Code a Sandcastle" Written by Josh Funk, Illustrated by Sara Palacios	The girl in this book receives a doll as a present, and she isn't quite sure what to do with it. She uses her tech skills and spare parts to upgrade her doll into a toy she can play with.
Drawing Activity: Fix the Broken Dolly	Replace a doll's broken parts with new ones.
Book 2: "Froggy Gets Dressed" Written by Jonathan London and Illustrated by Frank Remkiewicz	Froggy can't wait to play in the snow, but he'll need to put on a lot of layers before his mom will let him go out.
Flannel Activity: Fix Froggy	Use flannel pieces to put Froggy's clothes on in order.
Book 3: "The Most Magnificent Thing" Written and Illustrated by Ashley Spires	The girl in this book has an ambitious plan to make the most magnificent thing. However, things don't go according to plan, and she ends up with a lot of inventions that aren't quite right.
Song: "London Bridge is Falling Down"	Most people only remember the first verse to this song, but the lyrics to the whole song revolve around trying different things to fix the bridge.
Closing Comment	Today we talked about the importance of fixing your mistakes and managing feelings of frustration. These are important for kids to learn and are foundational to computer science.
Closing Song	Use the same song every time.
Extension Activity: Tinker Time	Set up a station for kids to tinker with broken toys, old machines, and tools.

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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

Computer programs rarely work on the first try. Often, programmers need to retrace the steps of their code to find out where they went wrong and how they can fix it. To develop this skill, children need to learn that failure is part of learning, and that it's important to review your work and figure out how to fix your mistake. This is called tenacity. This will also help support a child's emotional development by helping them manage their frustrations. Engaging in self-reflection is part of the learning process and helps children develop problem-solving skills. You can help your child learn computer science by letting them make a mistake and figure out what went wrong – then go back and try to fix it!

LETTER OF THE DAY:

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

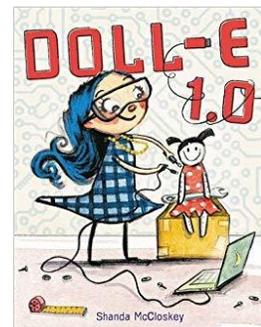
Say: During today’s storytime, we will talk about making mistakes. In computer programming, mistakes happen all the time, and it’s important to know how to review a program to find your mistakes and then also fix them. You can find a mistake by testing a program.

BOOK 1: “DOLL-E 1.0”

WRITTEN AND ILLUSTRATED BY SHANDA MCCLOSKEY

The girl in this book receives a doll as a present, and she isn’t quite sure what to do with it. She uses her tech skills and spare parts to upgrade her doll into a toy she can play with. As you read this book, point out the times when the main character is frustrated and how she tries to solve her problem.

Say to Caregivers: It’s important that children learn to manage their emotions and fix their mistakes. Reading books about characters that also make mistakes is a great way to reinforce this idea.



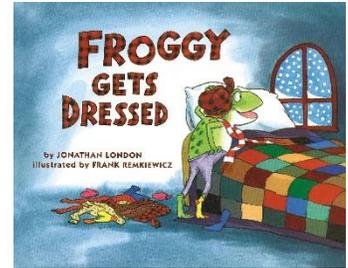
DRAWING ACTIVITY: FIX THE BROKEN DOLLY

On a large piece of paper or white board, draw a doll with arms, legs, hair, and eyes. Draw or tape up pictures of spare parts and tools. Assign each body part to a number on a dice (e.g. 1 is the right arm, 2 is the left arm). Roll the dice to see which part is broken, and then replace it with one of the spare parts or tools. Have the kids decide which part would work best to replace the broken limb, missing hair, etc.

BOOK 2: “FROGGY GETS DRESSED”

WRITTEN BY JONATHAN LONDON, ILLUSTRATED BY FRANK REMKIEWICZ

Froggy can't wait to play in the snow, but he'll need to put on a lot of layers before his mom will let him go out. This book is a great example of reviewing your work (or your clothing choices) to make sure that everything works right (or that you stay warm – and remember underwear!). As you read, point out to kids that even though Froggy keeps making mistakes, he fixes them and keeps on trying.



FLANNEL ACTIVITY: FIX FROGGY

Create flannel representations of Froggy and his clothes. Piece by piece, put the clothes on Froggy. Make an intentional mistake (like putting on the snow pants and then the long underwear), so the kids can spot your error. Play this a few times, and see if the kids can put all the clothes on in the right order.

BOOK 3: “THE MOST MAGNIFICENT THING”

WRITTEN AND ILLUSTRATED BY ASHLEY SPIRES

The girl in this book has an ambitious plan to make the most magnificent thing. However, things don't go according to plan, and she ends up with a lot of inventions that aren't quite right. She finds out that creating something isn't always easy, but it's important to keep trying because you might invent something unexpected.



Say to Caregivers: This book is another example of how to handle your emotions and keep trying – which is what tenacity is all about.

SONG: “LONDON BRIDGE IS FALLING DOWN”

Most people only remember the first verse to this song, but the lyrics to the whole song revolve around trying different things to fix the bridge. There are lots of different versions of the lyric – Google the song and pick your favorite.

CLOSING COMMENT

Tenacity is an important skill for computer scientists – it is the desire to make sure your program works perfectly, even if it means going back again and again to fix mistakes. You can help kids learn tenacity by making mistakes yourself and modeling how to manage your emotions and fix your mistakes. Ask questions like: What happened here that was unexpected? How can you fix it? How should it have worked?

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: TINKER TIME

Set up a station for kids to tinker with broken toys, old machines, and tools.