



HOW TO CODE A SANDCASTLE

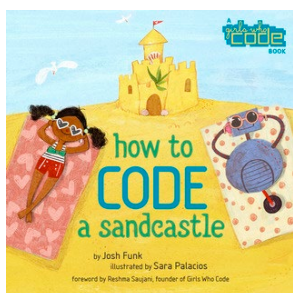
BOOKMARK FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

DID YOU KNOW READING BOOKS IS A GREAT OPPORTUNITY TO SUPPORT STEM LEARNING?

Reading with older toddlers and preschoolers uses **PEER**:

- Use additional Prompts if needed,
- Evaluate and
- Expand your child's answers, and
- Repeat the prompts.

ABOUT THIS BOOK



How to Code a Sandcastle

is a book written by Josh Funk and illustrated by Sara Palacios. Pearl and her robot use **step-by-step directions** to **build** the perfect sandcastle.

How would you **plan** to **build** a sandcastle? What step comes **first**? **Next**? **Then**? How would **fix** any problems that happen?

WHERE CAN I FIND THIS BOOK?

Search [YouTube](#), [BookShare](#), [Archive.org](#), and your local library.

ADAPTATIONS

STEMIE's tips for making adaptations to the storybook reading process

<https://stemie.fpg.unc.edu/resource/a-guide-to-book-adaptations/>

Scan the QR code to download or view online.



Expanding | Technology

How to Code a Sandcastle

By Josh Funk



Complete a sentence

"First we build the base, then we ____." (shape and decorate)



Recall

"What steps did Pearl use to build her sandcastle?"



Open-ended questions

"How did Pearl fix errors while coding her own sandcastle?"



WH questions

"What happens if you skip a step when building something?"



Distancing questions

"What have you built before, and what steps did you follow?"

STEM Words & Ideas to Explore

- Debugging
- Sequence
- First/Then
- Problem-solve
- Error
- Solution
- Looping
- Repeat





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ADAPTATIONS FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

Every child is different. Do what works best for encouraging your child's independent exploration during this suggested literacy activity. These are only suggested activity adaptations. Consider consulting your child's care team first.



Follow your child's lead and interests. Enthusiastically ask your child questions about what they are doing and what they like.



Answer your child's questions. If you do not know the answer, work together with your child to discover the answer.



Encourage your child to participate in the activity as much as possible. Praise your child's efforts and successes.

SUPPORT CHILDREN WITH VISUAL IMPAIRMENT, DEAF-BLINDNESS, OR MULTIPLE DISABILITIES:



Storybox:

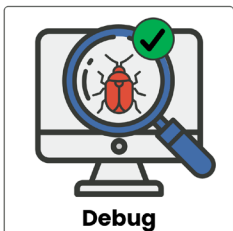
Select corresponding items and place them in a container or a box. Items may include:

- Plastic cups, scoops, and small shovels
- Toy robot
- Sand (in a taped shut bag or Ziplock)

This adaptation can also be used to:

- Increase children's attention and engagement
- Support children with sensory challenges

SUPPORT ALTERNATIVE WAYS OF COMMUNICATION:



Pictures, Symbols, Signs, or Icons:

- Select pictures that correspond to items, objects, or animals in the book
- Add signs and icons to the story
- Use pictures along with a communication board to support STEM learning

This adaptation can also be used to:

- Increase children's attention and engagement
- Support children's learning
- Support children who are deaf or have a hearing impairment



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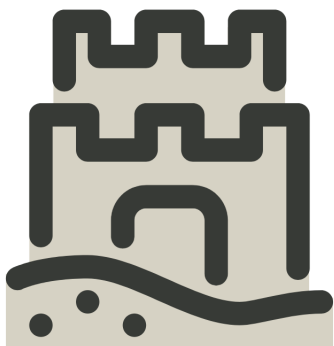
VISUAL CUES FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

How To Use VISUAL CUES:

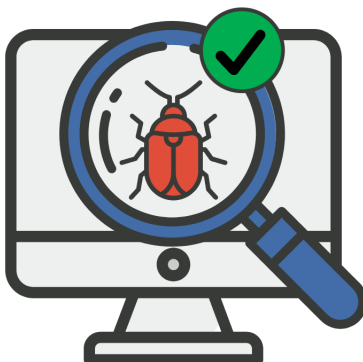
1. Print and cut out the images.
2. As you read, use tape or Velcro to attach the pictures to the corresponding pages in the book.

Check out STEMIE's tips for creating and using visual supports with

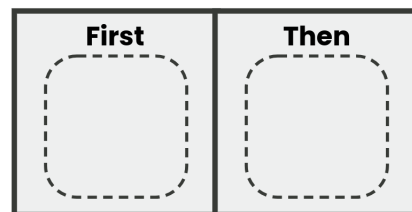
[A Guide to Visual Supports.](#)



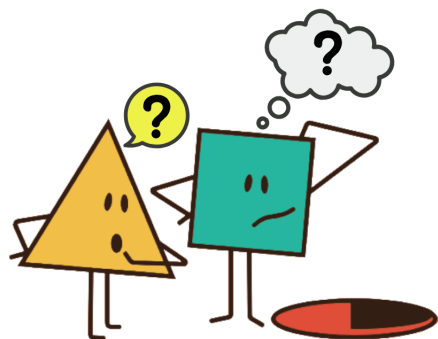
Sandcastle



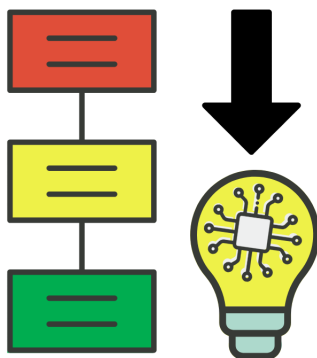
Debug



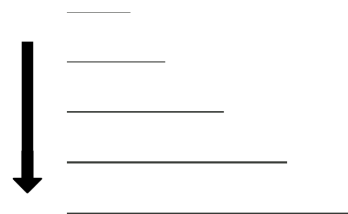
First-Then



Problem



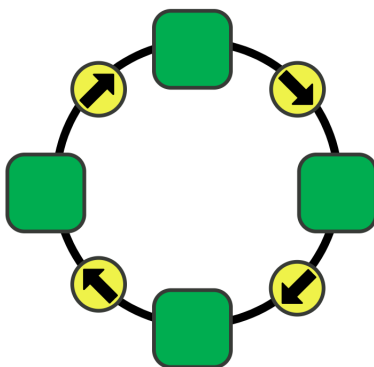
Sequence



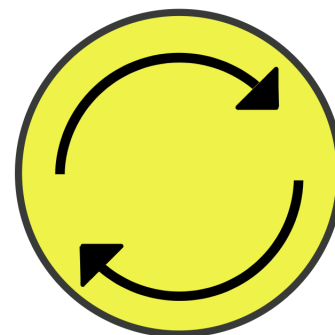
Order



Step



Looping



Repeat



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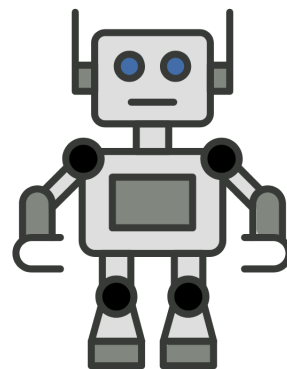
VISUAL CUES FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD



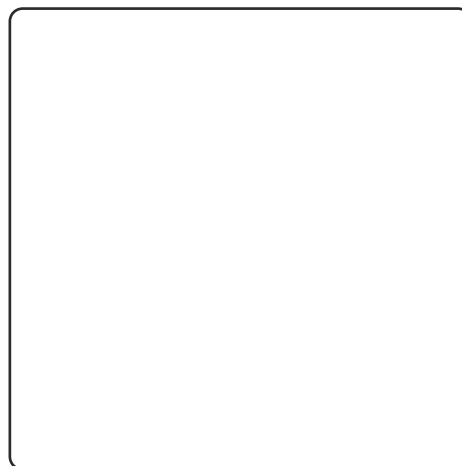
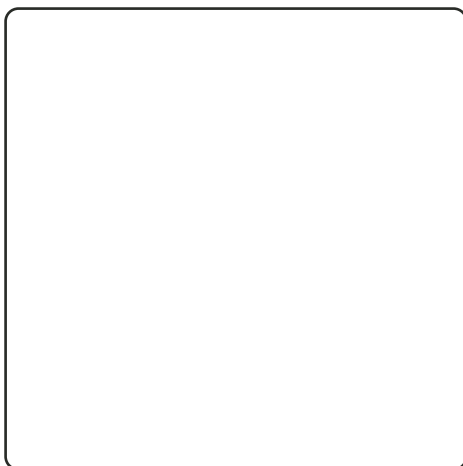
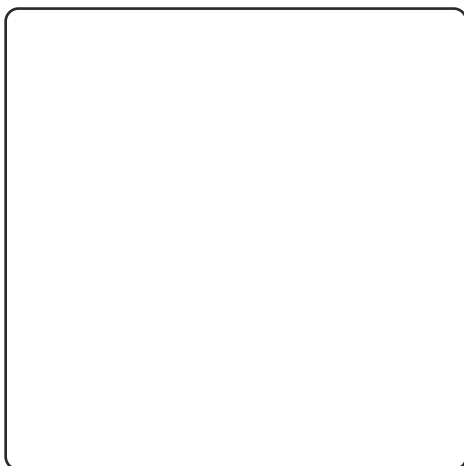
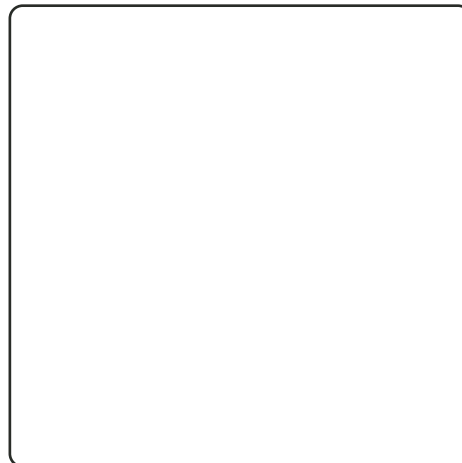
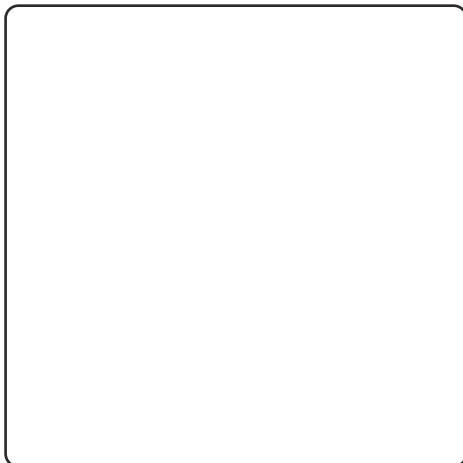
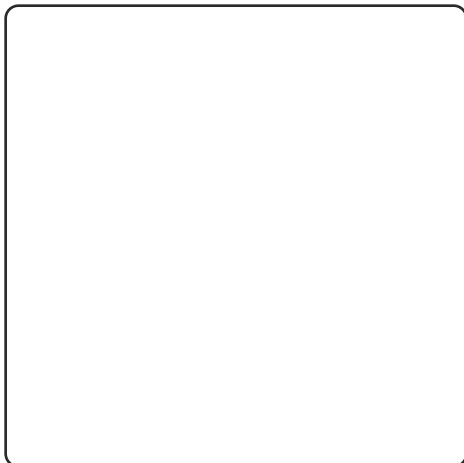
Error



Solution



Robot



Need more visual cues?

Use the empty squares above to create your own or visit [STEMIE's Visual Cue Library](#).



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ACTIVITY IDEAS FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

SOLVING PROBLEMS

Description: Help your child everyday **problems** using **“if/then.”** Talk about how to create and **test** possible **solutions**.

What My Child Is Learning!

Computational thinking is the method used to problem-solve by determining ‘what’, ‘how’, and ‘why’.

Your child is learning computational thinking by using **if/then** logic and **problem-solving**. They are beginning to understand how **actions** lead to **outcomes** and how to make **predictions**. Say things like, “If we spill water, then what should we do?” and let your child come up with a solution for how to solve the problem. Try different examples during play, meals, or routines.

Ask questions like:

- “What **will happen** if we **try** this?”
- “What should we do **next**?”
- “Can we think of another **solution**?”

ADDITIONAL ACTIVITY IDEAS:

- Ask your child to give you **step-by-step directions** to complete a small task, like making a snack or building a tower, and follow their instructions exactly.
- Play a **movement** game where you **repeat an action** (like “jump 3 times, turn around, repeat”). Encourage your child to decide which moves to do in which order and the **number of repeats**.
- Make a **plan** with a series of **steps** to **build** something together (like a simple snack or block structure). Work together to **fix any errors** in the **sequence** or pretend **one step didn’t work** and ask your child **how to fix it**.
- Check out our [Investigation for Snail Maze](#)

