Fun Coding Activities for Kids that Teach Reading Skills

October 4, 2023

While you may think coding activities for kids don't have a place in the literacy classroom, you may miss an opportunity to pair coding during your reading and writing instruction to improve student's reading and language comprehension.

In this blog post, I will share hands-on activities that are a great introduction for kids of all ages to learn block-based coding while teaching fundamental reading and writing skills and strategies.

What are Coding Activities?

Coding is putting an algorithm into a computer system to make something. Coding activities are board games and puzzles designed to teach kids basic computer code. You can find various ways to teach these basic concepts using computer coding or unplugged activities.

Experts in the coding world can take these "codes" and create their own game or virtual robot. Computer programmer jobs are in high demand, but few students graduate with computer science degrees. Therefore, schools are scrambling to expose students to coding and STEM.

Pin for Later

Why Teach Coding?

Technology and technology education has been on the rise for years. Many states have created a computer science curriculum for their high schoolers and encouraged coding and STEM in the classroom. Since coding is a valuable skill and a big part of our world, students need exposure to this growing industry.
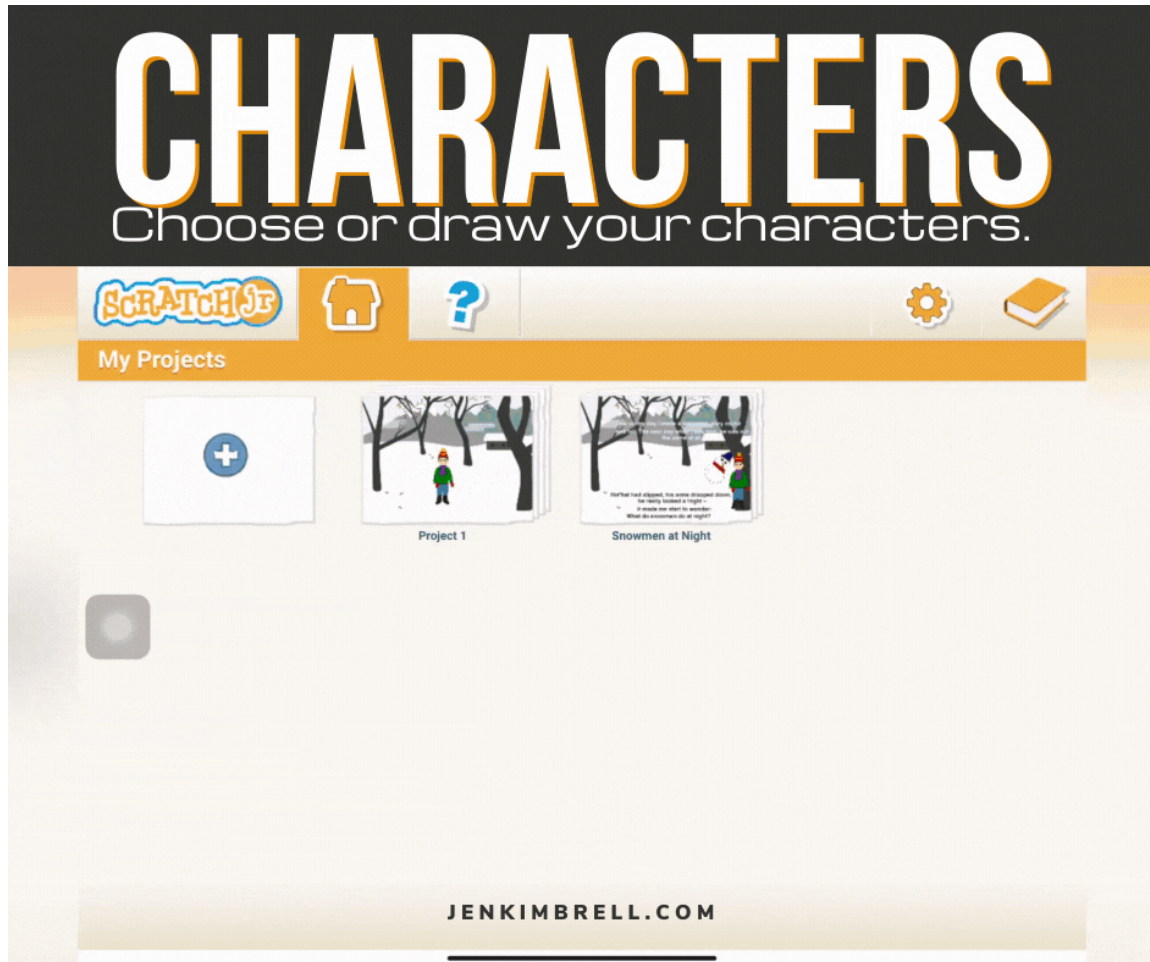
Unfortunately, unless you have a class designated for STEM and coding instruction, coding skills are not taught in the general education classroom. However, I have found a solution that is a great way for young kids to learn valuable skills while learning to read by creating their own interactive stories.

Fun Coding Activities Using Scratch, Jr.

My top choice for teaching fun coding activities and integrating coding in the literacy classroom is Scratch, Jr., a free platform available only on the iPad. If you don't have an iPad, this same technique can be used in Scratch online.
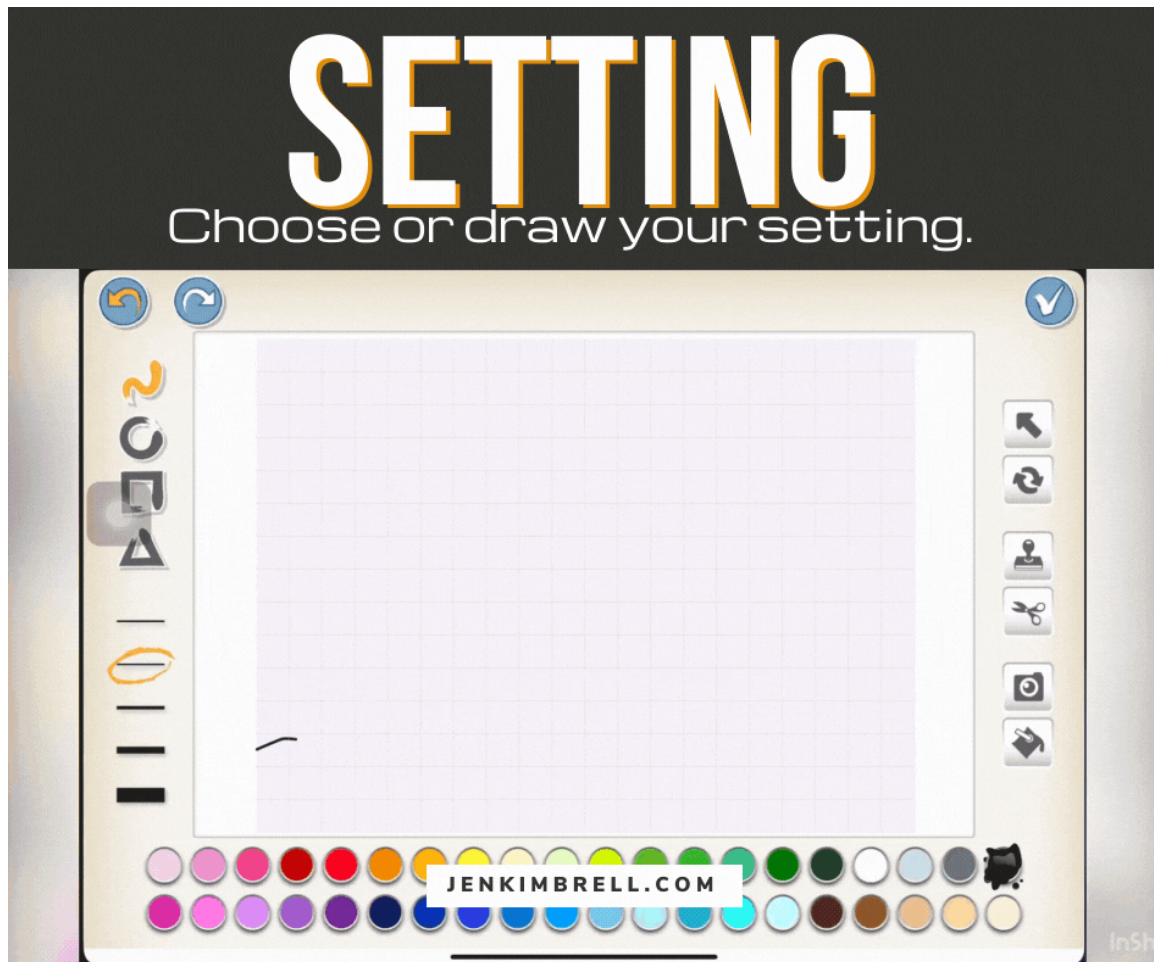
As an educator, you know the importance of reading aloud in the classroom. But have you ever thought about pairing books with coding? Believe it or not, coding and literacy have a lot in common, especially related to the structure of text and code.
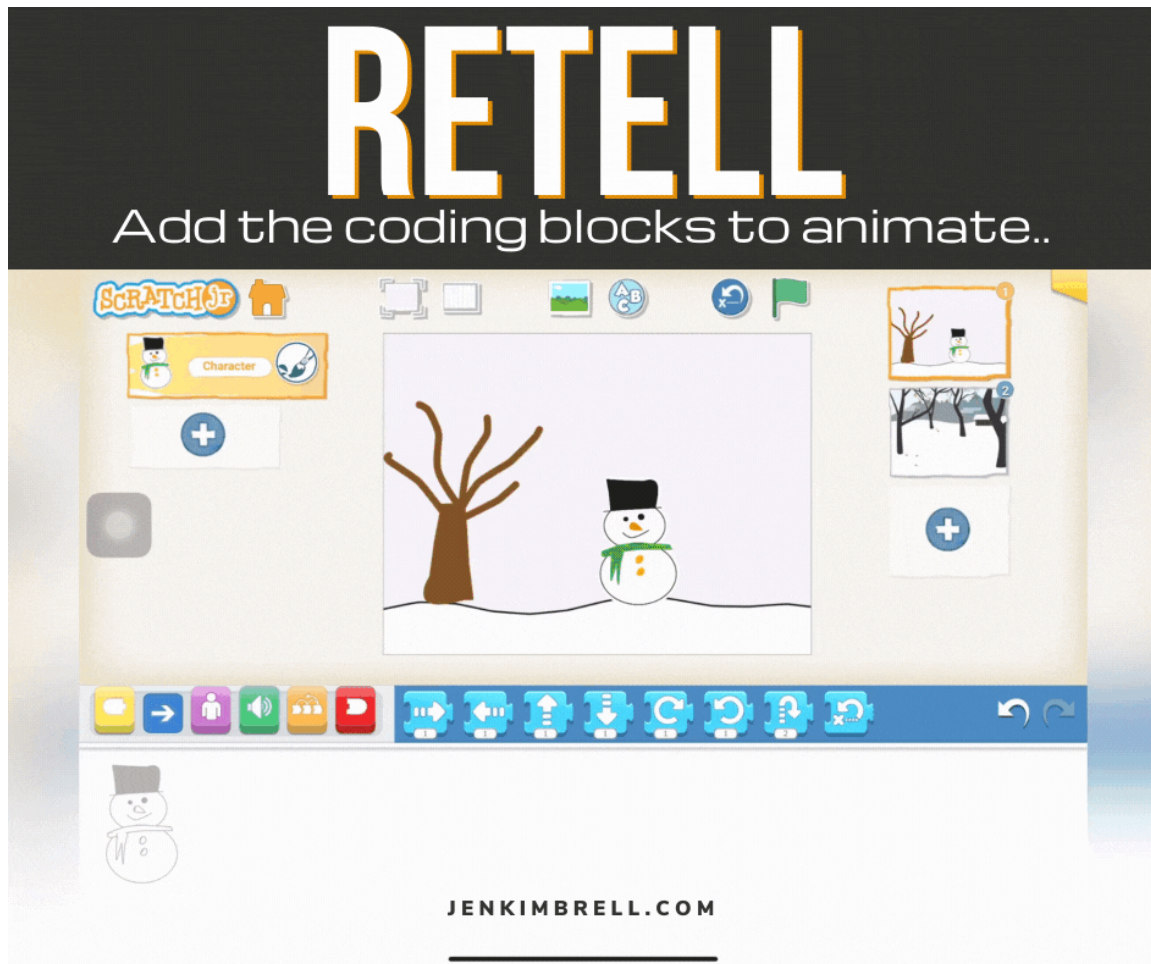

Story Elements and Coding Language

For example, stories have characters, settings, problems, solutions, and events. In the app, students can create characters, a setting, and up to four events. Plus, they can animate the characters and other objects in the story using the coding blocks. It's a simple activity for younger kids but allows older students to take it to the next level. There are different things you can do to approach the lesson.

For example:

- Allow students to draw characters from the story
- Have them create a setting from a story read aloud
- Students can retell a story
- Students can write, illustrate, and animate stories they've created for themselves.

The best part is that students use their critical thinking and problem-solving skills throughout the learning process.

RETELL
Add the coding blocks to animate..

JENKIMBRELL.COM

Coding Activity Example

In today's example, I will use the story *Snowmen at* Night by Caralyn Buehner as the mentor text. I love using this story because it has a circular ending. Using the book is an excellent opportunity to teach students this literary concept and relate it to real programming languages, such as loops in coding.

With this language and coding lesson, students will learn:

- Basic coding techniques
- Animate scenes from the book *Snowmen at Night*
- Be able to analyze other books for circular endings
- Create their own digital stories with coding.

To develop students listening and language comprehension, we need to spend a lot of time focusing on the three things below:

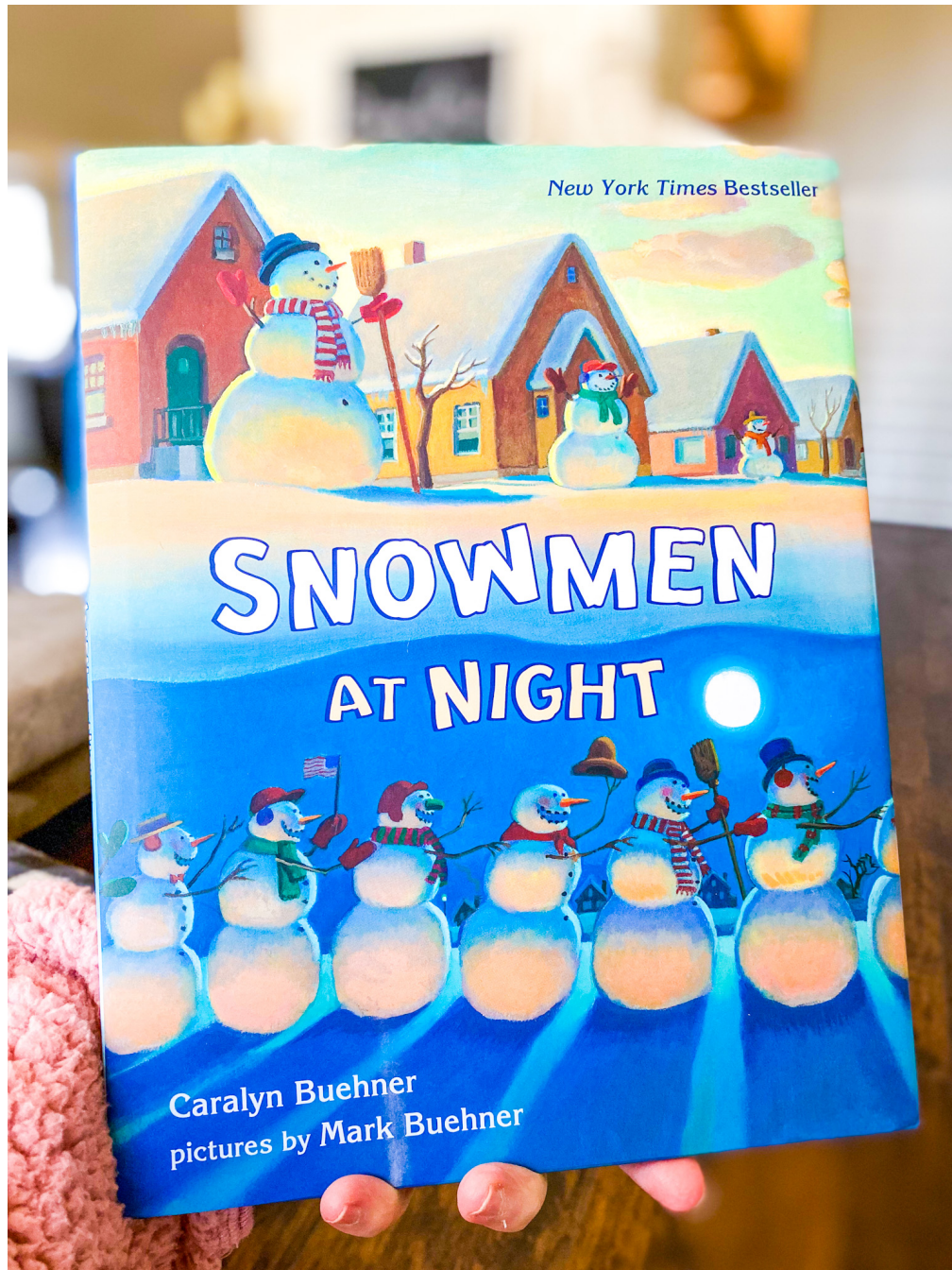- Build Background Knowledge
- Vocabulary Development
- Focus on Sentence Structure

Start with Building Background Knowledge

While this story is great because it pairs coding with literacy, I don't immediately start with the technology. To begin, I build background and vocabulary knowledge. For some students, they may have never seen snow before.

Therefore, this might be an excellent time to show videos and pictures of snow and snowmen. You might even have students make snow. This is a great time to have students discuss or write down what they are noticing so that questions can be generated.

Some questions include:

- Have you ever built a snowman?
- What did you use to build your snowman?
- What might happen in the story based on the cover?

I try not to stop too much during the first reading because I want them to enjoy the story. Therefore, I only stop to help students make predictions or pause to discuss vocabulary words. For example, I might ask students to predict what they think snowmen might do at night or explain the phrase "tuckered out."

Diving Deeper into the Story

Once we have read the story, I remind students of our focus: understanding how the beginning and the end work together to create a circular ending.

To compare the story's beginning and end, we create an anchor chart and explore the following:

- Characters
- Setting
- Words and Phrases

SNOWMEN AT NIGHT

Setting

wintry

Characters

snowman and boy

Words & Phrases

snowman was drooping at the beginning and end of book

BEGINNING

One wintry day I made a snowman, very round and tall. The next day when I saw him he was not the same at all.

His hat had slipped, his arms drooped down, he really looked a fright — it made me start to wonder: What do snowmen do at night?

ENDING

So if your snowman's grin is crooked, or he's lost a little height, you'll know that he's been doing what snowmen do at night.

Then, we analyze the story's beginning and end. Ask students what they notice about the beginning and end. This repeated language is an effective way to segue into the coding part of the lesson, where we focus on the idea of loops.

CIRCULAR ENDINGS

REPEATING A PHRASE OR ECHOING AN IDEA AT THE END OF THE STORY AFTER USING IT AT THE BEGINNING

GOOD WRITERS USE IT TO CONNECT THE BEGINNING OF THE WRITING TO THE END OF THE WRITING IN A FUN AND MEMORABLE WAY.

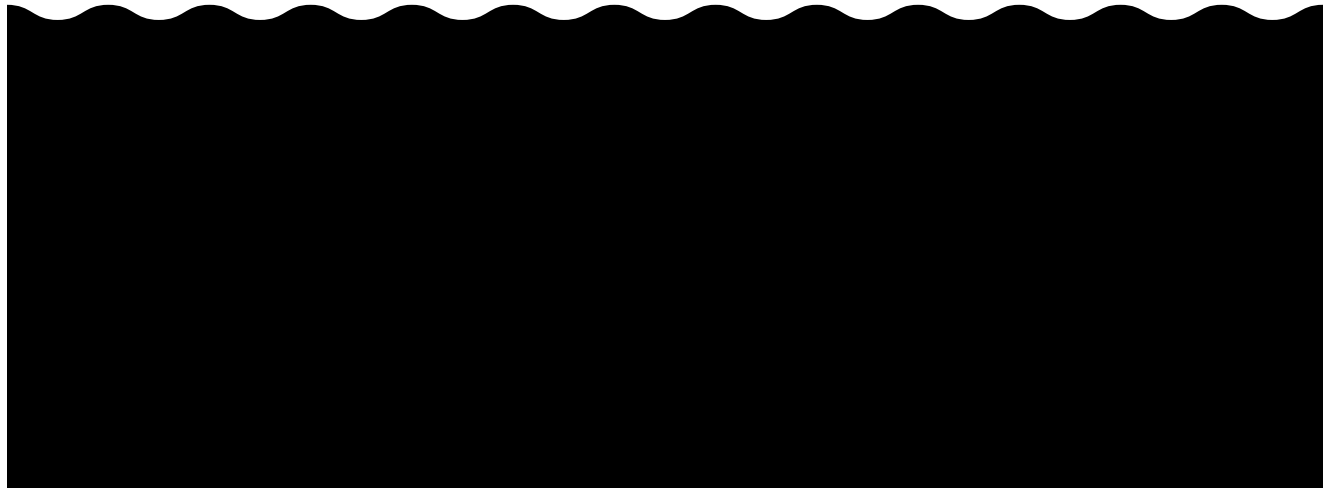JENKIMBRELL.COM

Unplugged Activity

Next, I like to use an unplugged activity where students pretend to be snowmen at night. Students create dances and incorporate loops using the dance and coding vocabulary cards. This activity can be placed in a center for more dancing fun.

JENKIMBRELL.COM

Coding is a huge part of our lives today. We are becoming more and more technologically advanced. Combining coding and literacy is just one way to incorporate coding activities for kids, and this lesson is the perfect start. From here, the coding possibilities are limitless.

As a bonus, this information can be viewed or listened to in video format.

Here is a free challenge to try with your students. Grab my free coding activities. Sign-up below:

Coding Challenge

Sign-up below to download your free coding lesson to use with Scratch, Jr.

To check out my coding lessons, click here or on the image below.