Step into STEAM

Projects for ages 2-6

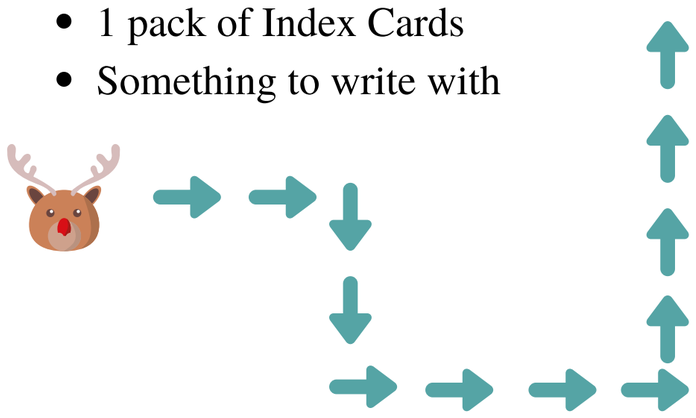
Science Technology Engineering Art Math

Coding Fun!

Did you know your preschooler can begin to learn coding concepts without using a computer or screen?!

You will need:

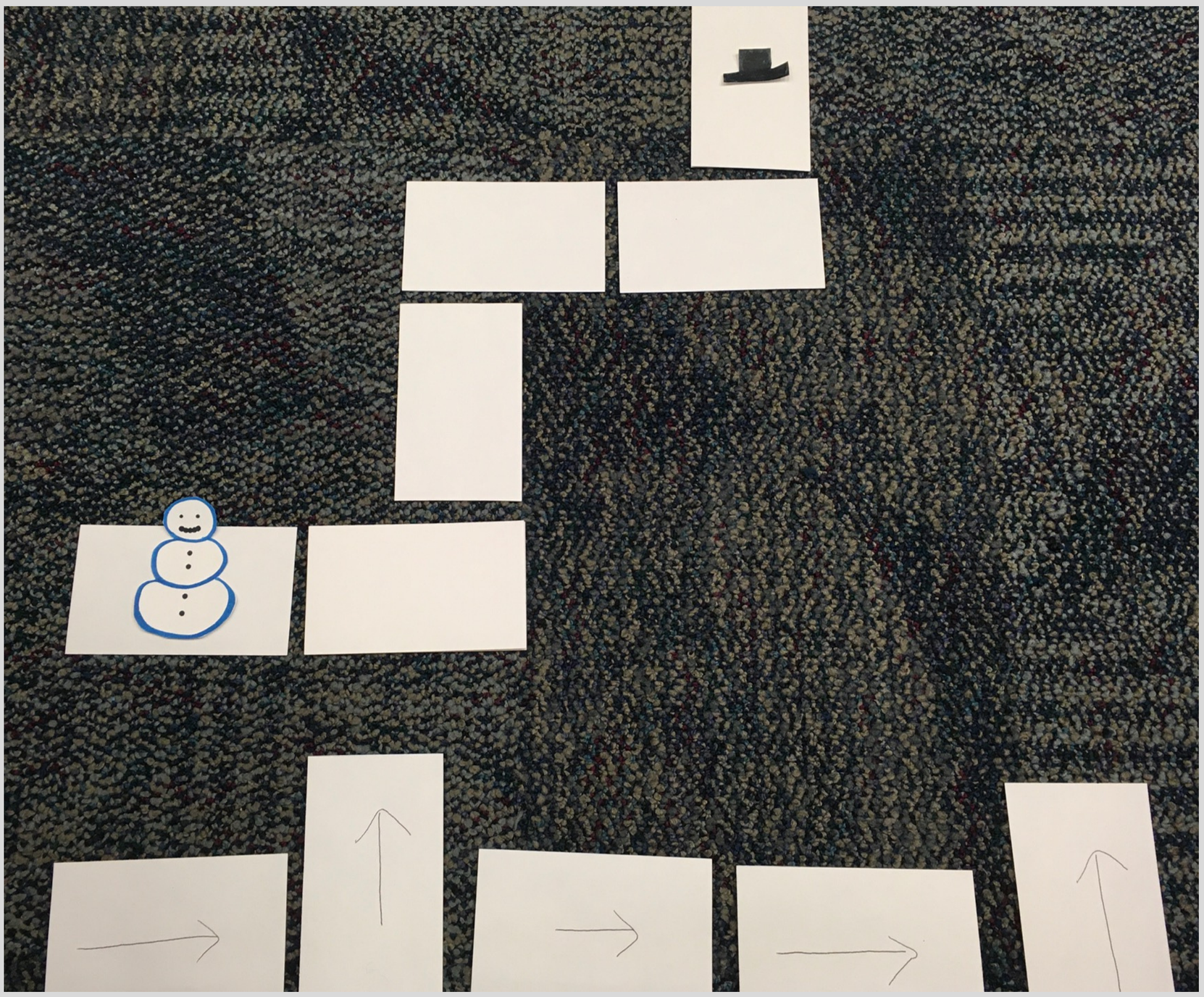
- 1 pack of Index Cards
- Something to write with



Step 1: Caregivers, take 5-10 index cards and draw a simple arrow on each (they can go in the same direction). Use the rest of the cards to create a path or a maze. Match the difficulty to your child.

Step 2: Draw a snowman, or any character you want. It could be as simple as a smiley face. Just make sure that it is small enough to fit on the maze or path track. You can even use one of your child's plastic toys instead of a drawing.

Step 3: Hand the arrow cards to your child and encourage them to use the arrows to show where the creature should move on the path. Try to get them to set up 3-4 cards at a time and then move the creature accordingly.



Coding Fun Continued!

Talking Points & Further Exploration

Match the difficulty to what fits your family best.
It can be as easy or as complicated as you need it to be.

- Talk with your child about **spatial concepts.** These concepts explain our relations to objects and people around us. This includes terms such as **up, down, in front of, behind, backward, last, over, under, left, right,** and many others. Understanding these concepts helps prepare children for reading, math, following directions, as well as coding. Play search and find games where you direct your child using these terms until they find a hidden object.

- Ask your child to break down simple actions into steps. For example: teeth brushing. Step 1: wet the tooth brush. Step 2: put the tooth paste on the brush. Step 3: brush your teeth. Step 4: rinse. **Coding is when programmers turn a series of steps into commands that a computer follows. Making this into a game encourages your child to practice the skills of following directions.** Multi-step directions can be especially difficult for small children to understand. Start small and work your way up.

- Play **If/ Then** games. **If/ Then is another way to practice coding language**. If I raise my hands, then you stomp your feet. These can be fun ways to get kids moving and start to recognize coding language. Try different combinations of movements and actions, testing your child's memory and motor skills. Then switch and let them try to give the directions.

- If you are able, expose your child to online games and apps that build coding skills. These make learning fun and present results your child can see and enjoy. Bits and Bricks through LEGO® is a great place to start. Users help lead a little LEGO® robot using arrow directions, just like with the index card game here. Others include the MIT designed Scratch Jr, and for older children, Scratch. Take part with your child when they use a screen. Screen time can be educationally beneficial for children when paired with engaged adult interactions.

Click the book covers or scan the QR code for more coding fun!

(ebooks available through hoopladigital.com & lakecounty.overdrive.com)