Program Your Morning

Ages: 7 and up (w/adult support)

Activity Summary
Explore coding by arranging words and phrases to create an order of operations with this low-tech, tactile version of Scratch computer programming!

Learning Objectives
- Participants will create “computer code” to perform a routine activity.
- Participants will investigate how the order of phrases influences the outcome of the program.
- Participants will explore how our brains and computers are similar.

Materials & Supplies
- Program Your Morning Code Blocks printable (included)
- Scissors
- 3 sheets colorful construction paper
- 1 roll of tape

Setup
Print and pre-cut the paper code blocks before doing the activity.
When printing the blocks, make sure to print single-sided.
Have an open area to work in so you can see all the blocks laid out in front of you.

Key Words
- Coding
- Program
- Input
- Output
- Computer
- Order
**Safety Precautions**

Some children may need assistance when using scissors to cut out the program blocks.

**Directions**

1. Once the paper blocks are cut, lay them out on a flat surface so you can see them all.

2. Make some observations: What do you notice? What do the blocks look like? What activity do you think this might be a program for?

3. These printable code blocks are from the Scratch coding program. In that program, you fit blocks together like puzzle pieces to create a computer program. That’s what we’re doing, only without the physical computer.

4. Now, you’re going to try and order these blocks so that they make sense for the order that you might complete a morning routine.
   
   a. Example: Can you “walk to the bathroom” before you “get out of bed”?
   b. The blocks are grouped according to color. To start the program, you will use the tan blocks because they can only fit the other pieces in a specific way.
   c. The yellow blocks are repeating blocks. What do you do for 2 minutes? What might you need to repeat twice?
   d. Finally, the blue, purple, and magenta blocks are movements and sounds.

5. Once you have put your program together, try running through it to see if everything makes sense or if you need to make any adjustments to your code.

6. Finally, attach the finished program to the construction paper and hang them up for others to try.

**Going Further**

Print out the blank blocks to create your own program. Try creating a program to make lunch, perform a dance, or play a game. Explore scratch.mit.edu for more block type examples and inspiration.

**Adaptations**

This activity is great for supporting reading comprehension. Go section by section and read each block together. Focus on one section at a time. Visit scratchjr.org to introduce coding to children ages 5-7 years and make it a whole-family project!

**Clean up**

Recycle any paper scraps from cutting out the blocks.

If you taped the blocks onto construction paper, take a picture to post to Thinkery’s Facebook page and then hang it up to play again later!

For more Thinkery at Home ideas visit thinkeryaustin.org.
when alarm rings

say Good morning! for 2 secs

get out of bed

walk to bathroom

walk to kitchen

grab toothbrush
when I enter bathroom
brush teeth
grab toothpaste
put on school clothes
put on shoe
turn on faucet
open toothpaste

turn off faucet

turn alarm off

put toothpaste on brush

brush teeth

put water on toothbrush
repeat 2

repeat until 2 minutes pass