

Coding For Good Badges - Digital Game Design 1

Maze Game Diagram & Coding Blocks

Game Objective: Juniors use coding blocks to learn how games are developed for Step Two of the Digital Game Design badge. They'll practice by moving a character (doll, stuffed animal, etc.) through a 3D maze, picking up objects along the way. Their goal is to navigate their character around the city to pick up supplies after a natural disaster and bring them to the local community center.

Instructions: Before the meeting, set up a 3D maze game:



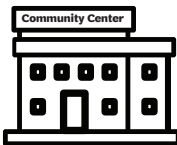
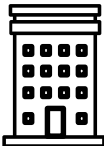

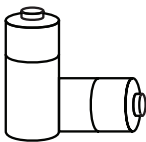

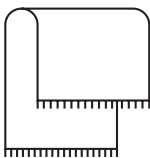

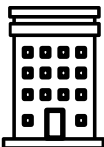
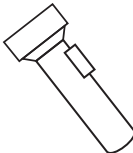

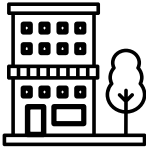
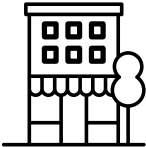

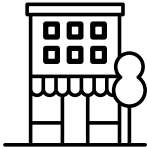
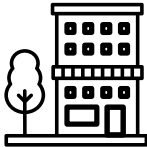
1. Draw the commands on the board or chart paper.
2. Print and cut out the paper coding blocks of the obstacles (buildings), objects (first aid kit, blanket, water, food, flashlight, batteries), and goal (community center).
3. Create a grid (10x10 or larger) on the floor using blank sheets of paper (8.5" x 11"). Alternatively, create the grid using masking tape - make sure the boxes are big enough for the character (doll, stuffed animal, etc.) to sit in.
4. Place the obstacles, objects, character, and goal coding blocks in the grid according to the diagram below.

If you're working with a large number of girls, you may want to work in small groups of no more than 6. Each group will need their own 3D maze game grid. It's highly recommended for each group to be led by an adult Volunteer.

Optional: Bring in 3D versions of the objects to use in your grid instead of the coding blocks.

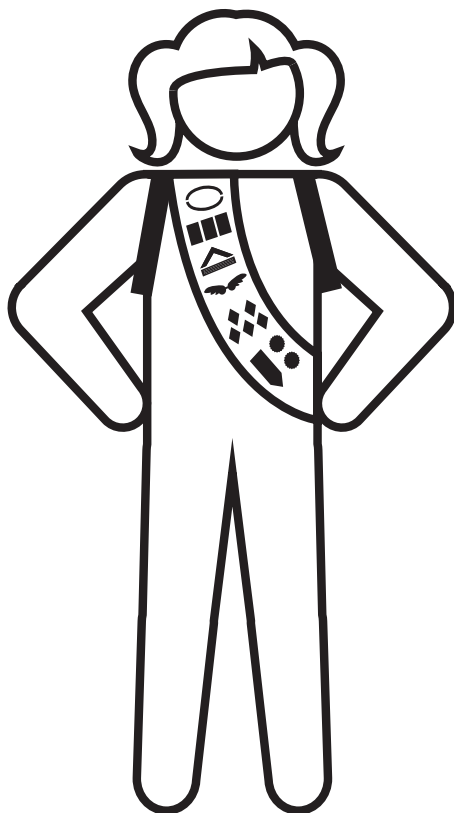
Commands:

- ➡ **Turn Right:** Turn to the right, do not take a step, stay in your square.
- ⬅ **Turn Left:** Turn to the left, do not take a step, stay in your square.
- ↺ **Jump:** Jump over an obstacle and land in the next square. Jumping is not allowed if it takes you off the grid.
- ⬆ **Move Forward:** Take one step forward. Characters cannot step off the grid.
- 📦 **Pick Up:** When you reach an object, pick it up.

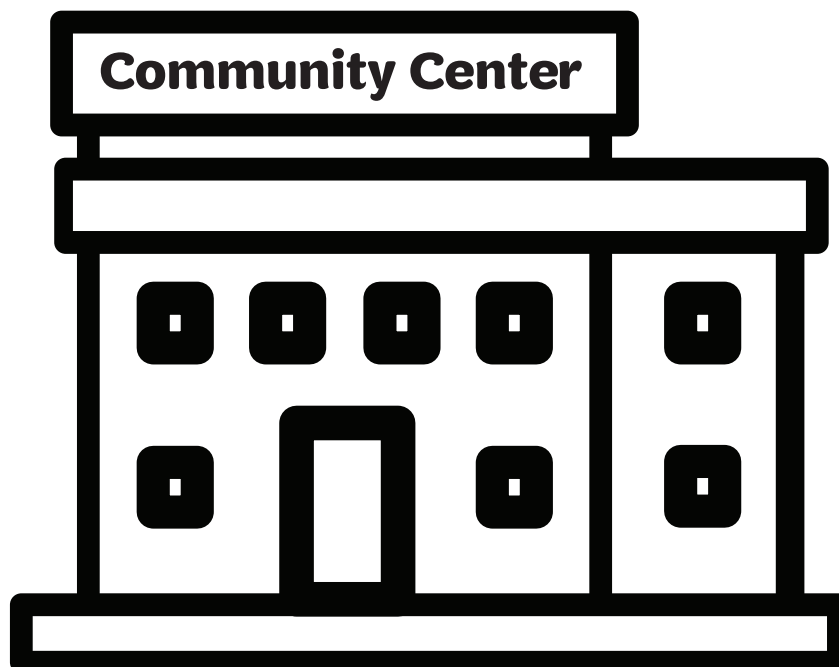
						
						
						
						
						
						

Note: To increase difficulty, expand the grid to 11x11 or larger to create a larger canvas for game design!

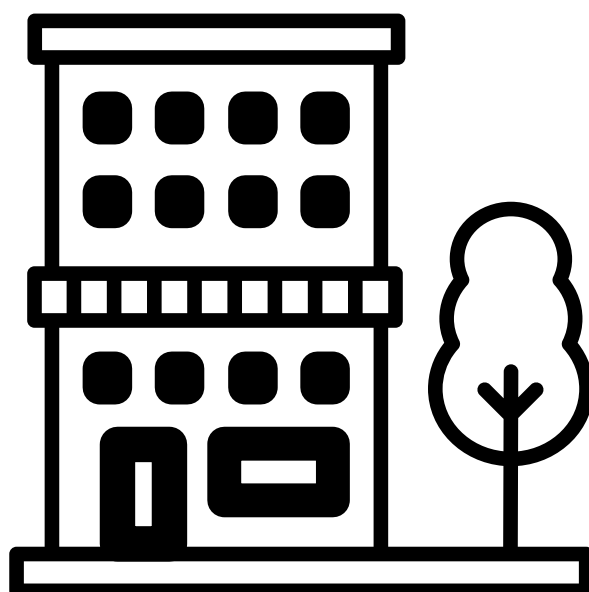
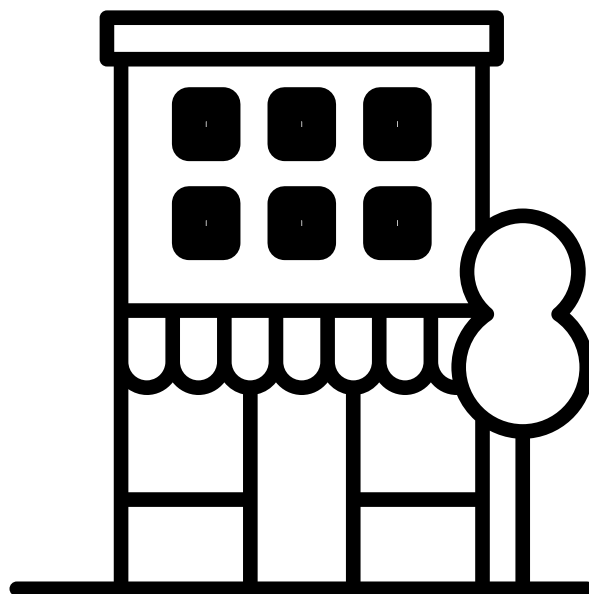
Character: Girl



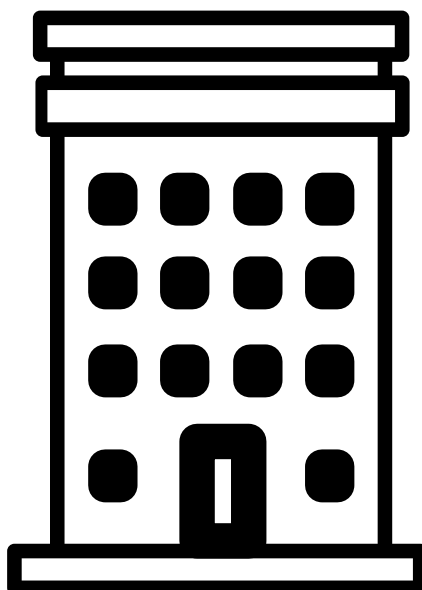
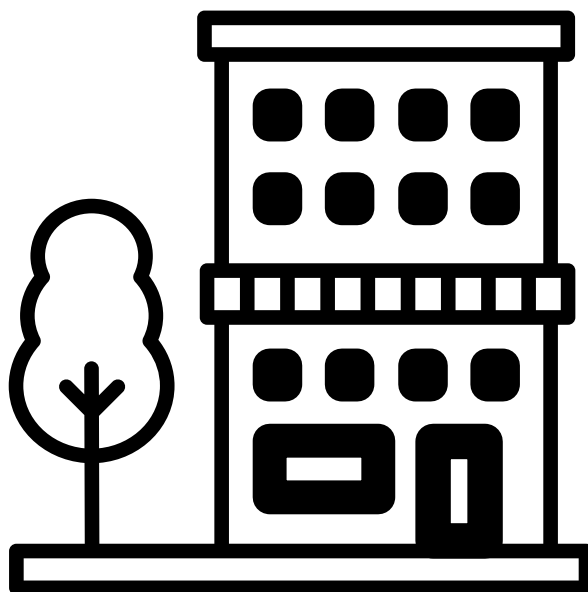
Goal: Reach the Community Center



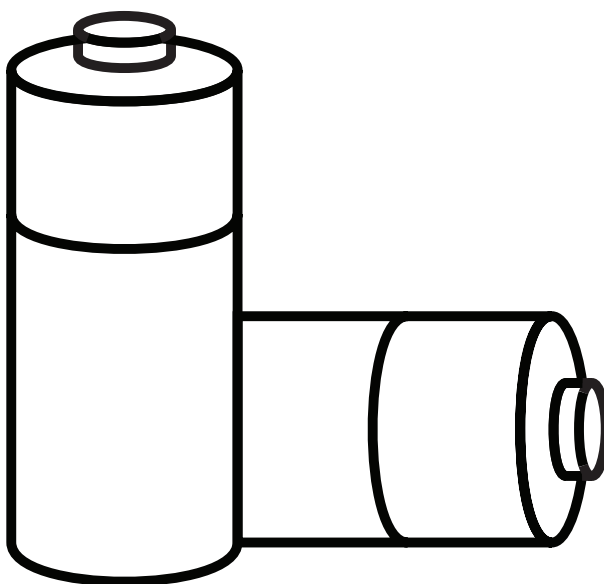
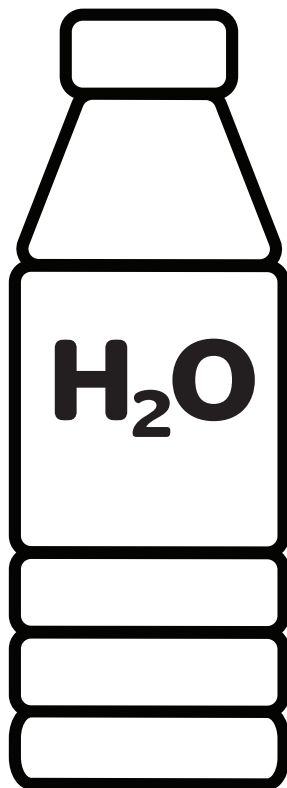
Obstacle: Building



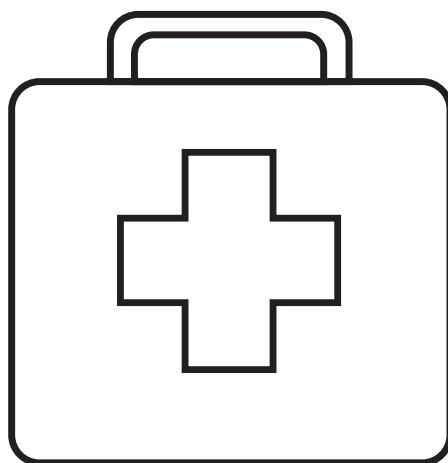
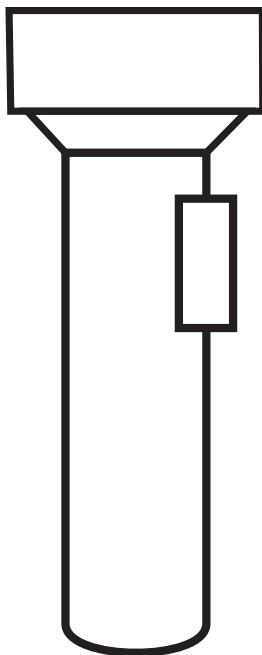
Obstacle: Building



Object: Disaster Supplies



Object: Disaster Supplies



Object: Disaster Supplies

