

Intro to coding activity

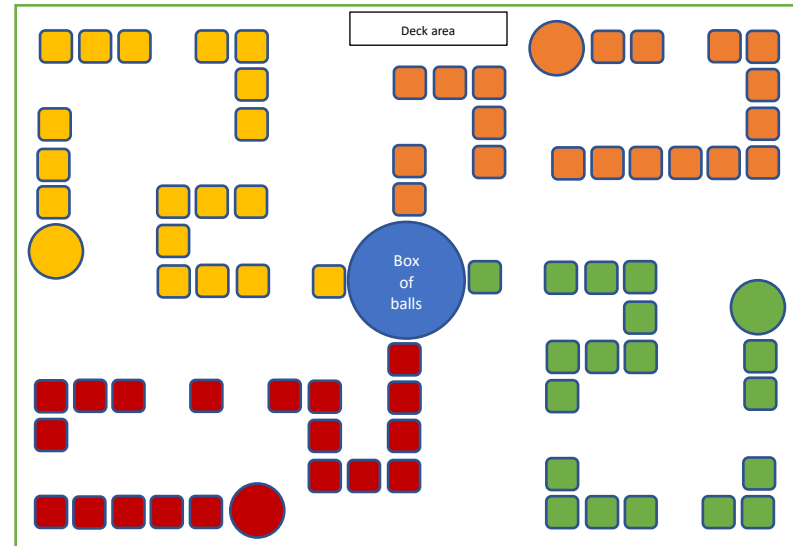
Object of the game:

- Get the most balls from the box in the middle into your team's box in five minutes, while following all the rules.

Rules:

- Students take turns being the actor for their group.
- The other students give the actor instructions, but they can only say their team's color/name and the number of the instruction i.e. "Green-2" means Green actor take one step forward. (Each student has a printout with the numbered instructions)
 1. Turn 90° right
 2. Take one step forward
 3. Reach for object
 4. Close hand over object
 5. Release object
 6. Jump forward
- The students are trying direct their actor to get the center box, collect a ball, bring the ball back, and drop the ball in their team's bucket.
- The actor must follow their team's instructions exactly, and then stop until they hear the next instruction. They cannot do anything without being instructed to do so.
- If the actor steps off the path, or drops the ball, or fails to follow instructions exactly then they must start over again at the team box.
- After the actor delivers a ball to their team's box, the next student becomes the actor.

Approximate Layout



There is a box in the center that is full of balls (or some other object), and a smaller box for each team. Each team has a path marked out in tape, chalk, or taped down pieces of paper.

Discussion questions after activity:

What does this activity have to do with coding?

How is the computer like the actor on the team?

Even without any coding, how do we give instructions to the computer?

How does the computer know what our instructions mean?

What are some very simple commands we can give the computer (print, +, -, /, *, =)

Let's plan out a very simple program: Let's say, I want to have the computer increase a number by one, how might I give the computer that instruction?