Ready, Set, Go! (Repeat Random)

Materials:

- KIBO
- Advanced Coding Extension Kit
- Painters or masking tape
- Open floor space

Description: On your mark, get set, GO! During this activity your students will race their KIBO robots to the finish line using the repeat block and random parameter card.

Standards:

- NYS Computer Science and Digital Fluency Learning Standards
  - k-1. CT.4, 2-3. CT.4
  - k-1.CT.6, 2-3.CT.6
  - k-1.CT.8, 2-3.CT.8
  - k-1.T 9, 2-3.CT.9

Vocabulary:

- Random

Procedure:

1. First ask the students if they know what a race is. Go over what a race is, what type of races there are and what the rules of a race are.
2. Next, in class if space allows, or outside have the students do some type of race (running, walking, relay, etc).
3. Once they have completed their race, explain to the students that they will be creating a code to race their KIBO robots.
4. Using the repeat card and the random parameter, as well as the regular KIBO blocks, have the students create a code for the KIBO robot. **Teacher Tip:** You may want to set challenge parameters such as must include a forward and backwards movement or a spin/trick.
5. Have the students scan and run their code. Troubleshoot as necessary.
6. Set up a race course using the tape to map out the track.
7. Race Time! Have the students run their code and race their robots.