

## Ayo Mate! (If Not Activity)

### Materials:

- KIBO
- Advanced Coding Extension Kit
- Something a block light (cardboard box heavy paper, etc)
- Various craft materials

**Description:** Ayo Mate and welcome aboard! During this activity students will explore how light illuminates objects by using the If Not block and turning their KIBO into a lighthouse.

### Standards:

- NGSS : 1-PS4-2
- 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.

### Spicy Word(s):

- Illuminate
- Parameter

### Procedure:

1. Have a discussion with the students about lighthouses and how they help ships to see in the dark. If possible, show examples of lighthouses and ask the students if they have even been to, or seen a lighthouse.
2. Using the “If Not” block, KIBO blocks, LED light and light sensor have the students create a lighthouse that lights up when dark.
3. Allow the students to decorate their KIBO like a lighthouse and make a boat.
4. Have the students scan and run the code. Troubleshoot as necessary.

### Extension Activity:

- Using the spin block, have the students make their lighthouse rotate when the light is on.