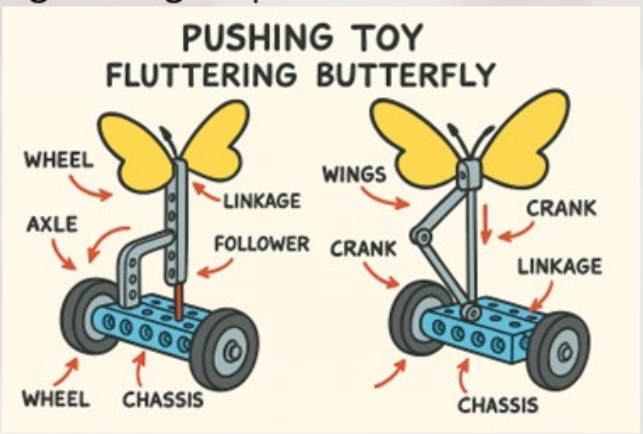
HOME CHALLENGE

Mechanical Butterfly

Level: 3+
Blocks using: none
Sensor: none
Mat using: none
Description:
Build a non-powered Spike Prime robot base with wheels. When the robot is pushed or pulled manually, a mechanical linkage connected to the wheels will activate a butterfly structure on top, making its wings flap.



1.Wheeled Base:
1. Use Spike wheels or equivalent circular elements.
2. The wheels should rotate smoothly without motors.
3. Ensure the chassis is stable and balanced.

2.Mechanical Linkage:
1. Connect the rotation of the wheel to a **crank-slider**, **cam**, or **gear-lever** mechanism.
2. The linkage should **convert rotational motion of the wheel** into **up-and-down movement**.

3.Butterfly Wing Structure:
1. Mount a simple butterfly model (or two wing plates) on top of the robot.
2. The up-and-down movement of the linkage should make the **wings flap as the robot rolls**.

4.Manual Activation:
1. No motors or electronics are allowed.
2. The wings must flap **only by pushing or pulling** the robot.

5.Optional:
1. Use rubber bands or axles to make the movement **smoother or spring-loaded**.
2. Decorate the butterfly for creativity.