

VEX IQ Level Up: Session 5

Activity: Test and choose an improvement for Flop!

1. **Think about one wheel improvement your team could make.** Sketch or record your idea in your engineering notebook.

Consider:

- What wheels you have to choose from
- Which wheels to change



2. **Document your current robot.** Use pictures and sketches to ensure you can undo any changes.
3. **Choose one plan for changing the wheels with your team.**
 - Decide as a team which wheel modification you will try first.
 - Everyone on the team should agree to the plan.
 - Decide who will make the adjustments to the robot, who will drive the robot during testing, and who will collect data on the test.
4. **Make and test the wheel change.** Use the [driving test you completed previously](#) and collect data in your engineering notebook.
5. **Repeat steps 3 and 4 to collect data about multiple wheel improvements.**
6. **After testing multiple wheels, come together to discuss the results of your testing.** Use your data to decide on which wheel improvement to keep.

Example Documentation:

Modification	Wheels Used	Time	Notes
<i>Change Front Wheels</i>	<i>Omni - Back Traction - Front</i>	<i>2m</i>	<i>[Signature]</i>

Feeling Stuck?

- *Make 1 change at a time and collect data. Don't change more than one variable before testing!*

Discussion Questions	Activity Checklist
● How did the wheel change affect the robot's performance? ● How does this wheel improvement relate to your strategy from Session 4? ● What ideas do you have for another way to test wheel changes?	☐ The team chose a plan for improving the wheels. ☐ Data was collected from testing multiple wheel changes. ☐ The team chose a final wheel change to keep.