

VEX IQ Expansion Kits

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Robotics & Mechatronics

VEX IQ expansion kits add extra beams, gears, wheels, motors and sensors to the base VEX IQ robot kit, letting teams scale up their designs for competition tasks and complex mechanisms. They turn a starter kit into a full engineering platform.

Key Features

- Extra structural beams and connectors
- Additional motors, gears and wheels
- Sensor expansions such as gyro and encoder
- Colour-coded metal and plastic parts
- Compatible with existing VEX IQ builds

Typical Uses in the Workshop

- Build competition-ready robot drivetrains
- Add lifting and claw mechanisms
- Create autonomous programmes with sensors
- Give each team a full parts set

Safe Operation

1. Inventory parts before building
2. Plan the mechanism against the task rules
3. Use the correct tools for pins and screws
4. Prototype mechanisms on a test base first
5. Document changes between iterations

SAFETY NOTES

- Keep small parts away from young children
- Check parts for cracks before heavy use
- Use the VEX tools correctly, not improvised
- Store parts in labelled trays between sessions
- Follow competition rules for legality

Maintenance & Consumables

- Sort and count parts after events
- Replace worn gears and bend shafts
- Check motor and sensor cables
- Store kits in labelled bins
- Keep the building guide with each kit

Specification & Buying Notes

Match the expansion kit to the class level and competition tasks. Motor and sensor packs add capability faster than structural packs. Buy spares of the parts that break most: gears, pins, shafts.