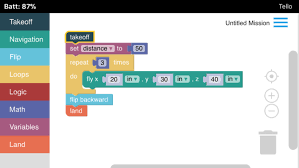


**Basic Programming For The Tello Drone**

While there are many options to load “Scratch” or other applications to program the Tello, one of the simplest apps is “DroneBlocks.” It works with Wifi-enabled smartphones, tablets, Chromebooks, desktops, or laptops running Android, iOS or ChromeOS. This is not an endorsement of DroneBlocks, simply a recommendation that this may be an appropriate place to start programming the Tello.

1. Download the free version of the DroneBlocks app. If the app does not have the colored bars to the left (Takeoff, Navigation, Flip, etc.) Close the app, make sure your wifi is connected to the internet, and then restart the app. On rare occasions, reloading the app may be needed.
2. Explore the app. Blocks of “code” are simply dragged into place from the options on the left. Always make sure that all of your code blocks are connected.  Any stray unused blocks should be discarded by dragging them off the left side of the screen.
3. Program a simple **“takeoff”** and **“land”** flight. With no commands in between.
4. Connect your Tello to your device’s wifi.
5. Follow the directions on the app to connect DroneBlocks to your Tello. Depending on which operating system you are using, it may be helpful to have the full number of your Tello handy. It usually looks something like Tello-XXXXXXXX.
6. Put your drone on the floor, stand back a few feet.
7. Click the three lines in the right corner (or “Fly Mission…depending on operating system) and choose the command “Launch Mission.” The drone may wait a few seconds; so, don’t run to pick it up. It should fly up about 40 inches, hover for about 5 seconds, and then land.
8. Pro Tip: Keep your device relatively close to the Tello, this helps alleviate connection drops. If your Tello does drop connection, it will simply hover. You can try to abort the mission, wait for the battery to give out, or you can grab the Tello from underneath (watch your fingers) and quickly turn it upside down, this will stop the motors.
9. Second Pro Tip: The free program hates very small or large numbers. Don’t program anything for under about 10 and don’t program above 199.
10. Time to explore the other commands. Start with “Navigation” and see where this takes you.

If you plan to take part in the Indiana 4-H Drone/UAV Competition, May 4, 2024; make sure you know basic movements: up, down, left, right, forward, back, yaw, and basic looping (repetition). If you are competing at the high-school level, make sure that you also understand programming curves.

A paid version of DroneBlocks is available; which will allow text-based programming and greater functionality. However, nothing from the paid version will be used at the Indiana 4-H Drone/UAV competition.