Pre-flight checklist: before every flight



Data Scribe: Read this checklist aloud, asking for the confirm / data from Spotter & Pilot.

Spotter/Safety Lead:

- Weather conditions of flying area: (Cloud Cover (%), Temperature, wind direction, speed, variability, humidity (optional))
- Hazards present? (yes/no/describe)
- □ Takeoff/landing area established?

Investigator Lead: science focused checklist:

TBD by the investigation

Pilot:

Drone checks:

Spin your props - secured? Check for loose parts. Battery is charged & connected. (opt) Payload secured?

Transmitter checks:

Battery is charged, Joy-sticks work.

Instrument checks:

<u>Camera:</u> Connected to power? SD card inserted? Sufficient storage available?

<u>Other sensors & equipment:</u> Power on? memory card inserted? Sensor working? Secured to drone? Meter-circle in place?

Everyone:

□ Step back 5x5 for safety

Before you fly Safety - Step Back 5x5 for Safety

Dut your drone down.

- □ Take 5 steps back.
- Look around for 5 seconds.
 - Look behind you too!
 - IDENTIFY & ASSESS hazards,
 - MAKE CHANGES if needed , SAFELY – complete your flight

Instructor: Data

scribe - see anything? Spotter- see anything? Pilot - See anything?

Stop to address anything you see.

Instructor:

Team, start your flight!

The Science / Flight Team & Roles

Data Collector/ Photo Roles:

Pre-flight

- Check instruments/ sensors
- Call out pre-flight checklist items
- Complete the Flight Datasheet

In-flight

- Read out investigation instructions
- Record data collected during flight

Post-flight

• Call out post-flight checklist

Spotter/Safety Lead Roles: Pre-flight

- Describe weather data
- Check surroundings for obstacles & hazards
 In-flight
 - Keep drone in site
 - Scan surroundings
- Read off data to Data Collector (optional)
 Post-flight
 - Check area for hazards
 - Retrieve with photo/ sensor data from drone (optional)

Pilot Roles:

Pre-flight

- Check the drone
- Check instruments/ sensors attachment

In-flight

- Fly the drone follow instructions from Data Collector
- Keep drone in site & lands safely

Post-flight

- Turn off drone
- Retrieve drone
- Check drone & charge batteries

Time to fly!

Data scribe:

- 1. Start a stopwatch (app)
- 2. Call out the route using the investigation plan.
- 3. If using FPV, take photos
- 4. Record data
- 5. Keep an eye on the drone too

Spotter:

- 1. Move around so you can always see the drone.
- 2. Continually scan the flight and ground areas for potential hazards.

Pilot (s):

- 1. Announce out loud "CLEAR PROPS".
- 2. Make sure the throttle (left stick) is all the way down then turn on the transmitter.
- 3. Back away 3 or 4 steps (or to a safe distance).
- 4. Bind & calibrate drone & take test photo and video
- 5. Announce out loud "TAKE OFF".
- 6. Launch drone
- 7. Keep facing the quadcopter the entire time.
- 8. Follow the data scribe's route directions
 - Maintain a safe altitude when flying over buildings / obstacles
 - Keep a direct line of sight at all times when flying



Flight data sheet

Session Number:

Date:

Instructor:

Location: Address/City/State , football field, south playground etc.)

Describe your site - Flat/slope? trees - shrubs

GPS location (optional): lat, long, elevation

Drone & transmitter information: Make / model / battery type & number

Weather conditions: Cloud Cover (%), Temperature, wind direction, speed, variability, sun direction, humidity (optional)

Potential dangers and plan for handling each.

Flight Number: Battery number:

Time of takeoff:

Names: Pilot / Spotter / Data recorder:

Goal for this flight:

Flight duration:

Flight path (make a map) Image/ video file names / folder name taken from ground / in-flight.

Observations: How did flight end? (Crash/soft/etc) Flight path / altitude description:

