

# 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:**

Camera: Connected to power? SD card inserted? Sufficient storage available?

Other sensors & equipment: 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

### ☐ **STOP**

☐ Put 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: