



Drone Exploring: Career Spotlights

Logistics — Club

Overview: Companies are now using drones to deliver packages, food, and even medical supplies right to people's homes. In this session, youth explore how a drone delivery works from start to finish, practice planning a delivery route around obstacles, and play a hands-on relay game that reinforces safe, accurate delivery, all while learning why careful planning and safety rules matter.

OBJECTIVES

- Introduce youth to the career of drone delivery and where it's already being used (packages, food, medical supplies).
- Teach the basic steps of a delivery flight: planning, take-off, navigation, drop-off, and return.
- Practice route planning and obstacle avoidance through a hands-on activity.
- Build awareness of safety, weather, and landing-zone rules for delivery drones.

SUPPLIES

- Flip chart or whiteboard and markers
- A large open area (indoor or outdoor) to set up an obstacle course
- Cones, boxes, or chairs to represent obstacles (trees, power lines, buildings)
- Small toy drone, remote-control car, or a “walking drone” (a youth acting as the drone) for the relay game
- Small package props (boxes, beanbags) to “deliver”
- Printed handouts: How a Drone Delivery Works and Plan a Delivery Route

ADVISOR NOTES

- If a real drone isn't available or appropriate indoors, have one youth per team act as the drone, following a teammate's directions to navigate the obstacle course.
- Emphasize that real delivery drones must avoid people, pets, cars, trees, and power lines, and need a clear, flat landing zone.
- Discuss weather's effect on delivery: wind, rain, and low visibility can delay or cancel flights.
- Consider inviting a guest speaker (someone who works in logistics, package delivery, or a local drone delivery pilot) to share how their work compares. See Optional Extensions.
- If no guest speaker is available, Advisors can run the entire session using this outline and the resource links below.

SESSION OUTLINE

- **Welcome and Icebreaker** (10 min)
 - “Package Predictions:” Ask youth what they think a drone would need to know before delivering a package to their house.
- **Safety Moment (Clear Skies, Clear Landings)** (10 min)
 - Delivery drones need a clear, flat landing zone away from people, pets, and cars.
 - Wind, rain, and storms can delay or cancel a delivery flight.
 - Drones must avoid trees, power lines, and buildings along their route.
 - Ask: “Why do you think a drone needs a clear space to land, even more than a delivery truck does?”
- **Mini-Lesson: How Does a Drone Delivery Work?** (15 min)
 - Walk through the steps: order placed, package loaded, flight planned around obstacles and weather, drone takes off, navigates using GPS, drops or lowers the package, and returns to base.

- Discuss real-world examples: companies delivering packages, food, and medical supplies by drone.
- **Activity: Plan a Delivery Route (15–20 min)**
 - In small groups, use the Plan a Delivery Route handout to map a path from a “warehouse” to a “front yard,” marking obstacles like trees and power lines to avoid.
 - Groups compare routes and discuss which is safest and most efficient.
- **Activity: Delivery Relay Challenge (20 min)**
 - Set up an obstacle course representing a neighborhood (cones for trees, boxes for buildings).
 - One youth acts as the drone, carrying a package prop and following a teammate’s step-by-step directions to reach the landing zone without touching an obstacle.
 - Rotate roles so each youth gets a turn as the drone and the navigator.
- **Wrap-Up Share-Out (10 min)**
 - Discuss what made a delivery route tricky and what the team did to solve problems along the way.

REFLECTION SECTION

Advisor Note: Some sample questions are below. They are designed to help the participants apply what they have learned to their own interests. You are welcome to use these questions or develop your own.

Focusing Questions

- What was the hardest obstacle to plan around during the relay challenge?
- What kinds of things do you think people might want delivered by drone?

Analysis Questions

- Why does a delivery drone need such a careful, planned-out route compared to a delivery truck?
- How could bad weather change a delivery plan?

Generalization Questions

- Where else in life do you have to plan a path around obstacles, like the drone did?
- What’s one job you can think of that uses careful planning, like drone delivery does?

Challenge: This week, notice one delivery (mail, packages, food) at your house and think through what a drone would need to do differently to make that same delivery.

OPTIONAL EXTENSIONS

Guest Speaker: Invite someone who works in logistics, package delivery, or a local drone delivery pilot to share how their work compares to what youth explored today, in person or by video call.

Advisor-Led Option: If a guest speaker isn’t available, Advisors can run this session using the outline above and the resource links below. No outside expert is required.

Resource Links: Search “how drone delivery works” on a video platform for kid-friendly explainer videos from companies operating drone delivery services.

Group Extension: Design a “delivery drone” out of craft materials and present what special features it would need (package box, camera, propellers) and why.

Handout: How a Drone Delivery Works

Delivery — Club

Follow the steps below to see how a package gets from a warehouse to a front door by drone.

Step 1: Order Placed

A customer orders a package, and it's prepared at a warehouse or delivery hub.

Step 2: Flight Planned

The delivery route is planned around obstacles, no-fly zones, and current weather.

Step 3: Take-Off and Navigation

The drone takes off and uses GPS to follow its planned route, avoiding trees, wires, and buildings.

Step 4: Drop-Off

The drone lowers or drops the package in a clear, safe landing zone, away from people and pets.

Step 5: Return to Base

The drone flies back to the warehouse to recharge and prepare for its next delivery.

Handout: Plan a Delivery Route

Delivery — Club

With your group, sketch a simple map below from the Warehouse to the Front Yard. Mark at least 3 obstacles (trees, power lines, a building) your route must avoid.

Step	What's in the Way?	How the Drone Avoids It
1		
2		
3		