



Drone Exploring: Career Spotlights

Construction — Club

Overview: Construction crews use drones to check on building progress, inspect hard-to-reach areas, and keep workers safer by reducing the need to climb tall structures just to take a look. In this session, youth explore how drones support a construction site, practice tracking a small building project's progress with photos, and discuss why aerial inspection can be safer than climbing.

OBJECTIVES

- Introduce youth to the career of using drones on construction sites.
- Explain how drones help track building progress and inspect hard-to-reach areas safely.
- Practice documenting progress on a small build project through a hands-on activity.
- Build awareness of construction site safety and why drones can reduce risk for workers.

SUPPLIES

- Flip chart or whiteboard and markers
- Building blocks, LEGO bricks, or a similar construction toy for each small group
- A camera, tablet, or phone to take progress photos
- Printed handouts: How Drones Help on Construction Sites and Progress Tracker
- Optional: hard hats or safety vests to reinforce the safety theme

ADVISOR NOTES

- Emphasize that drones don't replace construction workers. They help crews see problems earlier and avoid unnecessary climbing.
- If time is limited, shorten the build phases to two rounds instead of three.
- Discuss real examples of drones checking roofs, tall walls, or scaffolding instead of a person climbing up.
- Consider inviting a guest speaker (a construction project manager, site safety officer, or drone inspection contractor) to share how their crew uses drones. 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)
 - "Building Up:" Ask youth to describe the tallest thing they've ever seen built and how they think workers checked on it safely.
- **Safety Moment (Why Height Is the Biggest Risk on a Job Site)** (10 min)
 - Falls from height are one of the most common causes of injury on construction sites.
 - Drones let inspectors check roofs, walls, and scaffolding without anyone climbing.
 - Ask: "Why do you think construction companies are excited about tools that reduce climbing?"
- **Mini-Lesson: How Drones Help on Construction Sites** (15 min)
 - Explain how drones track building progress over time, inspect roofs and tall structures, and create 3D models of a site.
 - Discuss how project managers use drone photos to show clients and crews how a project is coming along.
- **Activity: Build and Track Challenge** (25 min)
 - Each small group starts a simple building-block structure.

- After each of 3 short building rounds, take a “progress photo” of the structure and record height or notable changes on the Progress Tracker handout.
- At the end, compare the photos to see the full progress from start to finish.
- **Discussion: What Would a Drone Catch?** (10 min)
 - Discuss what an inspector might notice from a photo (a leaning wall, a gap, a missing piece) that could be fixed early.
- **Wrap-Up Share-Out** (10 min)
 - Groups share their progress photos and describe one thing they’d want a drone to check on a real building.

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 did you notice when you compared your progress photos side by side?
- What part of a tall building would you be most curious to see from a drone’s view?

Analysis Questions

- Why is it useful to have a photo record of a building’s progress over time?
- How could catching a problem early (like in our activity) save time or money on a real job site?

Generalization Questions

- Where else in life is it helpful to track progress with photos or notes over time?
- What’s one job on a construction site you didn’t know about before today?

Challenge: This week, notice a building or construction project near you and think about what a drone inspection might check on it.

OPTIONAL EXTENSIONS

Guest Speaker: Invite a construction project manager, site safety officer, or drone inspection contractor to share how their crew uses drones, 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 “drones in construction explained” on a video platform for kid-friendly explainer videos.

Group Extension: Take progress photos of a group art or building project over several weeks and create a simple before-and-after poster.

Handout: How Drones Help on Construction Sites

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Read through the key ideas below before starting the Build and Track Challenge.

Progress Monitoring

Drones take regular photos so project managers and clients can see how construction is progressing over time.

Safety Inspections

Instead of climbing a roof or scaffolding, an inspector can review drone photos or video to spot problems.

3D Site Models

Drone photos can be combined into a 3D model of the whole site, helping teams plan and spot issues before they become expensive.

Why It Matters

Catching a problem early — and keeping workers off dangerous heights — saves time, money, and keeps people safer.

Handout: Progress Tracker

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After each building round, record what changed and take a progress photo.

Round #	What We Added or Changed	Anything to Fix?
1		
2		
3		