



Step up to instrumentation! Step up to remote sensing!

Build. Explore. Innovate. Prepare for Tomorrow's Workforce.

Step Into Real-World Science & Engineering Today

Want to gain practical skills that employers value? STELLA (Science and Technology Education for Land/Light Assessment) introduces you to the same principles used by NASA remote sensing satellites through affordable, do-it-yourself instruments that measure spectral data, temperature, air quality, and more.

Your Bridge to Professional Science

- **Introduction to Satellite Principles** – Experience the core concepts behind remote sensing
- **Learning Progression** – STELLA introduces fundamental concepts such as calibration, data quality and science capabilities—this is your first step on a learning journey
- **100% Open Source** – Designs, code, and documentation freely available for modification and improvement
- **Skills-Based Learning** – Build practical abilities that transfer directly to STEM careers

Scalable Engineering Experience:

Beginner: No-solder versions (STELLA-Q2, Helio-STELLA, STELLA-AQ) teach sensor basics and data collection without technical assembly.

Intermediate: STELLA-1.2 adds soldering, 3D printing, touch-screen programming, and customizable sensor packages.

Advanced: Adapt lightweight instruments for drone deployment, develop custom applications, and contribute innovations to the open-source community.

Workforce-Ready Skills Development:

- **Software Engineering** – Progress from basic CircuitPython to advanced multitasking concepts
- **Electrical Engineering** – From simple connections to complex circuit troubleshooting
- **Mechanical Engineering** – Learn 3D design, printing, and assembly techniques
- **Remote Sensing** – Understand spectral analysis principles used in Earth observation satellites
- **Data Science** – Collect, process, and visualize environmental measurements

Real-World Applications

Dr. Paige Williams has been flying STELLA instruments on drones for over 2 years, demonstrating how these lightweight devices bridge classroom theory and field applications. Your STELLA experience helps create a pathway to internships and early career opportunities.

Join a Collaborative Community

Connect with scientists, engineers, educators, and fellow students through our GitHub community.

Ready to Build Your Future?

Learn More: <https://science.gsfc.nasa.gov/stella>

Join the Community: <https://github.com/STELLA-Landsat/STELLA/discussions>

