



# READY, SET, DRONE! 2nd Edition

Grades: 4-8

## → DRONES

**Students:** Up to 30

**Contact Hours:** 12+ hours

*This program includes 12 days of activities, each designed to last about one hour. Use one lesson a day, clump them together into larger blocks or break them apart to be worked in one at a time throughout the course of a school year.*

**Recommended Settings:**

- Summer camps
- Classrooms looking for hands-on STEAM activities
- After-school programs

**Pricing Options:**

- Complete Program: \$2,995<sup>00</sup>
- Curriculum Printed Copy: \$695<sup>00</sup> \*
- Curriculum Digital Download: \$529<sup>00</sup> \*\*
- Refill Kit: \$349<sup>00</sup>
- Add-On to *Ready, Set, Code!* or *Drone Designers*: \$895<sup>00</sup>

**Curriculum Topics:**

- Essential Drone Knowledge
- Flight Safety
- Basic Piloting & Photo Skills
- Drone Physics
- Drone Rules & Ethics
- Real-World Applications of Drones

**Assessment:**

The curriculum includes quizzes to test drone knowledge and flight challenges to test piloting skills.

**Logistics & Storage:**

Each program is shipped in sturdy, reusable tubs, safely storing materials during camp and throughout the year.

**Technical Requirements:**

One smartphone or tablet required per drone as a radio controller (requires iOS 9.0 or later, or Android 4.4.0 or later; not compatible with FireOS, the operating system for Amazon tablets).

**Materials:**

*Ready, Set, Drone! 2nd Edition comes with an Instructor Guide, a digital curriculum download and all the supplies needed for 12 days of activities:*

- BrickLAB packs (over 650 colored bricks): 6
- Colored pencils (12 pk): 12
- Composition notebooks: 30
- *Droneology Jr* online course licenses: 50
- Extra prop guards: 6
- Extra propellers (set of 4): 6
- Flight Team Lanyards: 30
- LiPo batteries: 12
- LiPo battery multi-charger: 3
- LiPo safe storage bag: 1
- Mini quadcopters: 6
- Pencils (#2): 36
- Quadcopter carry cases: 6
- Safety glasses: 30
- Scissors: 12
- Storage tubs: 3
- Tape: 12
- USB charging cables: 6

*\* Print curriculum includes Instructor Guide, print copies for 30 students, 50 student licenses to Droneology Jr*

*\*\* Digital curriculum includes PDF of Instructor Guide and all student pages and 50 student licenses to Droneology Jr*

**Training Available:**

Professional development webinar training is available. Talk to a PCS STEAM Program Specialist for information.

**Shipping Availability:**

Contact a PCS STEAM Program Specialist to learn about shipping options.

# Alignments & Standards

## ISTE Standards for Students

- ISTE 1d Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE 2b Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
- ISTE 7c Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

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## Next Generation Science Standards\*

- NGSS 3-5-ETS1-1 Define a simple design problem reflecting a want or need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- NGSS 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- NGSS 3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.
- NGSS 4-PS3-1 Use evidence to construct an explanation relating the speed of an object to the energy of that object.
- NGSS 4-PS3-2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
- NGSS 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.
- NGSS 5-PS2-1 Support an argument that the gravitational force exerted by Earth on objects is directed down.

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## Common Core State Standards

- CCSS.ELA-LITERACY.SL.4.1/CCSS.ELA-LITERACY.SL.5.1/CCSS.ELA-LITERACY.SL.6.1  
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4-6 topics and texts, building on others' ideas and expressing their own clearly.
- CCSS.ELA-LITERACY.SL.4.2/CCSS.ELA-LITERACY.SL.5.2/CCSS.ELA-LITERACY.SL.6.2  
Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. / Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.

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## 21st Century Skills:

- Communication and Collaboration
- Critical Thinking and Problem Solving
- Flexibility and Adaptability
- Information, Media and Technology Literacy
- Leadership and Responsibility

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## Habits of Mind:

- Applying Past Knowledge to New Situations
- Gathering Data Through All the Senses
- Managing Impulsivity
- Questioning and Posing Problems
- Remaining Open to Continuous Learning
- Taking Responsible Risks
- Thinking About Thinking
- Thinking Flexibly
- Thinking Interdependently