DroneBlocks

takeoff(10);
change_altitude(40);
flyForward(75, 25);
hover(5);
pitchGimbal(25);
video('start', 20);
video('stop');
takePhoto(5, 5);
for (var count = 0; count < 4; count++)
    video('start');
yawRight(10, 30);
flyForward(25, 10);
change_altitude(25);
pitchGimbal(25);
Overview

Drones are not only a fun and engaging tool, but the applications in STEAM education are proving to be extensive and inclusive. Our curriculum can be applied with varying age ranges and is extremely conducive to students with diverse learning styles by helping them explore math, science and logic through fun and practical application. Students will learn Block, Python, and JavaScript coding by executing their code on small indoor friendly Tello drones that will fly autonomously indoors.

DroneBlocks Members will have full access to all DroneBlocks curriculum and DroneBlocks software (including our new drone simulator). The simulator can take advantage of any DroneBlocks “Block-Coding” curriculum and missions for distance learning. We also offer professional development services; Our one on one sessions are available to assist educators, walk through curriculum, and build user confidence. With the use of brain-based learning and coaching models we create positive outcomes, where technology is used as a tool for supporting more productive and engaging STEAM learning experiences.
Real World Application

THE GLOBAL DRONE MARKET TO BE WORTH $127 BILLION BY 2020
In addition to defense, delivery, or aerial photography, drones will soon be used for verifying business claims, boosting crop yields, and creating special effects for Hollywood blockbusters.

$1.9 BILLION IN VENTURE CAPITAL IN DRONE RELATED START-UPS
The average valuation of these start-ups is $5.3 million, and the three most followed start-ups are commercial logistics firm SkyCatch, cloud-based drone mapping and analytics firm DroneDeploy, and smart drone maker Matternet.

PROGRAMMERS ARE IN HIGH DEMAND
71% of all new STEAM jobs are in computing, yet only 8% of STEAM graduates are employed in computer science. Learning to code will increase students odds of securing a lucrative STEM career. In a world where computing jobs are growing at over twice the national average, coding has quickly become a vital skill.

IMPROVES CREATIVITY
Coding empowers kids to not only consume digital media and technology, but to create it. Instead of simply playing a video game or using an app, they can imagine making their own video game, or envision what their own website, or app might look like.

IMPROVES PROBLEM SOLVING
When kids code, they take complex problems and break them down into smaller parts. Kids learn what it's like to approach a problem the way a software engineer does, with logical, computational thinking.

COLLABORATION & COMMUNICATION
Students are challenged to collaborate and clearly communicate complex ideas with peers who are joined by through a common interest in technology. People who can problem-solve with others tend to be successful in the tech industry.
Drones

Extremely lightweight:
This incredibly small drone fits in your palm and only weighs approximately 80g (propellers and battery included). However, its durable design combined with DJI’s flight technologies ensure that you can always fly with confidence. Just grab it from your bag and have fun.

Safe to fly indoors:
Tello is super safe with its software and hardware protections. With a single tap, it can takeoff/land automatically; its vision positioning system facilitates precise hovering; when the battery gets low, alerts will go off. Moreover, even if you lose the connection, the Tello can still land safely thanks to its failsafe protection. Tello’s high-capacity battery offers an impressively long flight time, giving it one of the longest flight times in the mini-drone category.

Programmable:
You can learn the basics of programming while having fun. By using Droneblocks or Python coding system, you will be able to program your own flight patterns with the Tello. If you’re a more advanced user, you can use the Tello SDK to develop software applications. You will find Tello the smallest yet smartest drone you’ll ever fly.

_DroneBlocks supports Tello, Tello EDU, and Robomaster TT (Tello Talent)_
Droneblocks (Block-Coding)

Droneblocks is available on iOS, Android, and Google Chrome. This will allow you to utilize virtually any existing device whether it be a tablet or laptop. With over 100,000 users around the globe there are now support communities on various social media forums which are also available for free.

Scan to Download Droneblocks App
Droneblocks Code

Membership Exclusive

DroneBlocks Code is available on PC and Mac. DroneBlocks Code is for advanced users that have moved beyond block coding. Now program your Tello and Tello EDU using JavaScript and more advanced programming techniques.

Contact us for a Private Demo
Drone Simulator

Membership Exclusive

Explore DroneBlocks coding without a drone from anywhere! Compatible with all DroneBlocks block coding curriculum. Excellent resource for distance learning and environments where flying drones is not suitable.

Contact us for a Private Demo
Curriculum

Curriculum is an important part of the DroneBlocks experience. While the DroneBlocks app is a blank canvas for programming autonomous flight, we also provide in-depth curriculum that guides users through all aspects of responsible drone use. Our curriculum covers safety, regulations, and the real-world applications of drone technology. We offer various courses that demonstrate what can be done with the powerful Tello and Tello EDU micro drones.

Coding Languages to Learn

- Droneblocks (Block-Coding)
- Python
- Node-JS
- JavaScript
Key Advantages

- DroneBlocks now has over 150+ cloud-based lessons and growing for teachers to choose from!
- Clear lessons that build upon each skill introduced
- DroneBlocks lessons are aligned to include universal education standards, including CSTA
- True STEM/STEAM applications across all subjects
- Open Source – Dynamic Block Based Coding engaging coding learners of all ages
- Compatible on iOS, Android, & Chrome
- Collaborative: we encourage & incorporate feedback from students, teachers & developers
Professional Development

Our one on one sessions are there to assist educators, walk through curriculum, and build user confidence. With the use of brain-based learning and coaching models we create positive outcomes across education and professional development communities, where technology is used as a tool for supporting more productive and engaging STEAM learning experiences.

Virtual Sessions hosted by our Microsoft Global Training partners prepare educators from all skill levels on facilitating a class with drones. Educators will learn the ins and outs of the drone technology from capabilities to troubleshooting techniques to ensure as little downtime as possible during class. Courses are available in 2 hours blocks, more time means more detail, practice, and time for questions.

**Topics include:**

- What are the educator's needs?
- Updating the drone & troubleshooting
- Connection & flights
- Block coding & introduction to DroneBlocks
- Simple & Complex flight plans
- Application using Python
DroneBlocks is a proud Institutional Partner with CSTA. Accompanied with our courses you will find aligned standards for each of the DroneBlocks Courses. While we also provide exclusive Universal Skills & Educational Standards, we are strong advocates of the CSTA K–12 Computer Science Standards core set of learning objectives.

**SCIENCE**

- Understand that force acts on an object and includes strength and direction, causing the object to move.
- Objects that appear to not be moving have multiple forces compiling to create zero force on the object.
- The motion of an object can be observed and measured.
- Investigate and test solutions to solve each challenge efficiently.
- Synthesize information from a variety of sources.
- Evaluate solutions, taking into consideration safety, reliability and impact.
- Observe, question, collect and evaluate data.

**TECHNOLOGY**

- Technology can be created and improved by the interconnection of Science, Mathematics, and Engineering.
- Utilize a variety of technology and resources to better understand concepts and solve problems.
- Develop comprehension of the logic and syntax that goes into building or coding a program through engaging in and elaborating upon activities.
- Simulate solutions to real-world problems using models and/or computer simulation.
- Program variables that represent quantities in mathematical problems.
- Write conditional expressions to create program logic using if-else statements.
• Simulate solutions to real-world problems using models and/or computer simulation.
• Program variables that represent quantities in mathematical problems.
• Write conditional expressions to create program logic using if-else statements.

ENGINEERING
• Improve and optimize results by identifying errors and using mathematics and technology to redesign and solve problems.
• Evaluate, use prior knowledge such as scientific processes and real-world problems, and troubleshoot to develop a solution.
• Discuss, explain, and collaborate to improve a product through iteration.
• Design a device that converts one form of energy into another by building, testing, and refining. Determine the best solution to accomplish a given challenge.
• Plan and carry out investigations and gain feedback through design process (design solutions).
• Construct arguments that provide a convincing explanation of solutions created through programming.

ART
• Make, design, and create using a variety of materials to develop a concept or learning experience.
• Brainstorm ideas through modeling and sketching.
• Compile works of art to relate knowledge.

MATHEMATICS
• Measure distances, width, length and speed to gain data for interpretation and refining engineering and design.
• Integrate data analysis to collaborate and gain feedback.
• Solve mathematical problems with numbers in any form, strategically using applicable tools.
• Determine the probability of events and compare data from observed models. Explore and evaluate possible reasoning for discrepancies between models.
• Observe an object’s motion, providing data and evidence to evaluate and predict future motion.
• Develop and expand knowledge of geometry, understanding the concepts of measuring angles, and geometric constructions.
# Classroom Set

_DroneBlocks provides everything you need (curriculum, drones, support, etc.) to quickly launch a STEAM drone program._

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
</tr>
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<tbody>
<tr>
<td>DroneBlocks Classroom Bundle</td>
<td>$3,295</td>
</tr>
<tr>
<td><strong>One Year of Droneblocks Enterprise Membership</strong></td>
<td></td>
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<tr>
<td>ACCESS TO ALL DroneBlocks Curriculum &amp; Software for up to 10 teachers/accounts</td>
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<tr>
<td>150+ Cloud-Based Lessons on Block, Python, Open-CV, Node-JS, and JavaScript Coding</td>
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<td>Includes access for unlimited students to utilize the DroneBlocks Simulator</td>
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<tr>
<td><strong>Drone Bundle</strong></td>
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<tr>
<td>• 10 X EDU Indoor Drones</td>
<td></td>
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<tr>
<td>• 10 X Cases for Drone / Accessories</td>
<td></td>
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<tr>
<td>• 10 X Charging Hubs</td>
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<tr>
<td>• 30 X Batteries</td>
<td></td>
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<tr>
<td>• 200+ X Propellers</td>
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**TOTAL** $3,295
## Professional Development & Add-Ons

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<tr>
<td><strong>DroneBlocks Membership - Annual Fee</strong></td>
<td>$495</td>
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<tr>
<td>ACCESS TO ALL DroneBlocks Curriculum &amp; Software for up to 10 teachers/accounts. 150+ Cloud-Based Lessons on Block, Python, Open-CV, Node-JS, and JavaScript Coding  Includes access for unlimited students to utilize the DroneBlocks Simulator</td>
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<tr>
<td><strong>Tello Talent - Drone Upgrade (Per Classroom Set)</strong></td>
<td>$995</td>
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<tr>
<td>Drones are equipped with LEDs, 8x8 Dot Matrix, and extension board lets you connect, debug, and supply power to third-party sensors for additional drone applications (supports I2C, UART, SPI, GPIO, and PWM sensor interfaces) -- Please contact us for full details.</td>
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<td><strong>5 Drone &amp; Accessory Bundle - Add-on Pack</strong></td>
<td>$1,495</td>
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<td>• 15 X Batteries</td>
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<tr>
<td>• 100 X Propellers</td>
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<tr>
<td><strong>Professional Development (Per 2 Hour Session)</strong></td>
<td>$495</td>
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<tr>
<td>Professional development provided by our Microsoft Education Global Training partners. Our trainers are New York state-approved for Continuing Teacher and Leader Education (CTLE). One on one webinar sessions hosted by our certified curriculum and technology specialists to assist educators, walk through curriculum, and build user confidence.</td>
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<tr>
<td><strong>On-Site Professional Development</strong></td>
<td>Contact Us</td>
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<tr>
<td><strong>Custom Drone or Accessory Bundles</strong></td>
<td>Contact Us</td>
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<tr>
<td>Looking for specific accessories or trying to meet a budget constraint? Contact us and we will custom build a bundle that suites your needs.</td>
<td></td>
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<tr>
<td><strong>Drone Legends - STEM Fundamentals Curriculum and Class Materials</strong></td>
<td>$4,500</td>
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<td>Includes Lesson Planners, Missions Guides, Operation Manuals, Builder Sets, Landing Pads, Safety Goggles, Measuring Tapes, Storage Bins, and other program accessories. Please contact us for full details.</td>
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