

WHY SHOULD THERE BE DRONES IN CLASSROOMS?



Drone in the classroom is proven to improve motivation and attendance.



They provide opportunities for hands-on learning experiences and positively impact communication, collaboration, flexibility, self-learning, critical thinking, and empathy.



Drones can be a powerful tool for student development. Projects that allow students to see themselves from above can make them understand that they are a part of something bigger. It also allows students an opportunity to make friends or talk with other students they wouldn't normally.



Drones help students build a better understanding of the world around them, enrich their imagination, and spark their curiosity in ways that can be very beneficial, even when it comes to learning topics that may seem completely unrelated to this technology and its possibilities.

WHAT CLASSES WOULD YOU USE DRONES?

In History class of course!



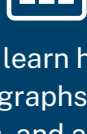
By allowing students to operate these machines, educators can inspire students to learn about local geography, cartography, and the local history of their communities.



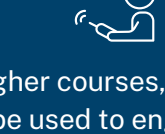
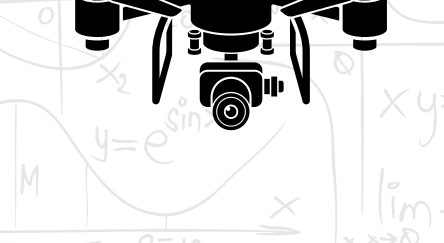
These tools can be very powerful to allow students to work on transmedia learning projects, creating their own videos, paintings, presentations, websites, and other kinds of content derived from the images and the information captured with these flying machines.

WHAT OTHER CLASS WOULD YOU USE DRONES?

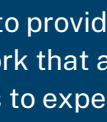
In Math class!



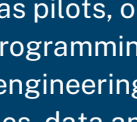
Students learn how to make and read graphs, calculate distances, and acquire some basic trigonometry concepts by following the path of different drones operated by other students



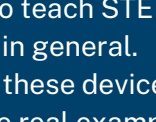
In higher courses, drones can be used to engage students in dealing with more advanced equations, for example applying the Bernoulli principle to calculate stall speeds (the minimum speed at which an aerial vehicle loses lift and falls off the sky) and testing it in real life.



In the same way, many schools have adopted robots in order to provide a framework that allows students to experience first-hand the effects of their code, many educators are using drones to engage students in writing programs to conduct autonomous flights. This can be very useful to teach computational thinking, and help younger students realize the great power of those skills.



Students might explore careers as pilots, or look at jobs in programming, design, engineering, mechanics, data analysis, Aerial photography, Forest Firefighting, Building/Tower inspections, Bridge inspections, Shark spotting, Police/Fire Department use, Search and Rescue, Crop inspections, Aerial mapping, and Hospital blood/organ delivery.



Drones can be very powerful tools to teach STEM-related topics in general. Flying these devices can provide real examples of how physical laws work, and building and enhancing them can also teach students about electronics, and even chemistry, conceptual physics of how the aircraft work, their different parts, and how to fix them when they crash or break

WHERE CAN YOU FLY DRONES?

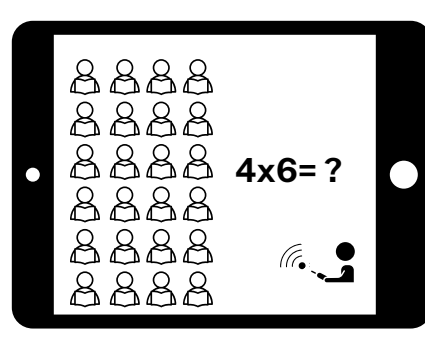
Inside the classroom!

Drone use doesn't have to be limited to older grades and students with strong hand-eye coordination or those with gym time and loads of space.

Set your drone to a height limit of 10 feet and it will work in a classroom.



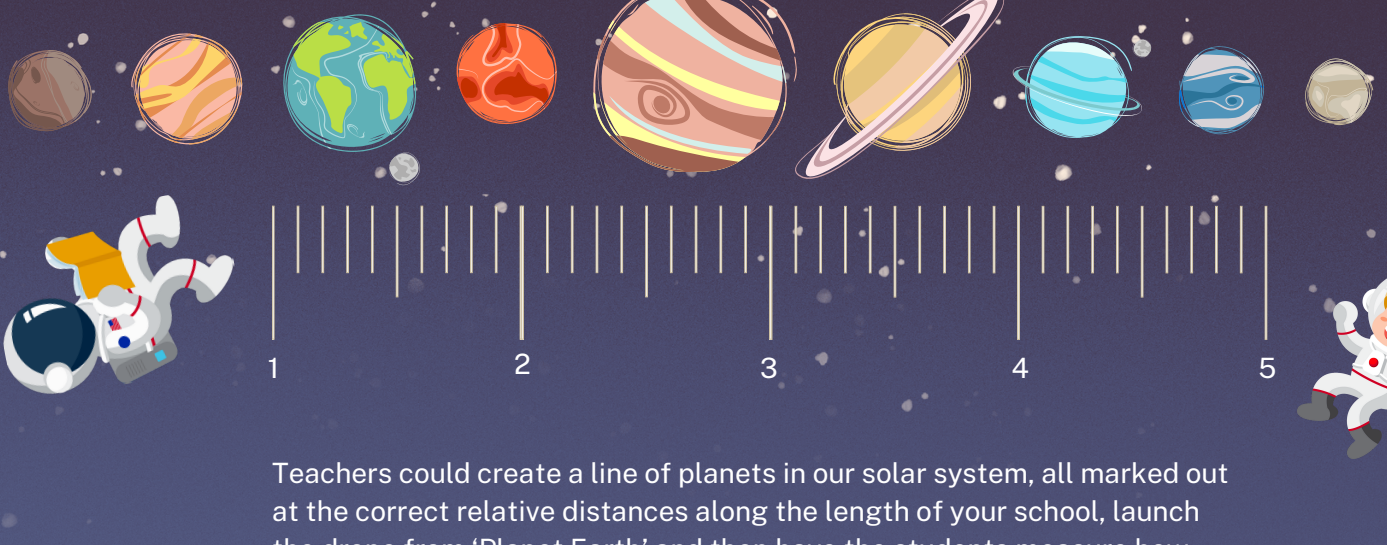
6				
5				
4				
3				
2				
1				
X	1	2	3	4



Younger students can practice multiplication tables by bringing students outside to map out what different problems look like. For example, students display 4 x 6 by standing in four rows of six students. They can move to showcase 2 x 12 by forming two rows of 12 students. Kids can see the images that they form through the pictures the teacher takes with the drone.



IN SCIENCE CLASS!



Teachers could create a line of planets in our solar system, all marked out at the correct relative distances along the length of your school, launch the drone from 'Planet Earth' and then have the students measure how long it takes for the drone to reach the various 'planets' to land.

Set your drone to a height limit of 20 feet and it'll work in a gym.

Teams of students can simulate real-world tasks or learn in drone racing leagues with indoor Precision Real-world (gym on a u-shaped course and requires students to maneuver drones through windows, land them on small tables, and weave through a course.) Team members can be pilots, techs, spotters and more!



DRONE SPEED RACING LEAGUES!



Students can compete on the football field in drone speed racing! Leagues are popping up all around the country right now! Support the imagination of students and stem learning with this up-and-coming sport.

HOW DO WE BRING DRONES INTO OUR SCHOOL?

You **don't** need to spend a lot to bring drones into your school. Even a basic drone can give kids experience with this technology. You might also benefit from investing in drone kits that students can build for themselves.



Students who struggle with drones at first can practice using simulations. Students are already used to playing games on smart devices and those same devices can be used to control the drones.



New curricula can be added to schools that want to hold drone classes, students learn ethics, history, aeronautics, drone components, and drone laws while also learning to fly and even getting FAA certified.



Repair teams in schools can build understanding and support for your drones.



KNOW YOUR SAFETY GUIDELINES AND REGIONAL LAWS BEFORE YOU FLY, AND HAVE FUN!

Educators can get comfortable with drones by joining/ hosting a drone class provided by the Learning Technology Center of Illinois.

Our drone experts will bring you up to speed on best practices, techniques for flying, how to integrate drones into lesson plans, and how to start your own classes or flying clubs.

REGISTER FOR A DRONE BASICS COURSE TODAY!



For more information visit us at
ltcillinois.org/services/catalog/

