Teens and drones are reaching new heights these days

By JENNIFER COLTON

Few things make kids as excited as watching something fly, whether it's an airplane, a kite or a leaf falling from a tree. Remote control helicopters and flyers have topped holiday wish lists for a decade, but in the past few years, flying gadgets have earned a specific name: Drones.

The first point to clear up about drones is an easy misconception: They aren't really toys. A drone is a type of unmanned aerial vehicle, or UAV, and effectively using a drone requires thinking like a pilot – and a lot of practice.

"A lot of people perceive drones as a toy – I know I did before I started working with the industry and seeing all the creative jobs they're doing with drones – but it's a tool with various applications," said Michael Dinkel, robotics/engineering instructor at Pendleton High School. "There are risks, but there are a lot of possibilities. We don't even know all the possibilities yet."

Dinkel teaches classes on unmanned aerial systems (UAS), a term which covers the drone, the operator, and the communications between the two. He said people often ask him what type of drone they should get, but he tells them to answer a different question: What do you want to get out of it?

"If it's just something for the kids to fly around the house, I recommend a small micro-drone that's cheap and the blades are cheap when the kids crash them (and they will)," he said. "If you're interested in aerial photography, you need a higher model."

If you've decided your family is ready for a drone this holiday season and you've answered the

question of what you hope it will do, take a few minutes – or an entire afternoon – to sort through the plethora of options online. Specifications like weight, flight time, size and speed can vary greatly. Also make sure to check the recommended age. For a true drone, the typical age recommended is 8 or older – if not 14 or 18.

"Manufacturers have safety recommendations, and I would really encourage people to follow those," Dinkel said. "Even the micro-drones are 13 and 14 years and older. If you're safe, everyone should be okay – just do it under adult supervision and follow the manufacturer's recommendations."

The drone and its materials will also include safety guidelines and instructions to read before taking to the skies. Drones can move faster and turn sharper than you'd expect, and controls can be very sensitive. Many drone accidents take place in the first practices as pilots become used to their machines, and drones do come with a high reward and high risk correlation. Flight-related injuries include concussions (being hit by falling drones or running into objects with eyes to the sky) to cuts (even covered, those are blades making them fly). Last month an Ohio school district had to send home a warning about a drone with "voice technology" attempting to lure children from playgrounds and sports practices. Drones have grounded emergency response to fires – they can interfere with helicopters and tankers, which is why the area above a fire is restricted airspace – and caused concerns about privacy for children and adults.

Most of those risks have the same solution as many others that children face: education and awareness. Before taking a UAV for its first spin, children and teens need to know the laws, the risks, and what to do when something goes wrong. That education means knowing what the state drone laws are and what areas are restricted – including national parks and emergency areas (remember that comment about fires?). Respecting privacy and keeping others safe are also important lessons for pilots to learn – before taking to the skies.

Once a pilot has mastered the basic controls and understands the responsibilities, drones can create unbeatable photos, do impressive tricks and offer hours of exploration. They can be used to learn programming, navigation, photography and even virtual reality. Drones will crash and will need repairs, and with tutorials available online, teens can learn basic repairs that can teach independence, mechanics, engineering and technology. Through practice and programs – like the UAS classes at Pendleton High where students can advance through being able to design, 3D model and build their own custom drones – students may find a great job, right out of high school.

"Our goal is basically if a student takes my class for three years in a row, they'll be able to take the (Federal Aviation Administration's) Part 107, become a licensed pilot and get hired by a company as a professional drone pilot," Dinkel said. "Technology is improving, and that's creating new jobs and new applications. There's so much happening, we don't even know where this is heading. It's going to be a good career for some of these students."

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