

Opinions About

DRONES



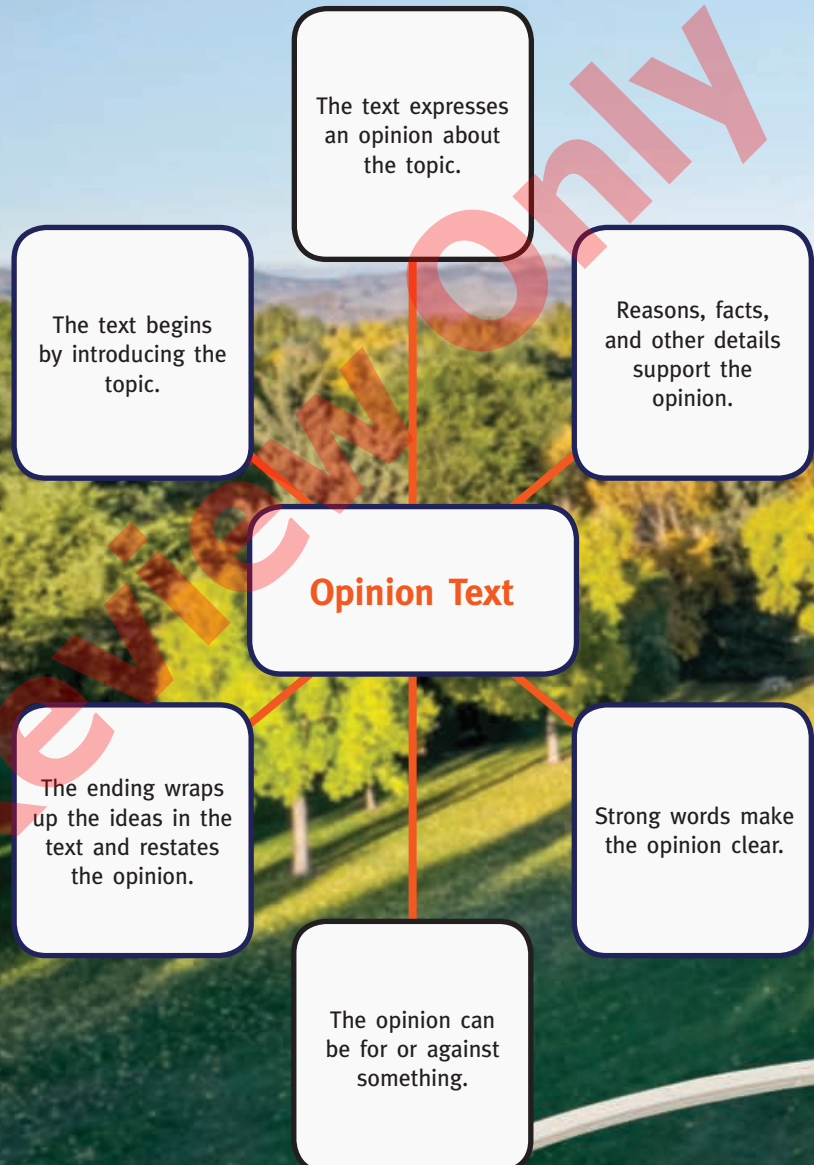
by Joanne Mattern



People use drones for different reasons. Which one is the best?

Opinion Text

Look for the genre features noted below as you read this book. Use the features to help you understand the text.



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Drones can look different.
But all drones fly and are
controlled from the ground.

What Is a DRONE?

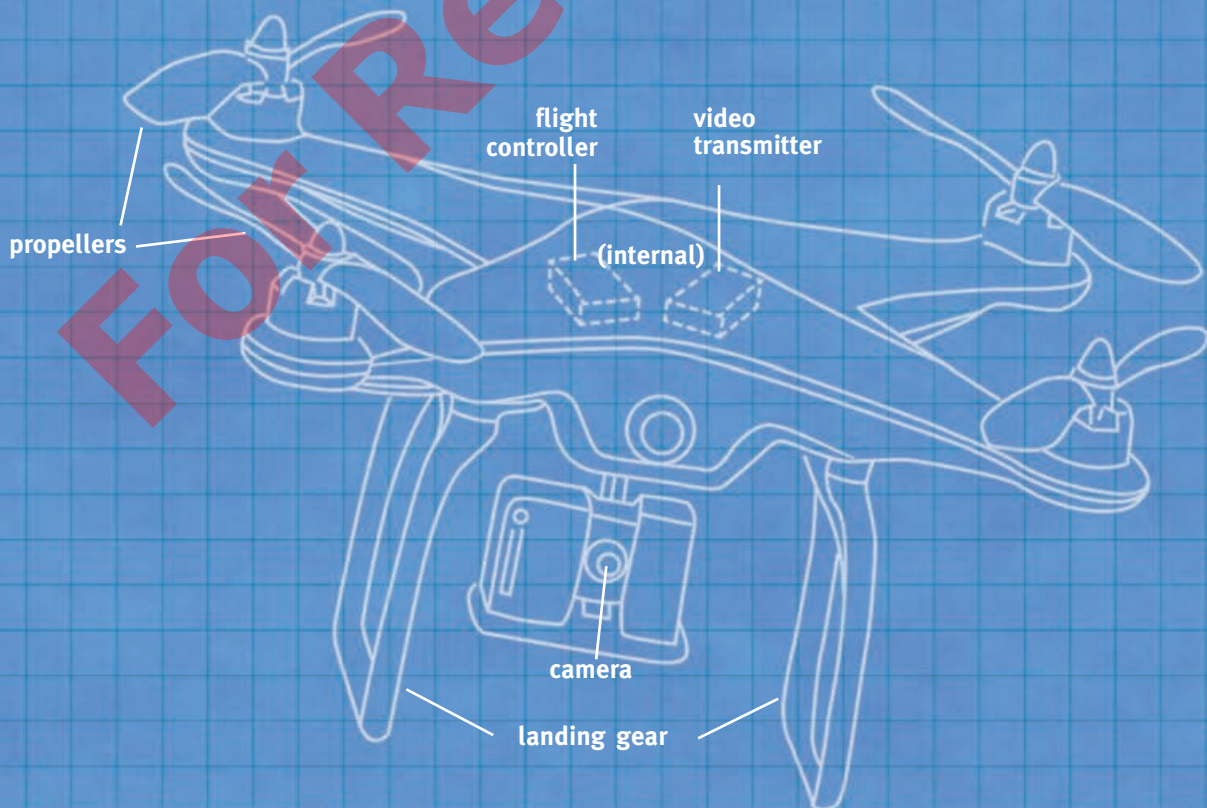
Look up! Planes and helicopters are not the only aircraft flying through the skies these days. Drones can also zip through the air or hover in place above a crowd. A drone is an aircraft that does not have a pilot on board. Instead, the operator uses a **remote control** to control the drone from the ground.

The remote control device communicates with the drone either through radio waves or Wi-Fi (wireless Internet).

The drone has a computer in it that sends information about its location to the remote control. The computer also receives signals from the remote control. It then tells different parts of the drone when and how to move. Many drones also use a GPS (Global Positioning System).

Drones come in different shapes and sizes. Some drones are small and look like helicopters, with four to six **propellers**. Others are larger and shaped like airplanes.

Parts of a Drone



DRONE HISTORY

The first aircraft without a pilot launched more than 100 years ago. Governments built and flew these early “drones.” They looked like small planes—about the size of cars—and were controlled by radio waves.

Over time, the technology improved and got less expensive. Companies started selling remote-controlled toy airplanes to the public. Drones that looked like small helicopters were then developed. These devices could fly higher and farther than the earlier toy planes. Users could also better control drones, because of the computer chip

in them. As technology continues to develop, drones fly higher and farther each year.

Today, people of all ages enjoy flying drones as a **hobby**. Businesses use them to monitor their property and deliver goods. Governments around the world also use them to keep people safe. However, some people have concerns about drones. They can crash and cause harm. They also can be used to invade people’s privacy.

So, what is the best use of drones? Keep reading to form an opinion.



▲ The remote-controlled toy airplane was popular in the past.

- Many hobby drones today look like small helicopters.



Drones by the Numbers



47%

of people in the United States are interested in drone deliveries as of 2017*

130

deliveries made by drone during a successful test in 2016**

42,000

drones registered for commercial use in the United States in 2016***

2,700,000

estimated commercial drone sales in the United States by 2020***

4,300,000

estimated hobby drone sales in the United States by 2020***

*from a survey website **from an international delivery company's press release ***from the Federal Aviation Administration (FAA)

An image like this is easier and less expensive to capture using a drone.

The Many Uses of Drones

Drones for Fun **PHOTOGRAPHY**

With the ability to fly and hover, drones can take photos and videos that a person would not be able to get otherwise. For instance, a drone can take a beautiful **aerial** photo of a canyon or a snow-dusted forest. Drone photography contests give photographers—both professionals and **amateurs**—a chance to win awards for their work.

Some magazines and newspapers publish these photos.

Drone operators can also take fun overhead photos and videos of themselves and events. Some people post their drone videos on the Internet. One site shows that many drone videos have been viewed more than 150,000 times. Some have received hundreds of comments from people all over the world.



Some drones race through the air at 113 kilometers (70 miles) per hour!

RACING

Drone racing is a popular new sport. In drone racing, operators (called “pilots”) guide their drones around a “racetrack” that has obstacles. Most drones used in drone racing have cameras attached to them. The pilots wear goggles or look at a monitor

that allows them to see what the drone’s camera sees—as if they are flying in the drone. The drones race at high speeds, and the pilots must try not to crash their drone. As in other races, the first drone to fly over the finish line wins.

Drone racing started as a hobby. But it has become so popular that there are now national and international racing championships. One popular U.S. sports channel showed a major drone race in 2016. Twenty-five drone pilots competed to become the 2016 Drone Racing League World Champion. More than 130,000 people watched this event, noted a sports website.

Drones for Business

FARMING

A drone can take hundreds of photos as it flies over miles of farmland. Farmers can use these photos to manage their crops and to check their **livestock**.

Matt Minnes founded a company that sells drones to farmers. Minnes said, “I realized that walking hundreds of acres to monitor corn and soybean fields was no way to spot a problem unless you stumbled upon it.” Drones save farmers time and money. One organization predicts that farmers will soon make up 80 percent of all **commercial** drone users.

- ▼ This farmer uses a drone to check for problems on his sugar beet farm.



MAPMAKING

Many companies use drones to make maps. For example, companies that survey land are finding drones useful. A land surveyor makes maps to help determine where new roads and other structures should go. They also map property boundaries.

Land surveyors are now using drones that have cameras and sensors on them. The sensors collect all kinds of information, such as how steep a hill is or how deep a lake is. The surveyor then uses the photos and information to make a map of the area.

- ▼ A surveyor uses a drone for surveying.





In 2016, France announced plans to begin using drones along a delivery route.

PACKAGE DELIVERY

Some U.S. companies have begun testing drone delivery services. Companies **investing** in drone delivery say that they can deliver packages faster by drone than by truck.

Unlike trucks, which have to follow the twists and turns of roads, drones can fly in a straight, direct path from warehouse to customer. Drones are not slowed down by traffic the way trucks are.

However, the weight of a package can make it hard for a drone to fly. So, for now, delivery is limited to packages that weigh less than 2.3 kilograms (5 pounds). Furthermore, the helicopter-like drones that businesses use cannot fly very far—so faraway deliveries cannot currently be done by drone. But engineers are working to solve these problems. When they do, the commercial use of drones will likely increase greatly.