



**NOTE:** To be read aloud

## Five Obvious Uses for Drones

*(Compiled from an article by Brian Handwerk for National Geographic)*

### 1. Hurricane Hunting

Drones can charge into the heart of a storm without risking human life and limb. The Global Hawk drones can stay aloft for 30 hours and fly 11,000 miles with their 116-foot wingspans. That lets them reach and stay in stormy areas that manned planes can't. The drones can collect data and their reports on temperature, pressure, humidity, and location could help scientists understand the forces of wind and water inside hurricanes by going with the flow the way humans never could.

### 2. 3-D Mapping

Small, lightweight drones can survey landscapes with thousands of digital images that can be stitched together into 3-D maps. Such technology has already been widely applied—for relief efforts after Hurricane Sandy, by farmers seeking to manage far-flung crops and fields, by mining companies monitoring changes to open pit mines, and by festivals to monitor crowd size for security reasons.

### 3. Protecting Wildlife

The U.S. government already uses drones to protect its lands and the species that inhabit them. The United States Geological Service use flying drones to monitor wildlife populations or map roads and wetlands for land management purposes. In Colorado, the U.S. Geological Survey has mounted a thermal imaging camera on a drone to count Sandhill Cranes when they are settled in on the ground for the night. Drones also lend punch in the fight against poaching.

### 4. Down on the Farm

Agriculture, far and away, is going to be the major market for drone operators. In Japan they've been flying drones for 20 years ... A lot of the farmland there is on steep hillsides, and those vehicles can treat an acre in five minutes that's very difficult or even impossible to do with a tractor. Drones can monitor fields to find out where pesticides, water, or fertilizers are needed. This is better for the environment and for a farmer's bottom line.

### 5. Search and Rescue

An injured victim of an automobile accident in Saskatchewan, Canada, in May 2013 may have been the first person to have his life saved by a search-and-rescue drone. He crashed in a remote location, and a ground search and an air ambulance helicopter with night-vision gear failed to find him. But after a cell phone call from the injured victim gave a hint to his whereabouts, a drone with heat-sensing equipment found the victim before a potentially fatal night outdoors in subfreezing temperatures. This technology will literally save lives.

**NOTE:** As a class, discuss why Unmanned Flying Aircrafts (i.e. "drones") are being viewed as an exciting new technology. Next, brainstorm problems that might arise when using flying drones (*the main issues are safety concerns, lack of clear rules to guide the use of drones, and potential invasion of privacy*).

**Source:** <http://news.nationalgeographic.com/news/>