

# INVESTIGATIONS

IT'S A BIRD, IT'S A PLANE, IT'S ... A DRONE by Lindy Sharkey

Drones around the world are being utilised to solve real-world problems in innovative ways. There are new uses being developed daily including aerial photography and surveying and fast delivery of food or medical supplies in hard-to-reach places. Investigate the strengths and limitations of this technology, explore locally or branch out into densely populated areas or real-time emergency relief.



## INVESTIGATE THE CLAIMS

Compared to traditional delivery services, the use of drones means deliveries are

- faster
- able to reach inaccessible locations.

### CURRICULUM CONNECTIONS

Level 7: Use Google Maps or similar to explore travel times, particularly in densely populated areas.

Investigate, interpret and analyse graphs from real life data, including consideration of domain and range. (VCMNA257)

Level 9: Explore comparisons in taking the shortest and most direct path. Investigate Pythagoras' Theorem and its application to solving simple problems involving right angled triangles. (VCMMG318)

## ANALYSE THE STATISTICS

In September 2022, the Australian Government launched a website dedicated to drones. You can find the data and research regarding the current and potential uses of drone technology in Australia at [www.drones.gov.au/policies-and-programs/data-and-research](http://www.drones.gov.au/policies-and-programs/data-and-research).

### CURRICULUM CONNECTIONS

Analyse use cases and cost savings of drones across different markets. Differentiate the analysis to suit either level 7 or 9.

Level 7: Identify and investigate issues involving numerical data collected from primary and secondary sources. (VCMSP268)

Level 9: Identify everyday questions and issues involving at least one numerical and at least one categorical variable, and collect data directly from secondary sources. (VCMSP324)

## ENGAGE WITH CODING

NASA has ready-made coding activities to investigate flight paths, students investigate flight paths and simulate the uses of drone technology with Scratch block coding.

[www.nasa.gov/sites/default/files/atoms/files/aam-package-delivery-drone-simulation-activity-guide\\_0.pdf](http://www.nasa.gov/sites/default/files/atoms/files/aam-package-delivery-drone-simulation-activity-guide_0.pdf)

[www.nasa.gov/sites/default/files/atoms/files/aam-attack-of-the-drones-coding-activity-guide\\_0.pdf](http://www.nasa.gov/sites/default/files/atoms/files/aam-attack-of-the-drones-coding-activity-guide_0.pdf)

### CURRICULUM CONNECTIONS

Level 10: Solve linear inequalities and graph their solutions on a number line. (VCMNA336)