## Lesson 17 – Activity Sheet

## Getting Started

Look at where you live. Is it a highly populated city or sparsely populated agricultural environment?

How could drone technology improve your life?

**Consider:**

* Access to products and good
* Farming and agriculture
* Safety and Security
* Access to internet in ‘off grid’ locations

## Success Criteria

* Identify the practical uses of autonomous vehicles
* Create a recovery helicopter suitable to protect a Lego Minifig
* Identify the optimal build for a recovery helicopter

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| **Industry** | **Autonomous Vehicle Type** | **Example of use** |
| Landscaping | Autonomous land vehicle | Drives round parks, uses sensors to detect litter or animal waste and bags it up |
| Agriculture | Drone | Flies over fields using hi-resolution cameras to identify crop growth |
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## Pro-tip

## Experiment with different materials and wing spans. Heavier materials like card are likely to work better than thin printing paper

## Test Time

Think Pair Share your ideas

* What is the drop time of the unmanned helicopter?
* What does this increase to by adding the Minifig?
* What happens if you use stronger materials?
* What happens if you increase the wing size or blade pitch?

## Stretch Tasks

* Look at the worksheet from Tomorrow’s Engineers
* Design and build a lifting helicopter capable or rescuing the Minifig

## Final Thoughts

During today’s lesson we have looked at:

* Drones as another type of autonomous vehicle
* How drones and other autonomous vehicles can support us in our daily lives
* The technology behind how drones work

Consider:

* What are the ethical concerns with drones becoming more popular with the general public?
* What are the ethical considerations to military use of drones?
* What are the limiting factors to the use of drones in industries such as delivery, crop surveillance etc?