## Lesson 37 – Activity Sheet

## Getting Started

## Think of some different uses for your self-driving car and the technology you have developed.

## How could you reuse or recycle the technology you have developed into new uses?

## Smart Speed Humps

## Smart Car football

## Smart Car Wrestling

## Smart Taxi

## Smart Street Cleaning Cars

## Pizza Delivery

## Other ideas?

## Success Criteria

* Design **alternative** uses for the technology within your self-driving vehicle with an environmental impact
* Design alternative uses for the technology within your self-driving vehicle with a commercial or business impact
* Design and develop alternative uses for the technology within your self-driving vehicle with an entertainment impact

|  |  |  |
| --- | --- | --- |
| **Further Uses** | | |
| **Industry** | **Idea** | **How could the technology be used** |
| ***Commercial*** | ***Automated delivery services*** | ***Use the current self-driving vehicle but include mapping using GPS to deliver parcels to customers. Customers could also track the vehicle GPS coordinates so they don’t need to stay in and wait.*** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

|  |
| --- |
| **Car Sumo Plan** |
| **Design/Plan your algorithm for Car Sumo** |

## Pro-tip

* When planning and creating your algorithm for Sumo, putting in some element of random movements might confuse your opponents and give you a chance
* You could turn toward you opponent using the light sensor or run away if you think he is likely to run out of power first

## Test Time

* Identify different uses of autonomous vehicles
* Does your sumo car stay within the ring?
* Does your sumo car actively attack or defend itself?
* How would changing the wheels improve your chances of winning?

## Stretch Tasks

* Look at the random blocks in MakeCode. Add some random element to your vehicle to confuse the opponent
* Add a level of intelligence. If the two cars are in head to head you don’t want to be disqualified for being still for 30 seconds – Create an escape element to your algorithm.
* Consider if you could add any offensive weapon – eg spikes to stop your opponent’s wheels turning

## Final Thoughts

* During this lesson we have looked at other uses for our autonomous vehicles in different sectors. We’ve considered how the technology applied in one industry could easily be reused in another
* We have developed and tested and algorithm that for a Car Sumo game and considered how we could use the technology to our advantage