## Lesson 19 – Activity Sheet

## Getting Started

## You might think that designing a car will be easy, after all, all cars are the same! The only difference is ours will be smart.

## The decisions you make now will have a huge impact on:

## How well your car drives

## How safe your car is

## How your car looks

## How well it sells

## **Key decision to make**

## How will you power your car – *front wheels, rear wheels or all wheels?*

## How many wheels? *3, 4, 6 … more?*

## How will you turn/steer your car?

## How will you keep your passngers safe?

## Success Criteria

* Decide and design the car platform layout in terms of number of wheels.

|  |  |  |
| --- | --- | --- |
| **Number of Wheels** | **Pro** | **Con** |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 6 |  |  |
| 8 |  |  |

* Decide and design how the car will turn or steer.

|  |  |  |
| --- | --- | --- |
| **Steering Method** | **Pro** | **Con** |
| Rack and Pinion |  |  |
| Single Wheel |  |  |
| Spin Steering |  |  |
| Tracked Steering |  |  |

* Decide and design how the car will keep the occupants safe.

|  |
| --- |
| **Number of Passengers and cabin layout** |
|  |
| **Reason** |

|  |
| --- |
| **Safety Ideas** |
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|  |
|  |
|  |

## Pro-tip

## Consider where the vehicle is being used and the number and size of the passengers

* Comfort and safety will be key, but so will style and looks

## Test Time

Think Pair Share your ideas

* What materials will you need to make your safety system?
* What materials and dimensions will your wheels be?
* Will the number of wheels chosen directly impact the steering method? How will you deal with this?

## Stretch Tasks

* Describe how you will test your safety systems – without hurting the Eggs!
* Consider how wheel size will influence body design
* Consider material properties required for the wheels

## Final Thoughts

* The focus has been the power train, steering and passenger bay. We have looked at the factors that influence these decisions and the importance of getting them correct