# Lesson 19 – Final Project – Smart Car Part 2

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| The Big Picture – Why Is This Relevant? | Learning Objectives |
| * Reinforcing the project goals * Linking designs with practicalities | * Decide and design the car platform layout in terms of number of wheels * Decide and design how the car will turn or steer * Decide and design how the car will keep the occupants safe |
| Engagement – How Can I Engage Learners? | Assessment for Learning |
| * Give Learners plenty of opportunity to research * Decision should be team led – ensure all Learners participate in team discussion and that discussion are recorded by the team | **Expected Progress:**   * Learners choose the number of wheels and steering method   **Good Progress:**   * Learners choose number of wheels and steering method with justification and consider passenger safety   **Exceptional Progress:**   * Learners attempt a Stretch Task |
| Links to KS3 Programme of Study | |
| * undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users | |
| Key Concepts | Key Words |
| * How practicalities may impact design decisions |  |
| Differentiation | Resources |
| Some Learners will want to come up with impractical designs and will need to be supported in making practical decisions | * Lesson 19 ppt * Lesson 19 Activity Sheet * PC * Internet access for research * Paper, pens, pencils * Egg family for dimensions * Example materials that could be used for safety devices (bubble wrap, balloons, cable ties etc) * Example materials for wheels (wood, rubber, perspex, card etc) |
| Lesson Flow | |
| * Introduce the learning objectives * Discuss the key decisions they will need to make at this point – discuss the idea of concept and practicality * Give Learners the lesson Activity Sheet * Get Learners to complete the wheels table and then decide on the number of wheels * Get Learners to complete the steering table and then decide of how they will steer the vehicle * Get Learners to complete the passenger table and safety table and decide how they will layout their cabin and how they will keep the eggs safe * Encourage Learners to attempt the Stretch Tasks * Depending upon the materials available this can be purely delivered as a conceptual exercise where students design the device without actually making any of the elements. The key is that they are applying their problem solving skills to a large task. | |
| Making | |
| No making activities in this lesson. | |