Employer Project

Term 4 2019/2020

Context

Bloodhound LSR is a venture based on the Bloodhound Project that is using the Bloodhound SSC Car rescued from administration by Yorkshire-based businessman Ian Warhurst in December 2018.
Since March 2019, the Bloodhound LSR project has been based at the UK Land Speed Record Centre in Berkeley, Gloucestershire. Its parent company is Grafton LSR Limited. The Bloodhound team is now working through its plan of high speed testing followed by setting a new world land speed record in South Africa.

The current world land speed record of 763.035 mph (1,227.985 km/h) was set over 20 years ago by a British team including Bloodhound LSR driver Andy Green. Advances in engineering design, materials and computational fluid dynamics (CFD) since the last record was broken mean we can be confident of breaking that record with Bloodhound LSR.

The project is helping to push boundaries and demonstrate pioneering new technologies. Many of the aspects of our land speed record car have required engineers to think in new ways and manufacturers to develop novel production and testing methods.

The arrow-shaped racer reached a top speed of 628mph (1,010km/h) on the mudbed of Hakskeen Pan, South Africa, before packing up to head home to England in the Autumn of 2019.

The team is now engaged in a review of all the data gathered during testing - from the roughly 200 air-pressure sensors dotted around the car, plus a multitude of strain gauges, temperature readers and accelerometers.

Tasks

Week 1

You will be taking part in a press conference with the Bloodhound engineering team. This will be an opportunity for you to ask them questions about their latest test run in South Africa. You will then need to complete one of the following:

1. Design and write a magazine article for Top Gear magazine that details the latest test run in South Africa.
2. Write a poem about the Bloodhound car and the latest test run.
3. Write a script for a news broadcast to give viewers all of the latest details about the recent test run.

Week 2

You will be able to explore the workings of the Bloodhound car and discuss the latest technological developments that are happening with the engineering team. They will discuss with you how they are considering changing from a petrol engine to an electric one. You will then need to complete one of the following tasks:

1. Answer the question "which type of battery would be better for the environment?" Use the prompt sheet to help you with this. This will be in U112.
2. Create a virtual design using solid works that models how each of the new electronic components can fit into the car. This will be in U128.
3. Create a physical mock-up of the bloodhound car with recyclable materials showing how the new components could fit into the car. This will be in the engineering barn.

Week3

Communication and sponsorship are key to the long term success of the Bloodhound project. Select one of these tasks to complete:

1. Create an app prototype that allows users to view live details of the test runs, check the latest social media and send feedback to the Bloodhound team. This will be in U112.
2. Design a new livery for the helmet worn by Andy Green that incorporates the sponsors, a sense of British pride and South African heritage. Use the template to help with this. This will be in U128.
3. Create a flyer to give to potential sponsors of the Bloodhound team that will persuade them to invest in the project. This will be in U111.

Prizes

You will need to submit your finished piece of work at the end of each session and the student with the best piece of work will win a Bloodhound themed prize. The tutor group with the best overall work will win a tutor group reward that will be decided by the student council representative, the form tutor and Graham.