

Year 5

Summer 2 Space

Rovers

During this unit the children used their knowledge of space from their science unit to create Lunar/ Mars rovers. The children began by researching the features needed for a lunar rover using their chromebooks. Using their research children were then able to create an annotated diagram for their initial design. Following this, the students then analysed and evaluated their work to create a second design with improvements and changes made from the first. Then they formulated a sketch of what their prototype type could look like after they were shown the tools and equipment that they would be using. The following lessons the children were able to touch upon the skills of measuring, sawing, use of the glue gun and design in order to construct their moon buggy. Finally the children evaluated their partners and their own prototypes.

Lesson 1 - LQ: What are the features of a Lunar Rover and Mars rover?

At the beginning of the lesson the children were told their design brief. The children were asked to analyse the features of a mars rover and lunar buggy in order to help their initial design.

DESIGN BRIEF

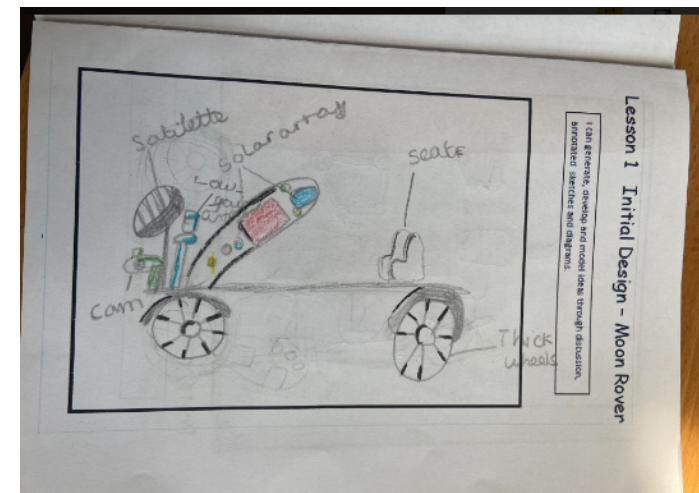
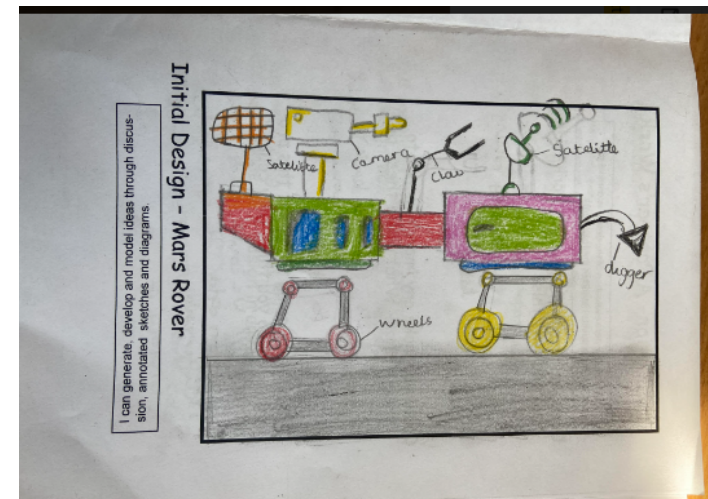
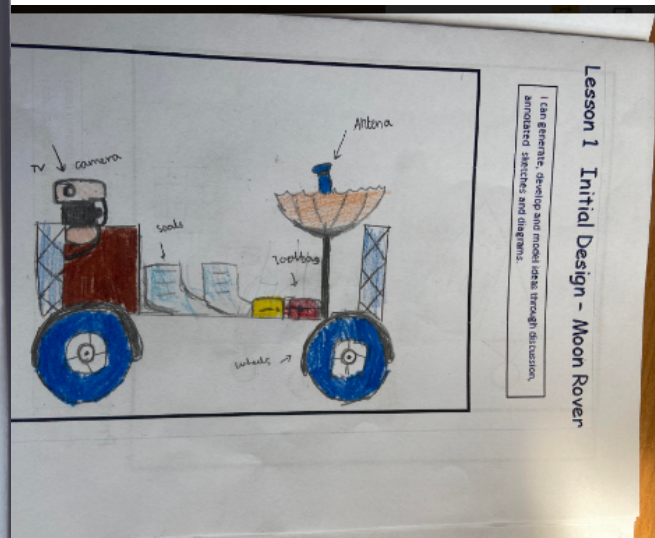
I can think ahead about the order of my work, choosing appropriate tools, equipment, materials, components and techniques to strengthen, stiffen and reinforce more complex structures

Who are you designing this rover for?
(who is the user)
I am designing it for myself

What purpose are you designing for?
(What will your rover be used for?)
To explore the moon.

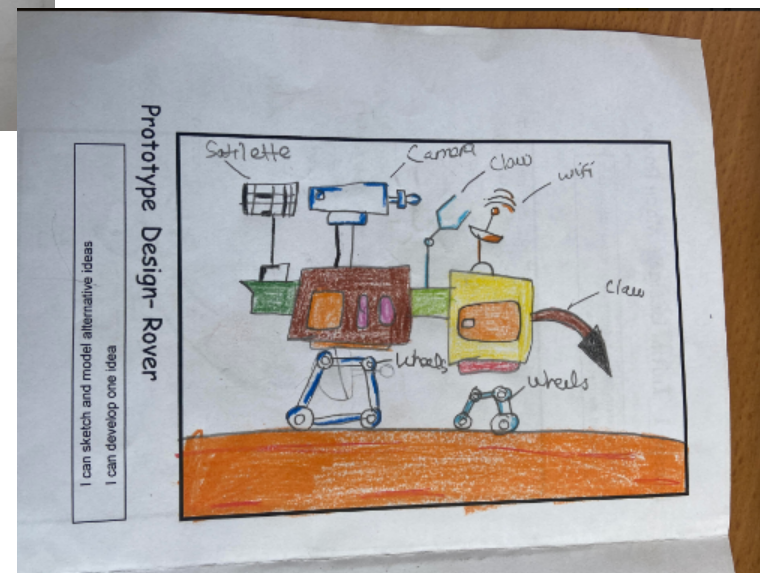
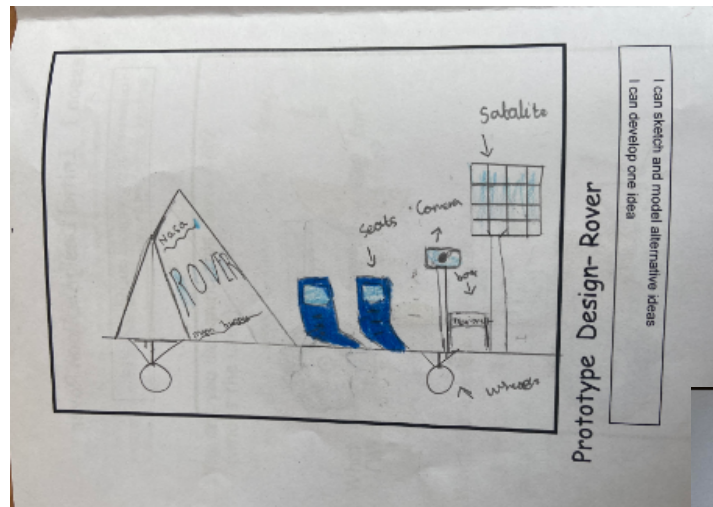
What materials will you need?
Cardboard, string, toothpicks, wood, aluminium foil, paper, pen,

What tools will you use?
Scissors



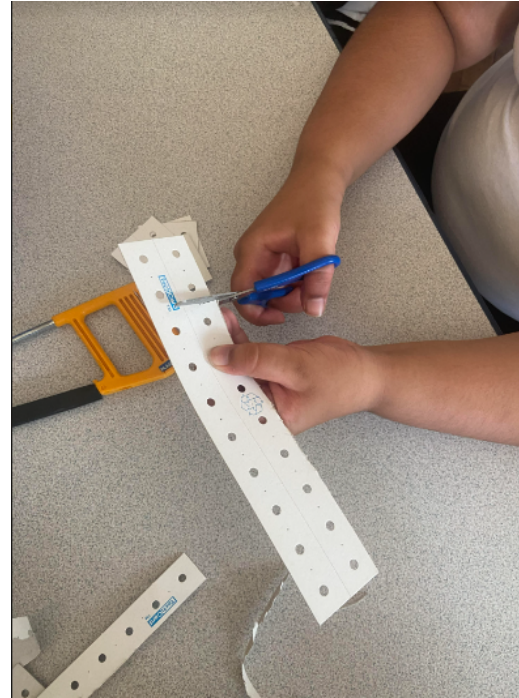
Lesson 2- LQ: How can I create an original design using information I have researched?.

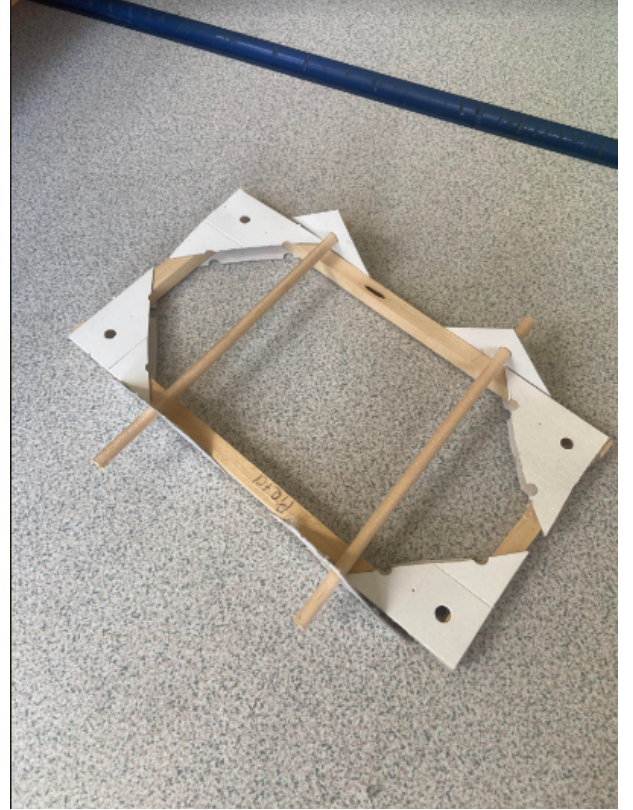
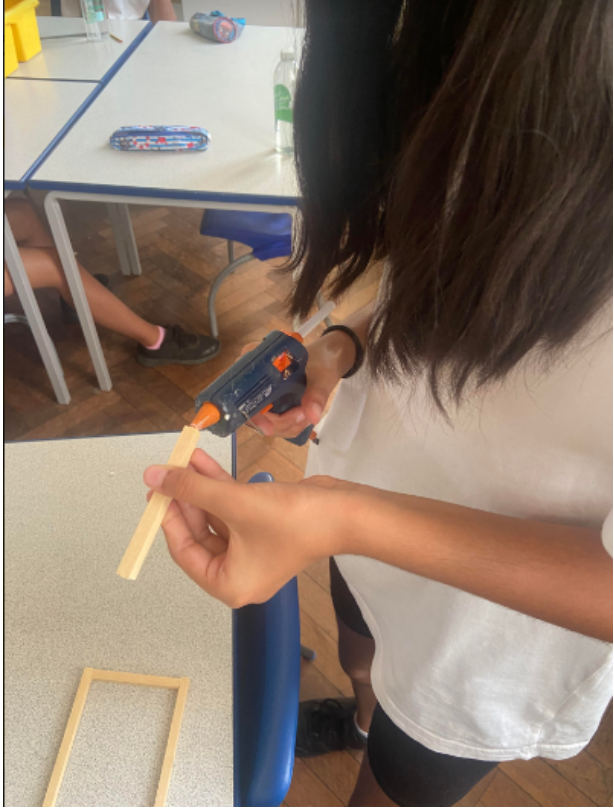
During this lesson the children used their initial design to create another design using elements from their initial design as well as further research of their lunar/mars rovers. The children were then shown the equipment that they would be using for their prototype. They then had to create an annotated design of their prototype.

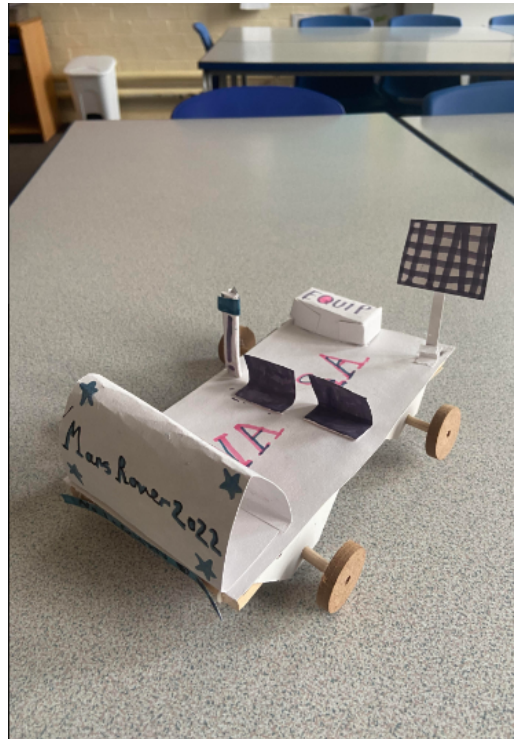
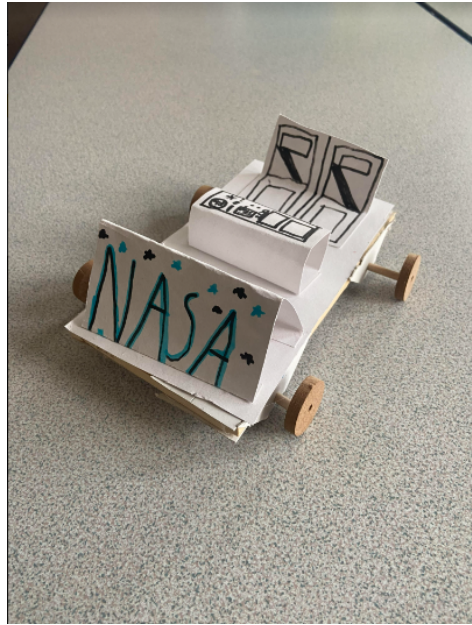
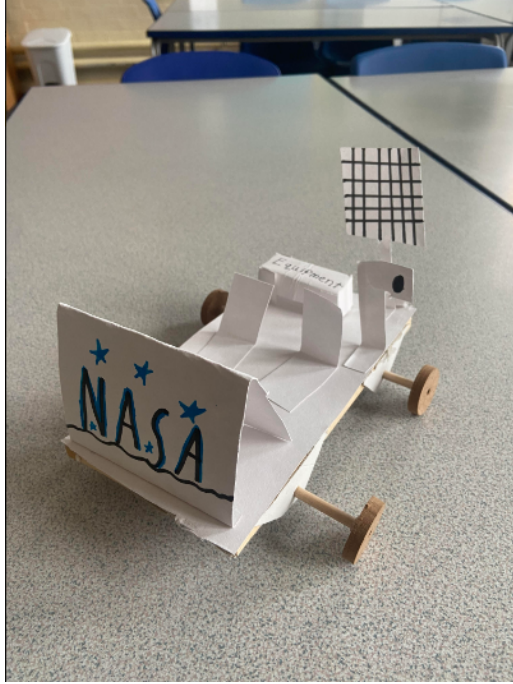
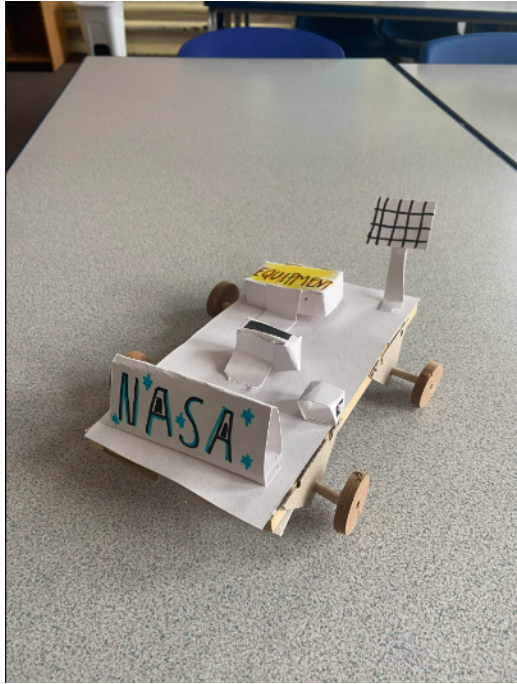


Lesson 3 and 4- What techniques can ensure that my prototype is strong and moves?

In this lesson, the children constructed their wooden prototypes using the skills of measuring, sawing and using the glue gun. (The dowels for the wheels were too large- need to make sure they are smaller for next year)







Lesson 5- How can I use my success criteria to evaluate my work?

The children of Year 5 evaluated their partners and their own work by identifying strengths, weaknesses and where they could improve if they were to complete the project again. **Main weaknesses across Year 5: Not enough time given to the unit (2 days), not enough gluten guns for each class to use. Incorporate a motor into the prototype so that it can move.**

