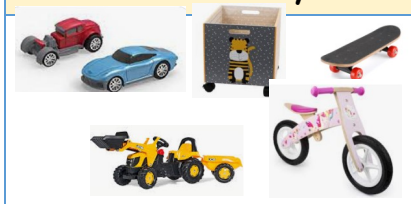
Dial Park Primary– Design & Technology– Mechanisms – Even Year– Concepts: Leadership, Influence and Conflict- KS1 (Spring)

Design and Make a moon buggy to help Neil Arm- strong teddy on the moon.

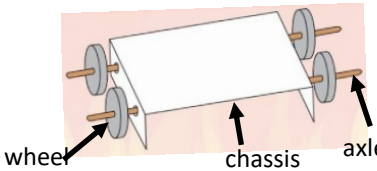
Discovery



Evaluate some wheeled products.
How do you think they move?
How do you think the wheels are fixed on?
Why are the wheels round?

Draw a picture of a wheeled product.
Can you name the parts?

Initiative



What is a mechanism?

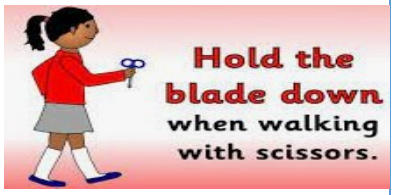
Why do we need them in vehicles?

Vehicles need wheels and axles to make them move.

Using construction kits, can you make a vehicle that moves?

I am able to join materials with moving joints

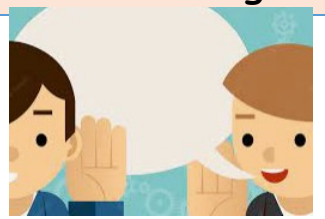
Awareness



Axles can be made from dowel or paper sticks and attached with tape or plasticine.

Why do we need to have an awareness of safety when using tools in the classroom?

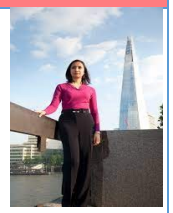
Listening



Who is the user and purpose of your product? Design a moon buggy to help Neil Armstrong teddy on the moon. Draw your ideas and discuss your design with a friend. Listen to each and share your ideas.

Inspire Me!

Roma Agrawal is a structural Engineer who designed the Spire of the Shard building in London.



Vocabulary

axle

axle holder

chassis

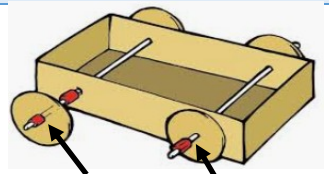
vehicle

wheel

Positivity

How could your moon buggy be appealing as well as functional?
Where will your moon buggy be used and how will this affect your design?
As designer, I can try out different finishing techniques such as collage, paint or computer generated images to match a design brief.

Acceptance



Free axle-fixed wheels: The wheel is attached firmly to the axle so when the

Fixed axle-free wheels: The wheel is attached loosely on the axle so the wheels turn around

What will you do if something does not go as planned? How will you adapt your design to solve your problems? E.g, do your wheels spin? Do you have a fixed-axel or free-axel?
I am able to create products using levers, wheels and winding mechanisms

Relationships

Test each others final product. Be a critical friend and test that it is fit for purpose.

Does your moon buggy move with and without Neil Armstrong teddy? Do all the features you included work as planned?
As a designer, I can try out different ways of making axel holders and joining wheels and axles.

Kindness

If you were given the job to design a new vehicle for a village in Africa, what would you design and why?

How would your vehicle change their lives? Ask your friends simple questions about the vehicles they have chosen.

Prior Learning

- I have assembled vehicles with moving wheels using construction kits.
- I have explored moving vehicles through play.
- I have gained some experience of designing, making and evaluating products for a specified user and purpose.
- I have some cutting, joining and finishing skills with card.

Protected Characteristics

Gender: Do you think there are equal opportunities for women in engineering?

Declarative Knowledge: National Curriculum/Dial Park subject knowledge

Procedural Knowledge: (Scientific Enquiry) Skills

Disciplinary Knowledge: As an engineer, I can….