



Topic Title: Brilliant Buggies! Year 2 Term: Autumn 2



Skills Taught:

- To ask simple questions and use different types of scientific enquiries to answer them
- To set up simple practical enquiries, comparative and simple tests – poster resources to support investigation process
- To make careful observations and compare results, observing how changes impact on their results, such as weighting their buggy or changing the materials used or surface travelled or angle of ramp, shapes of wheels etc.
- To design/ make and evaluate a wheeled buggy
- To make simple measurements with timers and measuring length of the distance travelled.
- To record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.
- To compare how things move over different surfaces

Immersion Activity/Provocation: How do you think it works? Explore a range of moving wheeled “toys” and observe and make predictions about how forces are utilised to make them travel faster or further. Build their own Brilliant Buggy using their findings to aid design.

Key question?

How do forces, including act upon objects?

Big Questions:

What do you notice?
How will you record?

What have you
observed?

Why do we use
different materials for
different purposes –
wood/ card/ paper?

Can you predict which
vehicle will go further?
What are your reasons?

What makes wheeled
toys go further or
faster?

Topic Title: Terrific Tests!

Enquiry Questions: 1 per week across the half term related to the above (e.g. How will you use what our investigations into wheeled toys has taught us when designing your own buggy?)

Focus Texts: Going Places



	<u>Skills and Knowledge</u>
Some children will:	<ul style="list-style-type: none">• Talk about the differences between materials and changes they notice.• Explore and talk about different forces they can see and feel• Explore how things work
Most children will:	<ul style="list-style-type: none">• Describe the simple physical properties of a variety of everyday materials• Ask simple questions to investigate• Perform simple tests using simple equipment and make observations• Use observations and ideas to suggest answers to questions posed• Ask relevant questions
Some children will progress further and will:	<ul style="list-style-type: none">• Set up a simple experiment to compare materials and consider fair testing.• Understand what equipment they will need, how to record findings in a suitable way, including the gathering of data.• Make observations and gather data in a way that helps to answer questions.• Present findings from enquiries and give oral and written presentations of results and use these to draw conclusions.• Can see patterns in observation and are able to, with support develop further questions from their findings.• Can use relevant scientific language to discuss their ideas and findings.• Understands that magnetic forces can act on objects without contact.• Can explore the strength of different magnets, understanding what is needed, how to make it a fair test, how to gather data and record data and draw conclusions from their findings

Enrichment/Outdoor Learning: Test Buggies – The Race!

Animations and videos:

<https://thestemhub.org.uk/stem-at-home/item/balloon-buggy>

CBeebies – Grace’s Amazing Machines Series

<https://explorify.wellcome.ac.uk/en/activities/odd-one-out/wonderful-wheels>

<https://explorify.wellcome.ac.uk/en/activities/whats-going-on/flexible-wheel>

Previously on....(Links to prior learning) Observation of the behaviour of materials when forces are applied – bending/ squashing/twisting and stretching

Recording of observations

Perform simple tests to test the properties and uses of materials

Make simple predictions for the above

Distinguish between an object and what it is made of

Key Vocabulary:

Materials/ objects/ use / suitable and unsuitable/

Compare/ observe/ measure

Forces/ push/ pull/ faster/ slower

Test/ results/ data/ record/ findings

Those linked with materials

Working Scientifically

Cross-curricular links:

Information writing – Observations/ Linking back to Until I met Dudley

Data handling – Sorting and Classification / Tables/ Diagrams

D&T – Design activity object utilising a force – Design/ make and evaluate

Celebration of knowledge and skills gained (opportunities for assessment):

Concept Cartoons – The children have planned a fair test – True or False?

Develop a Double Page Spread (Also in DT portfolio) of what you have learned about Working Scientifically and designing a Buggy - Evaluation?

Non-fiction texts: