



Science planning with Sustainable Travel Links for Year 3 and 4 Working scientifically – speed and distance Links to maths (data handling) and DT

Objectives:	<ul style="list-style-type: none"> • Ask and answer relevant questions • Set up an enquiry using a fair test and make a prediction • Make systematic observations, taking accurate measurements, using equipment • Use the results to make simple conclusions • Evaluate the enquiry and suggest ways it could be improved
Success Criteria:	<ul style="list-style-type: none"> • Relevant questions that can be investigated • Ways that the enquiry can be conducted fairly • Accurate use of appropriate equipment and clear recording • A conclusion based on the results • Reflections on the success and how it could be improved
<p>Please ask children to bring in any cars, buses, etc they have at home. Also borrow from YR/KS1 if possible so that there are plenty.</p> <p>Teacher Input with key questions: Explain that today’s lesson is about how far and fast different wheels will travel. It is part of the preparation for DT (Moving Monsters / Controllable Vehicles)</p> <p>Intro – http://www.bbc.co.uk/learningzone/clips/what-makes-a-winning-pedal-car/9661.html Watch clip –what were the main points? What was the key vocabulary? https://hwb.wales.gov.uk/cms/hwbcontent/Shared%20Documents/vtc/wheels_axles/eng/Introduction/default.htm</p> <p>Work through the activities in the above webpage to secure understanding of how wheels and axles work.</p> <p>What do we notice? Why is this information important?</p> <p>Look at the variety of vehicles that have been brought in from home. What type of axle do they have? How many wheels etc. How will this affect their speed and distance that they travel?</p> <p>Task - In groups to come up with a “Big question” about speed and distance that the vehicles might travel.</p> <p>Put children into groups and ask them to come up with their questions – modify any that might not work. Ensure that they have enough vehicles per group.</p> <p>Discuss: Equipment available, how the test can be kept fair, where they will work, how they will measure the speed and distance. Show recording proforma – remind they are also able to create their own if they wish to.</p> <p>Give time for enquiry - Take photos for books and display.</p>	<p>Resources</p> <p>http://www.bbc.co.uk/learningzone/clips/what-makes-a-winning-pedal-car/9661.html</p> <p>https://hwb.wales.gov.uk/cms/hwbcontent/Shared%20Documents/vtc/wheels_axles/eng/Introduction/default.htm</p> <p>Vehicles that have been brought in from home/YR/KS1. Stop watches Measuring tapes Camera</p> <p>Mini plenary CT to check that the questions are relevant and able to be investigated. What is the prediction based on? What is the fair test element? Was your prediction correct?</p> <p>Plenary Demonstration of enquiries to other groups. Sharing reflections.</p> <p>http://www.bbc.co.uk/learningzone/clips/what-makes-a-winning-pedal-car/9661.html</p> <p>Re watch the clip – how has our understanding moved on from first watching it?</p> <p>Assessment</p> <ul style="list-style-type: none"> • Can ask and answer questions that are relevant. • Can find ways that the enquiry can be kept be conducted fairly. • Can use appropriate equipment accurately with clear recording • Can make a conclusion based on the results. • Can reflect on the success of the enquiry and how it could be improved.

Science: Enquiry about speed and distance**Date:**

My name:

Other people in my group:

Our big question:

My prediction – what I think will happen:

Description of activity:

Equipment we used:

How we made it a fair test:

Results

Type of vehicle	Description of axle	Description of wheels	Time mins and secs	Distance m and cm
1				
2				
3				
4				
5				

What we found out – our conclusion:

Was my prediction correct?

How we could improve our enquiry for next time?

What have I learnt today?