Oide

Investigating Slopes

Stage	Strand	Strand Unit
2	Measures	Measuring

Learning Outcomes	Maths Concepts
• Through appropriately playful and engaging learning experiences, children should be able to compare, approximate and measure length, weight, capacity and area using appropriate instruments and record using appropriate units of measurement.	• Common base units of measurement are useful to make and test comparisons. • Measurement instruments (e.g. rulers) are tools for measuring physical quantities or attributes such as length, weight and capacity.

Learning Maths

In this learning experience learners explore the links between height of slopes and distance travelled by a toy car. Learners use a ramp, toy car and a range of concrete manipulatives to design and test slopes. They record estimates and predictions on a whiteboard prior to conducting the measurement task. Learners are encouraged to use a variety of standard (rulers/ metre sticks) and non-standard units (cubes, links etc) to measure the distance travelled. Learners will then devise their own strategies to measure the distance travelled.

Understanding and Connecting	Communicating	Reasoning	Applying and Problem Solving
The learner			
Understands that using a unit of measurement helps us to compare distances travelled.	Records, estimates and measures distance travelled by the toy car concretely, pictorially and orally.	Assesses the reasonableness of their estimations and measurements.	Devises their own strategy to measure the distance travelled by the car.

Teaching Maths	
Fostering Productive Disposition	**Encouraging Playfulness with Mathematics**
Give learners opportunities to interact and work collaboratively with their peers, in mixed ability groups.	Introduce and reinforce mathematical language as it arises through this playful learning experience.

Emphasising Mathematical Modeling
Encourage learners to communicate and justify the relationship between the height of the slope and the distance travelled in a way that makes sense to them , e.g. tables, graphs, orally.

Using Cognitively Challenging Tasks	Promoting Maths Talk
Allow learners to grapple with the idea and problem freely and to explore multiple correct solution pathways.	Re-voice the learners' mathematical ideas.

Assessing Maths
• Can learners measure the distance travelled using standard and non-standard units? • Are learners proficient when recording and communicating estimations? • Can learners record and justify results? • Ask learners to give feedback on this learning experience to identify successes and challenges which can inform future planning.

Source
Adapted from https://www.sfi.ie/site-files/primary-science/media/flash/act23/Investigating_Slopes_Activity.pdf