



Curriculum Links

KS3 Maths - Osmington Bay, Dorset

	Brief Description	Equipment Includes	Curriculum Information
			Maths
Wire Flyer	A zip wire session provides data including distance travelled and time taken in order to calculate speed using algebra.	Clipboard, stopwatch, activity equipment: zip wire	Understand and use place values for decimals, measures and integers of any size. Interpret fractions and percentages as operators. Use standard units of mass, length, time. Use a calculator and other technologies. Change freely between related standard units. Use compound units such as speed. Construct and interpret appropriate tables, charts and diagrams for grouped and ungrouped data. Understand and use standard mathematical formulae and expressions, including scientific formulae. Substitute numerical values into formulae and expressions. Interpret mathematical relationships both algebraically and graphically.
Tower Time	Students use trigonometry to analyse data from their abseiling session and produce an annotated presentation of the activity.	Clipboard, clinometer, measuring tape, activity equipment: abseiling	Understand and use place values for decimals, measures and integers of any size. Use the standard conventions for labelling the sides and angle of triangle ABC. Describe, sketch and draw using conventional terms and notations. Apply angle facts to derive results about angles and sides, including Pythagoras' Theorem, and use known results to obtain simple proofs. Use Pythagoras' Theorem and trigonometric ratios in similar triangles to solve problems involving right-angled triangles. Understand and use standard mathematical formulae and expressions, including scientific formulae. Substitute numerical values into formulae and expressions. Interpret mathematical relationships both algebraically and graphically.
Heartbeat	A rope-based activity produces the opportunity to collect data which can then be turned into a presentation showing how pulse rates change during the activity.	Computer, clipboard, data logger with pulse sensor, activity equipment: rope-based activity	Understand and use place values for decimals, measures and integers of any size. Construct and interpret appropriate tables, charts and diagrams for grouped and ungrouped data. Order positive and negative integers, decimals and fractions. Describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers). Construct and interpret appropriate tables, charts, and diagrams for grouped and ungrouped data.
Aero Noughts	Data from an aeroball session, such as shots and goals, provides material for analysis in terms of ratios and percentages.	Clipboard, stopwatch, tally counter, activity equipment: aeroball	Understand and use place values for decimals, measures and integers of any size. Use ratio notation, including reduction to the simplest form. Divide a given quantity into two parts in a given part:part or part:whole ratio; express the division of a quantity into two parts as a ratio. Understand the multiplicative relationship between two quantities can be expressed as a ratio or fraction.
Marker Trail	Based on an orienteering session, students explore angles and distances in order to design a shortest route.	Maps, activity equipment: orienteering	Understand and use place values for decimals, measures and integers of any size. Use compound units such as speed. Use scale factors, scale diagrams and maps. Draw and measure line segments and angles in geometric figures, including interpreting scale drawings. Derive and use the standard ruler and compass constructions. Understand and use standard mathematical formulae and expressions, including scientific formulae. Substitute numerical values into formulae and expressions. Work with coordinates in all four quadrants.



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Tunnelling for Numbers	Students collect number cards as they navigate through an underground maze of tunnels and must then complete a series of numerical challenges.	Clipboard, activity equipment: tunnel trail	Understand and use place values for decimals, measures and integers of any size. Construct and interpret appropriate tables, charts and diagrams for grouped and ungrouped data. Order positive and negative intergers, decimals and fractions. Describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers). Construct and interpret appropriate tables, charts, and diagrams for grouped and ungrouped data.
On Target	Your students will learn about averages, percentages and fractions as they calculate how accurate they've been.	Clipboard, activity equipment: archery	Understand and use place values for decimals, measures and integers of any size. Construct and interpret appropriate tables, charts and diagrams for grouped and ungrouped data. Order positive and negative intergers, decimals and fractions. Describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers). Construct and interpret appropriate tables, charts, and diagrams for grouped and ungrouped data.
Build 'em Up	On water or land, students will design a raft or buggy which they'll use to complete a series of challenges. Data collected will then be applied to distance/speed/time calculations.	Clipboard, tape measure, stopwatch, activity equipment: raft/buggy building	Understand and use place values for decimals, measures and integers of any size. Interpret fractions and percentages as operators. Use standard untis of mass, length, time. Use a calculator and other technologies. Change freely between related standard units. Use compound units such as speed. Construct and interpret appropriate tables, charts and diagrams for grouped and ungrouped data. Understand and use standard mathematical formulae and expressions, including scientific formulae. Substitute numerical values into formulae and expressions. Interpet mathematical relationships both algebraically and graphically.