Take This

Your school uniform

Years 5-6

GEOMETRY

Transformation
Explore the design features of the school logo/monogram. Show on a diagram how it includes reflection, rotation, translation.

Design an 'original' alternative school (or class) logo/monogram that includes at least two elements of transformation.

Explore the symmetry of garments by placing patterns on a fold as they create the garments for toys (as above).

GEOMETRY

Shape
Explore shapes, including those that tessellate, by researching, measuring and designing a school sunhat.

MEASUREMENT

Create a school uniform for a mascot or toy (exploring accurate length measurement and area).

Work in pairs to take accurate body measurements (height, arm and leg length, neck).

Make accurate measurements of two items of their school uniform (eg. (T) shirt and skirt/shorts). Have students turn garments inside out, notice the way they are made, including seams and seam allowances. Calculate the approximate square measure (m^2) of fabric used for each.

Take accurate body measurements of a favourite toy. Calculate the amount of fabric needed to make a two-piece school uniform for this toy.

Present plan/design to a peer, before cutting, sewing and fitting garments to the toy. Display class/school 'mascots'.

Create a school beanie:
http://www.nzmaths.co.nz/resource/making-beanies

STATISTICAL INVESTIGATIONS AND LITERACY

Gather, sort and display body measurement (height, arm and leg length, neck) data and investigate middle, spread and clustering of data.

Consider improved features/preferences for the school uniform, (or addition of a new uniform item, eg. school jacket), design a survey to investigate preferences, collect data, display and present results, and make recommendations.

Use data squares to gather multivariate data to answer summary and comparison questions such as: Do more boys than girls prefer the summer sports uniform? Do more parents use/want a uniform exchange to operate in the school than to buy new uniforms? Make a display and present results.

NUMBER AND ALGEBRA

As part of ongoing numeracy learning, apply efficient problem solving and number strategies to calculate fabric amounts and costs.

Find fractions of quantities, lengths and areas.

Explore inverse operations of multiplication and division, as amounts/costs are multiplied (eg. if fabric for 1 shirt costs $2.75, what is the cost of 24 shirts? If fabric for 24 shirts cost $66.00, what does 1 shirt cost?)

Solve open-ended problems. Eg. polo shirts cost $32, Sweat shirts $41, shorts $19 and hats $9. If the school buys a bulk lot of these 4 items for $1,000, how many of each type of garment might they get?

Recognize sequential patterns and relationships in amounts/costs/measurements.

Record patterns in fabric amounts/costs in a table. State relationships using an equation for n garments.

Explain reasoning and justify strategies and solutions.