

Teaching Maths Skills Using Lego Bricks

When I'm not busy supporting teachers or writing presentations, I can usually be found playing Lego with my children! It's an incredibly creative toy, but it can also be used to support maths in a number of different ways. Here are some examples of ways to use Lego to support mathematical concepts.

Greater than/Less than
Building towers to allow children to be able to compare numbers with a concrete representation

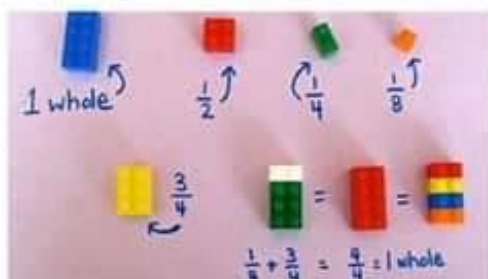


Measuring with Lego

Lego can be really helpful for younger children to measure objects in a nonstandard unit. It also makes it easier for them to see the difference in height between two items.



Lego fractions - investigating what fractions can be represented using Lego



Lego to create patterns

Try investigating reflective symmetry and rotational symmetry. Also see if your children can create repeating patterns using translation.



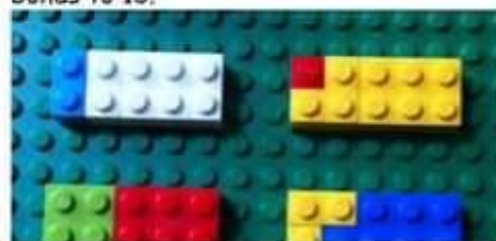
Introducing the Part-Part-Whole model

Can your children find the total of two Lego blocks?

Part	Part
	
Total	
	

Investigating number bonds within 10

This child is combining two colours of Lego totalling 10 to investigate number bonds to 10.



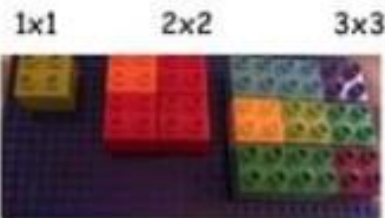
Lego to help create graphs for data handling

Can your children collect information and present this as a Lego bar chart. Here favourite colours have been represented. Which is the most popular colour?



Have you used Lego within a mathematical context? We love to see creative ways that different concepts can be taught. Tweet us your examples @first4maths

Lego to investigate square numbers - by creating squares out of Lego your children are creating square numbers. What pattern do they notice if they think of these squares as being arrays? How many square numbers can they make before they run out of Lego?



Using Lego towers to investigate taller, shorter, more or less and finding the difference - by building towers of two different heights children can compare these in different ways. By placing the towers next to each other they can calculate the difference between the tallest and the shortest tower.

Money and Lego

Assign each Lego block a different price.

Have your children come work out what combination of Lego blocks they can buy with their given amount to make a planned design.

Will they have to change their design based on how much Lego they can buy with their given amounts?

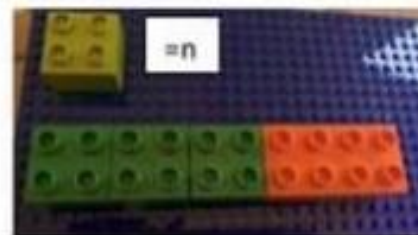
Can they take some Lego blocks back for a refund and buy different blocks to change their design if needed?



Lego Algebra

By assigning algebraic values to Lego children can represent in a concrete way what these calculations are stating.

e.g. $3n+4$



Patterns

Can your children complete a repeating pattern that you have started for them or can they create their own.

To increase the complexity, you could create a pattern that has a formula attached to it. Can your children work out what the next 2 parts of the pattern will look like? Can they predict what the 10th part of the pattern will look like? What is the formula for the pattern?



Lego Area

What different shapes can your children make that would have an area (total amount of the board covered) of 24 studs?

Which of these shapes are regular shapes? (all sides the same length)
Which of these shapes are irregular (sides have different shapes) or rectilinear? (a shape where sides can be different lengths but all sides meet at a right angle)

