

Review: MoreToMath

By Jetro

Pictures by LEGO® Education

If you have kids (or nephews) chances are at one time or another you have used LEGO bricks for more than building a set or MOC. I have used bricks as (substitute) counters in a game, as a language learning tool [1], and to build letters, to name but a few alternative “home school” uses.

But probably the most immediate use – whether conscious or not – is related to maths: counting studs, combining brick sizes to fill a gap in a wall, mirroring constructions or even translating 2D instructions into a 3D build are all maths related skills.

Of course none of that is usually meant as a serious sustained effort to teach maths, nor is it a readymade solution that can be deployed in the classroom – in comes MoreToMath.

“MoreToMath is ... a supplemental tool for first and second

grades, aimed at teaching and reinforcing the practices of mathematical problem solving”. At least that’s what the press release says. So what is it all about?

MoreToMath consists of two parts. The first is a box with 520 mostly standard LEGO bricks. The set contains a large selection of 1x1 and 1x2 bricks in various colours. There are also some 8x8 plates to build on and other parts (cones, plates, longer 1x bricks). The set comes in a handy container with sorting tray and is designed to be used by a pair of students. The brick selection is clearly oriented towards a very specific purpose: when you see the parts you don’t immediately feel you would like to own multiples and build who-knows-what with it and the parts in themselves do not immediately evoke maths concepts either. The key to the set is the software/curriculum pack.

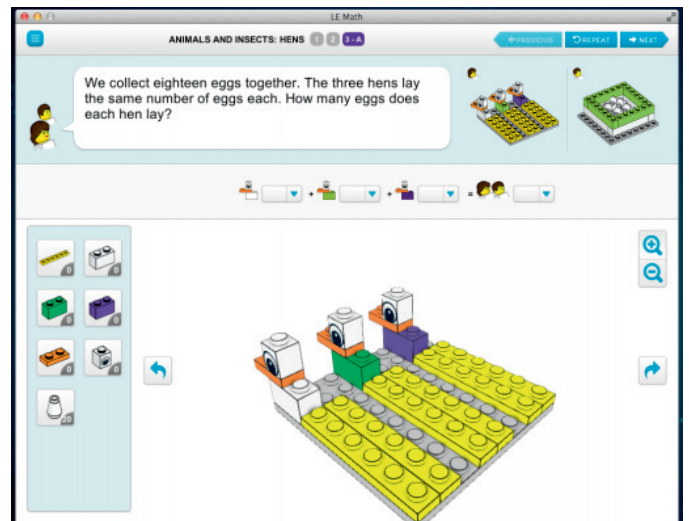




It contains not only a specific on-screen building program that allows students to rebuild their solutions on the board (in a way that is reminiscent of LDD), but also (and probably more importantly) a curriculum pack with 48 activities in 16 concept lessons that deal with different aspects of Maths.

The buzzword for this kind of learning experience is “hands-on minds-on”, but a little reflection on why we like to use LEGO® ourselves brings out the reasons behind the success of this approach: children learn best when they are engaged in the learning, when they like what they are doing within a meaningful context and get a chance to try things out for themselves.

In addition to this obvious advantage, using LEGO bricks allows them to see otherwise abstract concepts in a concrete, physical environment, making it much easier to assimilate the concepts they are learning.

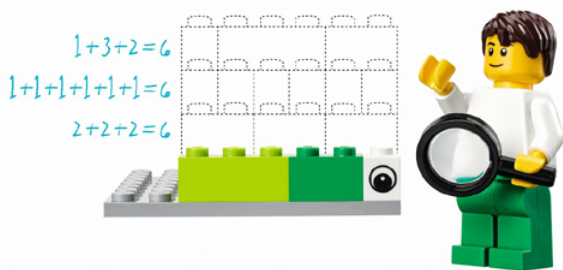


Finally one or more solutions can be built on the board so the class can see there can be more than one correct answer.

MoreToMaths does not substitute “traditional” learning, but it complements it in a way that draws students’ attention and helps them come to terms with abstract concepts by building them. And contrary to other learning experiences, the real added value lies in the curriculum, rather than in the relatively straightforward parts pack.

Acknowledgements: LEGO Education for providing a review copy of the set and the software

[1] See HBM014 for an article on teaching English with LEGO bricks
#



Take as an example the lesson you may have already seen in the picture with the classroom. Basically it teaches students to divide 18 into three (not necessarily equal) parts. By doing so physically (taking 18 “eggs” and placing them next to any of the three hens) the students build their solution and learn to “see” how a number can be divided into several parts. Visualising abstract concepts is key.