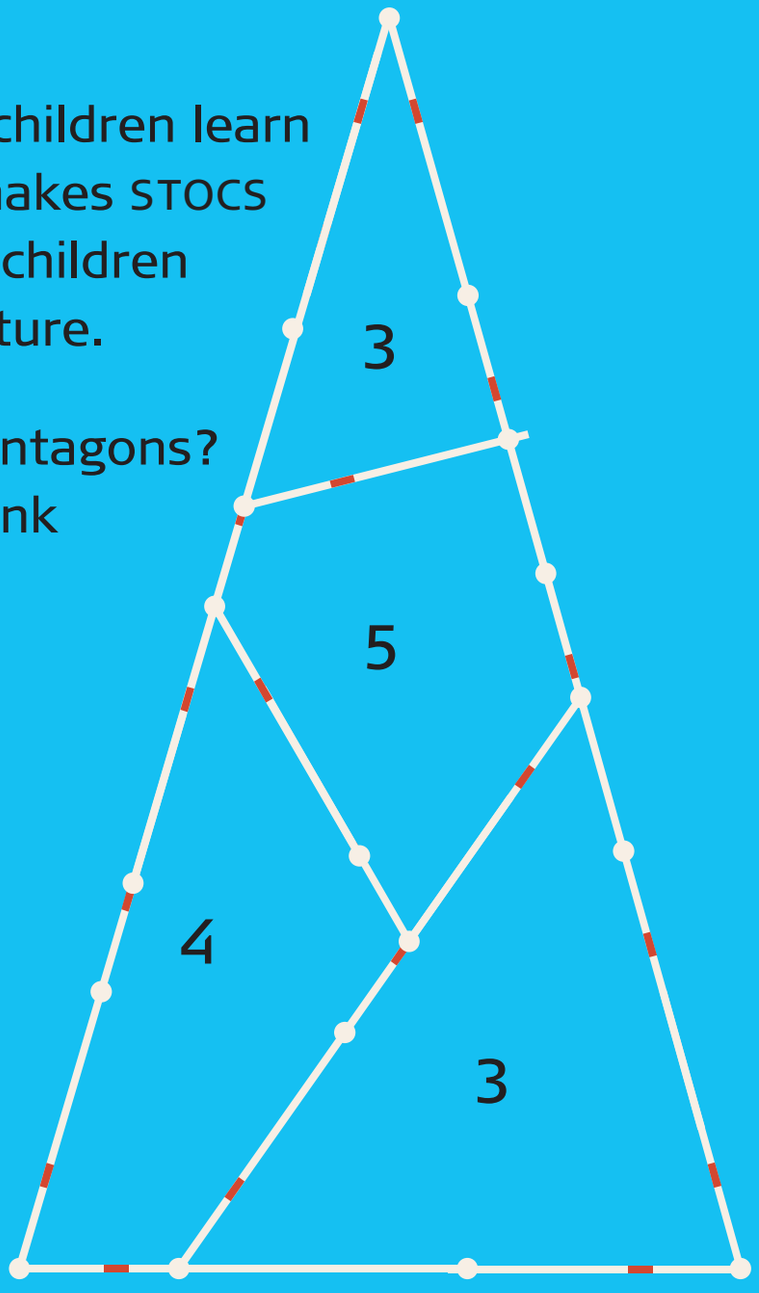
An excellent educational resource

$$a^2+b^2=c^2$$

When creating a structure with STOCS children learn about lines, angles and shapes. This makes STOCS an exciting, engaging way of teaching children about maths, technology and architecture.

- What are triangles, squares and pentagons?
- What does an architect need to think about when he plans a building?
- What's the best way to build a tall structure?
- What are crystals?

Create action-packed, memorable lessons with STOCS.



STOCS©

The clever cords construction system

This brochure provides activity ideas to inspire teachers, child-care professionals and parents to plan fun activities using STOCS. There's a selection of challenges suitable for all abilities so children of any age can take part.

With STOCS however, the possibilities are endless so with a little initiative and imagination, it's easy to build new exciting structures time after time.

If you have a great idea and you'd like to share it with us, please e-mail the details along with a picture of your creation to education@stocs.nl

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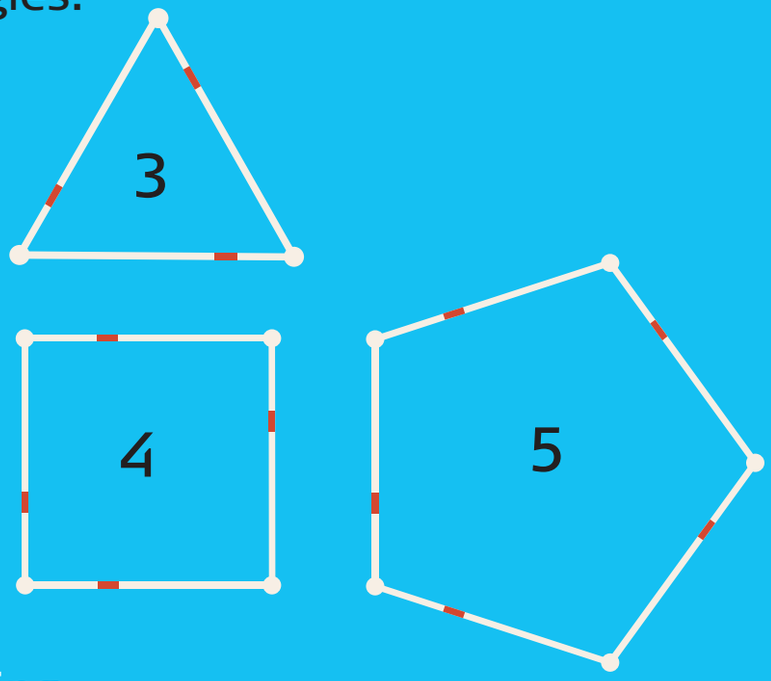
1 Sides and angles

6-12 years

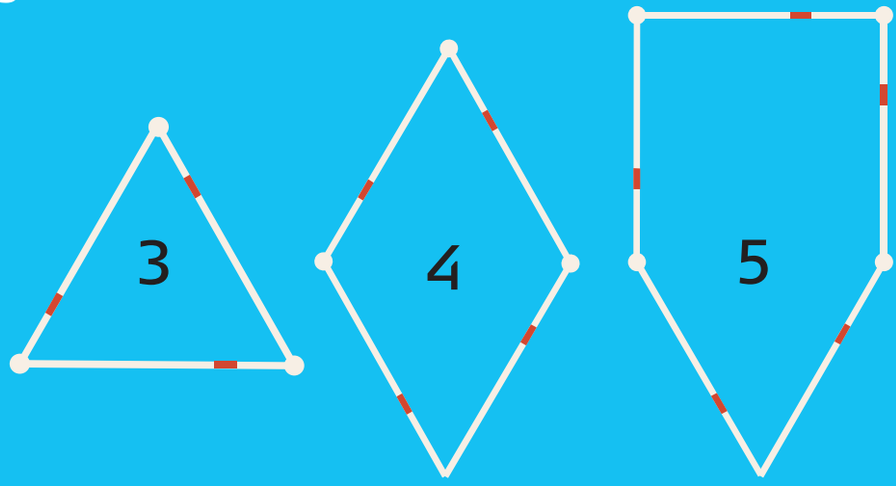
Here you will to learn about shapes and angles. Soon you will start to recognise shapes in the environment around you, for example, on buildings and objects.



●○○○ Tie your STOCS into a triangle, a square and then a pentagon. Place the three shapes flat on the floor. Can you see that within each shape, all angles are the same?

●●○○ Now, try to squash the shapes by moving the sides. With the square and pentagon it's easy but you'll soon discover that this is impossible with the triangle... it keeps the same shape and stays very strong!

●●●○ Next, make a three-dimensional STOCS structure. Count the shapes on the outside faces – how many triangles and pentagons are there?



2 Stability and strength

8+ years

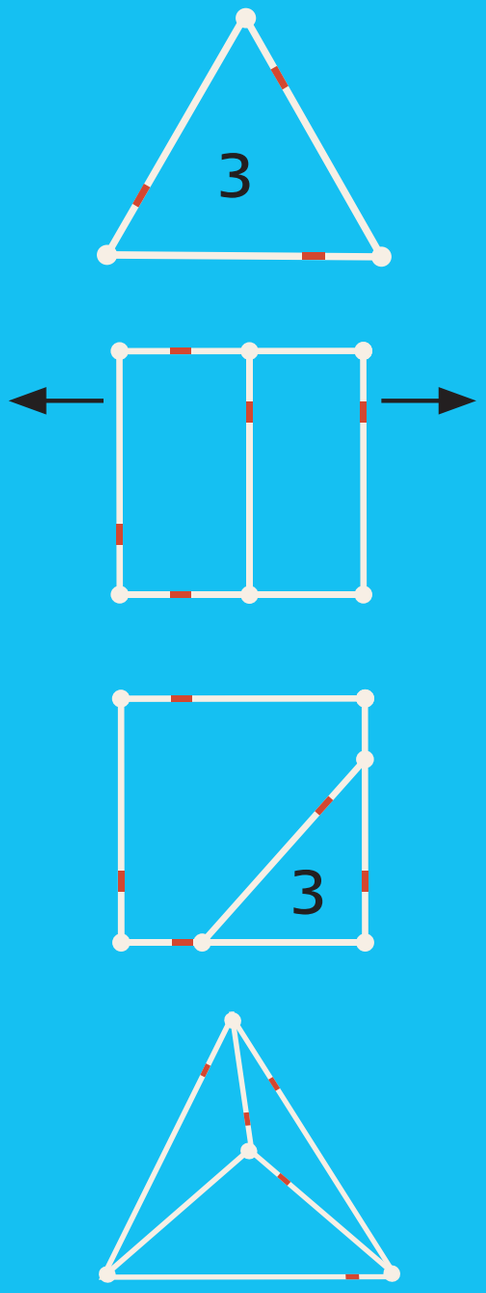
Structures should be firm and stable. These activities show how you can stop your work from collapsing and also how you can build a strong, cost-effective structure.

●●●● Search the internet for images of bridges or towers built with bars. Bet you will find some famous examples. Do you recognise any?

●●●● Create a square and a triangle using your STOCS. Place them flat on the floor. What do you think about the difference in stability?

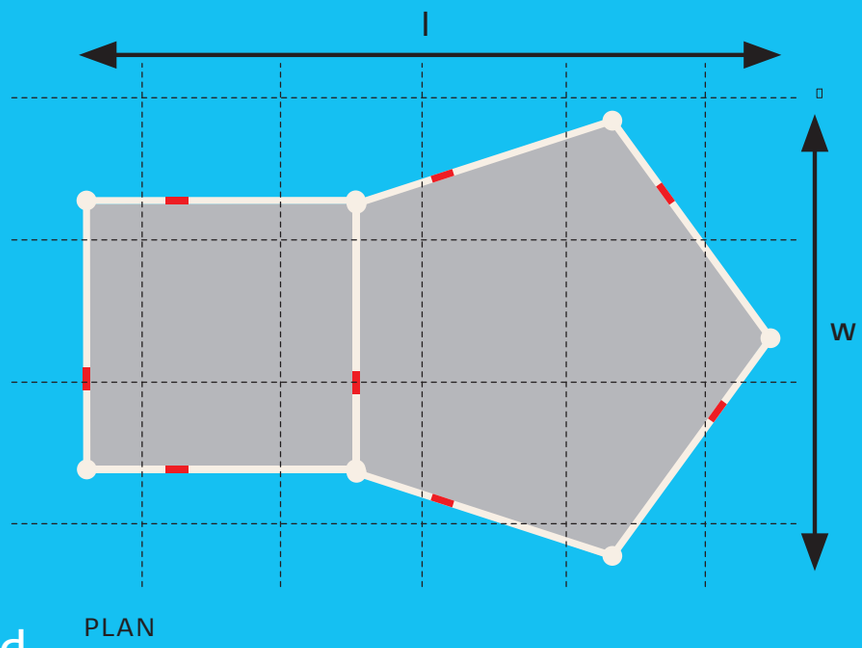
●●●● Try tying one of the STOCS across the corner of the square, as shown in the picture. This makes the square even stronger.

●●●● Now make a three-dimensional triangle like the picture shows. Isn't it amazing how strong this is?



3 How architects plan a building

8+ years



PLAN

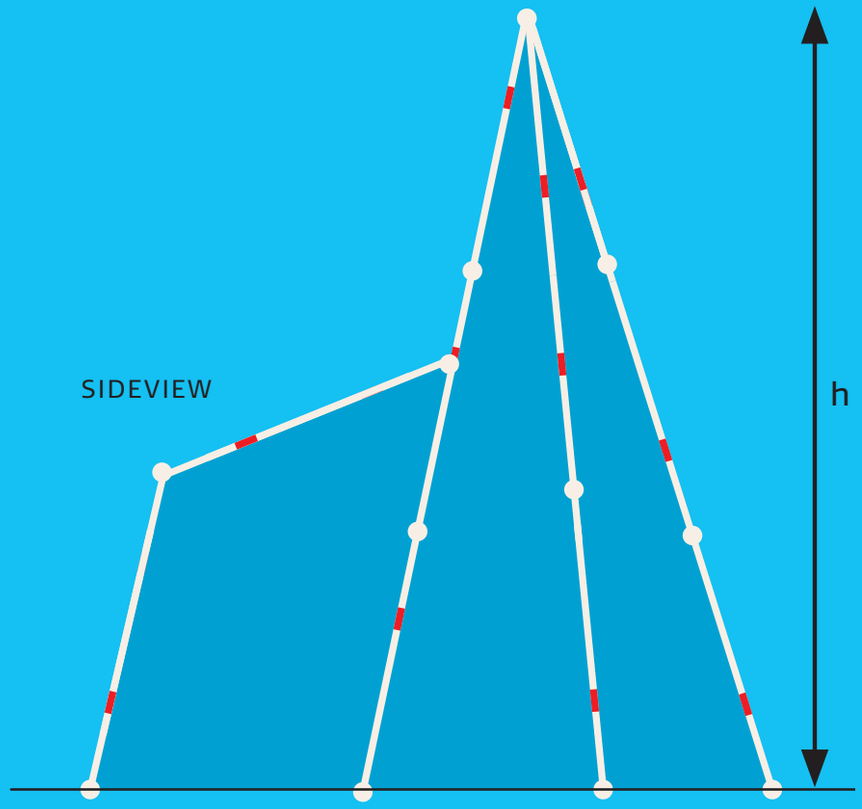
Architects have to make sure that a building is attractive, strong and comfortable to live in. Would you like to plan a building?

●●●● Make a STOCS construction and decide where to put the entrance.

●●●● Draw on squared paper the ground plan of your STOCS building. Calculate a scale. E.g. a length of 50 cm of your building is 5 cm on paper.

●●●● Cover two walls of the structure with a rug or cloth. Imagine the other walls are made of glass. Experiment with where you would have glass if you were going to live there.

●●●● Now draw the sides of the building working with the same scale. There's your building plan!



SIDEVIEW

4 Practising teamwork and ideas

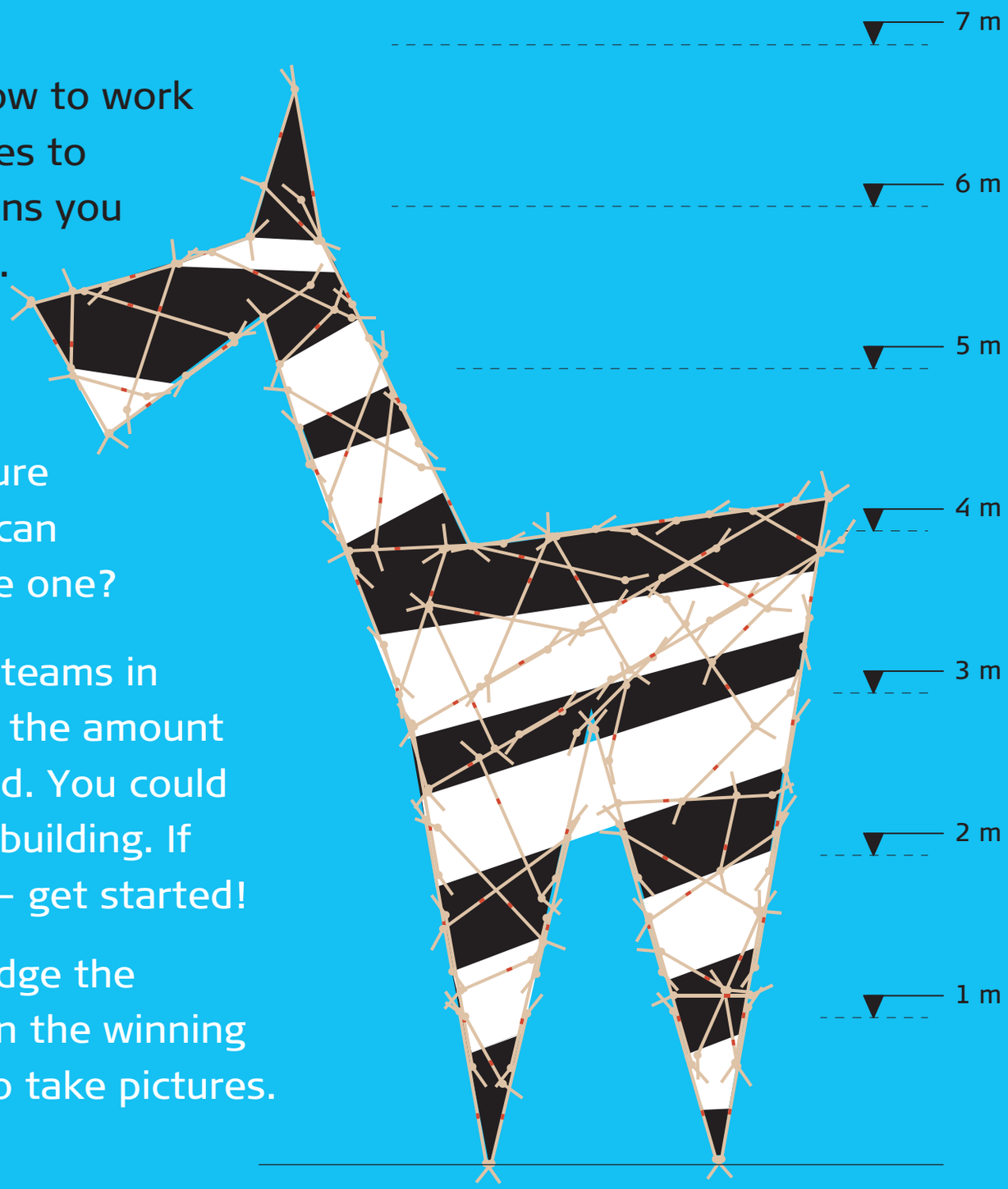
8+ years

With STOCS you learn how to work as a team. When it comes to building, teamwork means you make a better structure.

●●●● Organise a contest – Who can build the highest structure with 25 STOCS? Or who can build the most attractive one?

●●●● Form two or three teams in your class and agree on the amount of STOCS you are allowed. You could also set a time limit for building. If you're ready for action – get started!

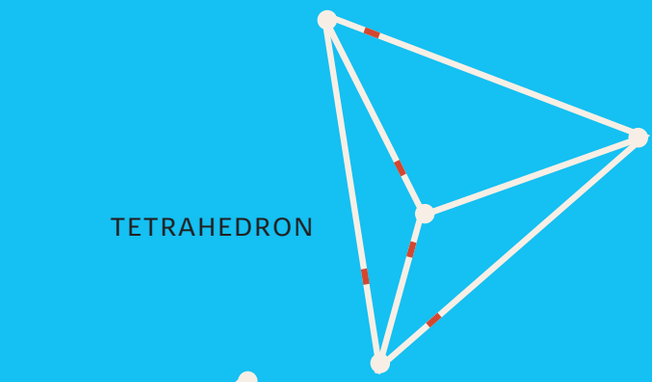
●●●● Ask someone to judge the structures and decide on the winning creation. Don't forget to take pictures.



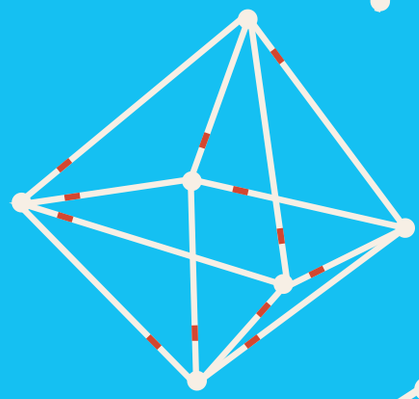
5 Build brilliant crystals

10+ years

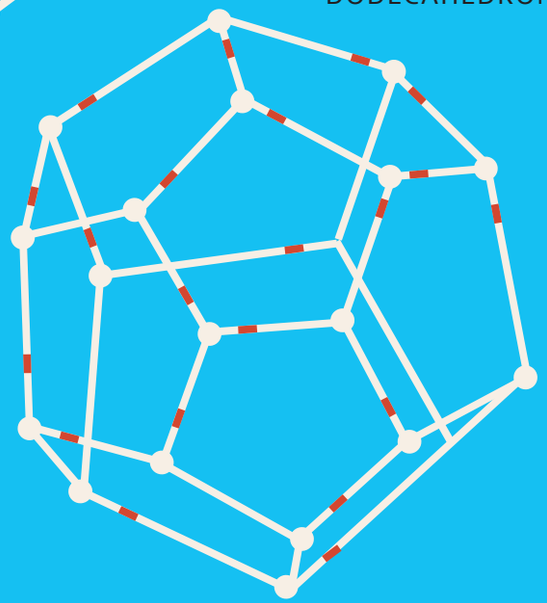
Nature creates the most impressive structures... crystals. Can you believe sugar and salt are made of crystals and that they‘re even in your ice cream?



●●●● Using your STOCS, build a tetrahedron. This is a shape made of four triangular faces, like the picture shows. Notice that all the faces are identical.



●●●● Next build three more separate tetrahedrons, so you have four in total and connect them. Can you see how they fit together perfectly?



●●●● The toughest challenge! Try to build a structure with eight identical faces, an octahedron, or dare connecting twelve, a dodecahedron! This will create a very impressive crystal – just like the ones Mother Nature creates!

A hands-on approach to learning

STOCS can create stunning structures, made from all sorts of shapes - squares, triangles, pentagons and more. They can be connected to one another at any point and any angle so the possibilities are endless.
STOCS can create small structures or life-size ones - imagine what happens when you take a few small structures and connect them to one another. Really impressive creations come to life!

STOCS, the clever cords construction system.

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