

Megastructure Home Learning - Yr3/4 Autumn 2020

Below are a selection of activities that you might want to try as extra activities after you have completed the Maths and English online lessons that are on the school website. There is a wide selection here and we would love to see your work, so please send anything you do to year34@allsaintsprimaryschoolmaldon.co.uk.

Creative - (Subjects included - Art, Music, Design & Technology)

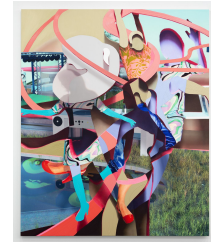
Many people brave the giddy heights and try to climb the tallest buildings in the world. One such brave person is, **"The French Spiderman"**, who has even climbed the Burj Khalifa!!

You can watch it here:

<https://www.youtube.com/watch?v=w7RLDvfM9HQ>

If you were The French Spiderman, which building would you want to climb? Why don't you make up your own comic strip to show the adventures of **"The French Spiderman"** as he climbs your favourite megastructure?

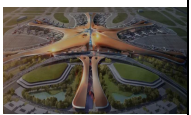
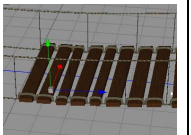
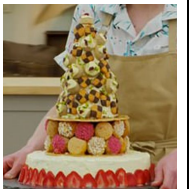
Create a mosaic/collage picture of skyscraping megastructures. Have a look at some pictures of some of the world's greatest megastructures and use them as inspiration to make a mosaic or collage. You could use old magazines, newspapers, pictures, colour paper or card or anything else you can find in your house.



The Great British Bake Off has recently just finished and contestants created some fantastic dessert towers. Can you bake a dessert tower? What will you put in it? What will it look like? How tall can you make it? We look forward to seeing your yummy creations.

The Capilano Suspension Bridge in Vancouver, Canada was built in 1889 originally using rope and wooden planks. Find out more about this amazing megastructure here: <https://www.capbridge.com/> Can you design and make your own rope bridge?

Make a poster to show different types of megastructures. Use this link to help you: <https://www.theguardian.com/artanddesign/gallery/2015/nov/09/megastructures-seven-wonders-of-the-modern-world-near-completion>



Knowledge & Understanding of the World (Subjects included - Science, Geography, History & RE)

Over the years, many megastructures have been built to commemorate an event or a person such as the Royal Albert Hall, The War Memorial and Nelson's Column in London. Mega statues have been erected to commemorate people and gods - look at the website to find out more about them worldwide. Can you recreate one from plasticine/ food etc?

<https://www.theatlantic.com/photo/2018/10/photos-15-tallest-statues-world/574531/>

Other megastructures can date back to more ancient times. Think



We have spent a lot of time in the last few weeks planning to build our megastructure out of straws, masking tape, string, paper, card and anything else you decided to use. Could you have a megastructure day of your own at home? Your design brief was to build the biggest and best Adventure Playground, which had to have a bridge, a swing, an elevated hut (which could hold weight) and a climbing frame. We cannot wait to see your creations!

You may remember watching this [CLIP](#) in class when we learnt about the strength of triangles. Can you use sweets and cocktail sticks to create a structure that would support the weight of a brick?!? Remember not to eat all the sweets! YUM, YUM!



about Ancient Egypt and Ancient Greece. Why were they built? What were they used for? Are they still used today and if so, are they being used for the same cause/reason? Use this website to help you: [LINK](#)

What can you find out about nature's megastructures? Look at cathedral termites for instance!

Watch the story of the Nutcracker and do some Nutcracker crafts. Use these links:

Story: https://www.bbc.co.uk/programmes/articles/5G2q6rSsQ8MYg8YbhgwKTtw/the-nutcracker?dm_t=0,0,0,0,0

Crafts: https://www.bbc.co.uk/teach/ten-pieces/ten-pieces-tasters/ziv3382?dm_t=0,0,0,0,0

<https://youtu.be/KFWlr3nzGnc> use this backing track for, "**We wish you a merry Christmas**" (it says it is for boomwhackers but it can be used with any tuned instruments)



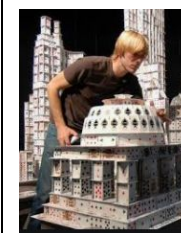
The tallest building in the world, the Burj Khalifa in Dubai, took nearly six years to build. Construction of the tallest building in Europe, the Federation Towers in Moscow, started in 2003. Meanwhile, in China, a 57 storey tower block in Changsha was constructed in merely 19 days. Can you create your own tall structure using just one material? Straws? Playing cards? Blocks? How can you make it stronger? Watch this clip

<https://www.bbc.co.uk/teach/class-clips-video/design-and-technology-ks2-making-structures-stronger/z626hbk>

Some megastructures have a specific use. This could be as a bridge, or a dam and so on. Find out what is special about the Falkirk Wheel. What is its purpose? Can you explain how it works? What about the Thames Barrier? What is its purpose and how does it work?

Why not get the family together and have a go at, "**Rudolph is coming to town**" with percussion - you could use pots and pans or body percussion maybe. Use this track to help you:

https://youtu.be/aoVdr_ZhBRo



PE and Wellbeing

Go Noodle on Youtube: [LINK](#)
Cosmic Kids Yoga on Youtube: [LINK](#)
Joe Wicks school workouts: [LINK](#)

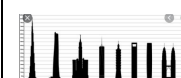


Design a megastructure assault course for an Iron Man -style competition for Spiderman or another comic strip character.

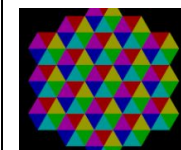
Extra Math Activities

Make a bar graph to show the world's top five tallest buildings. Watch these clips to help you:

<https://www.youtube.com/watch?v=PuTqWxuAazI>
<https://www.youtube.com/watch?v=jqAavgOf-ZQ>

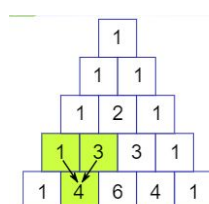


In your megastructure day you will have found out how strong the triangle shape is. We say that a shape tessellates if we can use lots of copies of it to cover a flat surface without leaving any gaps. How many types of triangles are there and which ones will tessellate? Can you create wallpaper designs and patterns? Use this website to help you: <https://nrich.maths.org/11504>



Extra Math Activities Cont...

What can you find out about Pascal's triangle? Could you do a presentation to your family about what you have found? Maybe draw a poster to show off anything you have found and then send it into us. <https://www.mathsisfun.com/pascals-triangle.html>



What are the first five square numbers? Are there triangular numbers as well? If so, what are the first five? Is there a pattern or a way to calculate them without drawing them out each time? Can you tell me what the 10th square number is or 10th triangular number? What about the 20th!?

