



Minds in Motion

FORTifide

Activity Rundown:

Today we will be building perhaps one of the best quarantine activities yet! We will become engineering and take into consideration all of the different landscapes, environments, and climates from around the world for this project. There are extreme landscapes such as the jungle, Antarctica, the desert and many more. When we think about these environments would it be possible for you to survive? We will test this theory by using all of our brainpower to build the highest quality forts to survive!



You will need:

- + Pillows
- + Blankets
- + Chairs
- + Paper
- + Pencils
- + Boxes
- + Flashlight
- + Fan
- + Anything you can find around your house that might be suitable for a fort!

Let's do it!

- 1) Before we begin to design a fort that will be able to withstand the world's harshest elements we must put ourselves in the mindset of being an engineer!
- 2) Engineers go through a process before starting a project that allows them to map out all of the possible solutions for a problem.
- 3) The engineering design process goes as follows:
 - **Define** your problem
 - **Identify** possible solutions



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- **Brainstorm** more ideas. What are the pros and cons of each
 - **Select** the most promising solution
 - **Prototype** your solution
 - **Test** your solution
 - **Improve** your design based on the testing
- 4) Now that we are familiar with the engineering design process you must pick an environment that you would like to put your fort up against. For example, let's say we were looking to build a structure that could withstand the climate of the arctic.
 - 5) Our problem would most likely be surrounded by the idea of staying warm and the ability to withstand strong winds.
 - 6) Take out a piece of paper and go through the engineering design process that is listed above. In the brainstorm phase be sure to draw out your designs and list your materials that you think you will use.
 - 7) After you have completed the engineering design process and have gotten to the testing phase you may begin building!
 - 8) Think about what you will need to keep yourself warm and protected from the strong winds!
 - 9) When you are ready to fully test your fort, if possible place multiple fans around your fort and get in!
 - 10) Are you able to feel the wind at all? Are you warm inside your structure? Are there certain design flaws that you can improve upon?
 - 11) We hope you enjoyed building a fort in the world's harshest climates!



Resources:

- <https://my-little-poppies.com/forts-stem/>
- <https://www.sciencebuddies.org/science-fair-projects/engineering-design-process/engineering-design-process-steps>



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Reach out!

We would love to hear from you about all the amazing STEM projects you are doing at home! Show us your finished products on any of the following social media platforms by tagging us or by using the following hashtags. We hope these projects have brought some excitement to your day during these difficult times.

Let us know how we did! Please [click here](#) to fill out a short survey on how well we did and what you would like to see more of in the future. Thank you!

Twitter: **@MyMindsInMotion**

Facebook: **@mindsinmotion2014 & @ucactiveliving**

Instagram: **@ucalgaryactive**

Please use the following hashtags!
#ucalgarycamps #ucalgarytogether