

***S.T.E.M.***

***Science – Technology -  
Engineering - Math***

Mr. Skirbst

# *Earth & Space Science*

## STEM 1: EARTHQUAKE STRUCTURE

[Marshmallow structure](#) [marshmallow tower](#) [Earthquake table](#)  
[Engineered spaghetti tower](#)

## STEM 2: HURRICANE & FLOOD PROTECTION

<https://www.youtube.com/watch?v=f6t4dkMUOZ0>  
<https://www.youtube.com/watch?v=F4iUPbbblpA&t=84s>  
<https://www.youtube.com/watch?v=vWajbL0ZUHE>  
<https://www.youtube.com/watch?v=6xFjQSZVTK4>  
<https://www.youtube.com/watch?v=nXmNjuSh4rg>

## STEM 3: WATER FILTRATION

<https://youtu.be/KMP9-49I1U4>  
<https://youtu.be/rXepkIWPhFQ>  
[https://youtu.be/j\\_ouCfFGIil](https://youtu.be/j_ouCfFGIil)  
<https://youtu.be/yjIE9km3Utl>  
[https://youtu.be/tPP\\_Yn2w2Sk](https://youtu.be/tPP_Yn2w2Sk)

## STEM 4: WATER BOTTLE ROCKET

<https://youtu.be/-iSo8u7WFFk> (Step 1 Tutorial)  
<https://youtu.be/6X8abVd8GRM> (Step 2)  
<https://youtu.be/5YS-ETfGM8w> (Make your own)  
<https://youtu.be/3fHu5iQurDo> (Science Olympiad)  
<https://youtu.be/CCycRo5C1WE> (Rocket Fins)  
<https://youtu.be/DrPt-AktIMs> (How much water)

# Life Science

## STEM 1: OSMOSIS

[Eggsperiment](#) [Pototo](#) [Potato cores](#) [osmosis kids](#) [hypotonic vs hyupertonic](#)  
[Paper balloon](#) [water-proof paper](#) [waterproofing](#) [oil technique](#)  
[Another way](#)

## STEM 2: SEED GERMINATION

[https://youtu.be/dlq5U9IB\\_ew](https://youtu.be/dlq5U9IB_ew)  
<https://youtu.be/T94hwhYCFsY>  
<https://youtu.be/EDADxVr9Mng>  
<https://youtu.be/EGcHfDtOnF8>  
<https://youtu.be/BSPIjwNmJN4>  
<https://www.youtube.com/watch?v=Hs9KgdLwJYQ>  
<https://www.youtube.com/watch?v=VBvkQRAFSUA>  
<https://www.youtube.com/watch?v=nuE9zpdo67Y>  
[https://www.youtube.com/watch?v=dlq5U9IB\\_ew](https://www.youtube.com/watch?v=dlq5U9IB_ew)  
<https://www.youtube.com/watch?v=kldH1ZSvF8o>

## STEM 3: ANGIOPLASTY

<https://youtu.be/fLonh7ZesKs>  
<https://youtu.be/duGA94-usUs>  
<https://youtu.be/p3z9FLYijrQ>  
<https://youtu.be/UHPI3CMiAlg>  
<https://youtu.be/Krx4ayd-cDo>  
<https://youtu.be/dSVkclnD3ds>  
<https://youtu.be/DbN9MZjzXS4>

## STEM 4: WATER BOTTLE ROCKET - PARACHUTE

<https://youtu.be/IFJ-IPwTIsU> (Parachute)  
<https://youtu.be/vMT-97kW9nQ> (Parachute Reefing)  
<https://youtu.be/nnZbji8Payc> (Easy Parachute)  
<https://youtu.be/m2ui8ITPIU8> (Parachute Part 1)  
[https://youtu.be/\\_qjTHr-gqo](https://youtu.be/_qjTHr-gqo) (Parachute Part 2)  
<https://youtu.be/yka9f7Dlfdk> (Parachute Part 3)  
<https://youtu.be/jsytoMrWock> (Parachute Part 4)

# Physical Science

## STEM 1: EGG DROP

[Crash dummy Egg Drop](#)

## STEM 2: HOT BOX

<https://youtu.be/OJ9u3pDQeM4>

<https://youtu.be/luiCAiXWmbU>

<https://www.youtube.com/watch?v=8I96BzSNNqE>

<https://www.youtube.com/watch?v=yOXWufRbe2Q>

<https://www.youtube.com/watch?v=NymrqzeGf5c>

[https://www.youtube.com/watch?v=IRT-Q\\_dTu4M](https://www.youtube.com/watch?v=IRT-Q_dTu4M)

<https://www.youtube.com/watch?v=9kkJ7SIFeHU>

## STEM 3: CHEMICAL BATTERY

<https://youtu.be/CX84I5ZZHVg>

<https://youtu.be/IV4IUsholjg>

<https://youtu.be/Lv2xcGcr6Jg>

<https://youtu.be/GhbuhT1GDpl>

<https://youtu.be/edMN7P5oCaY>

<https://youtu.be/HfofZtf8oml>

<https://youtu.be/vlHfUJu3aKo>

[https://youtu.be/VMdS65\\_E\\_X4](https://youtu.be/VMdS65_E_X4)

<https://youtu.be/aCCK132OIGA>

<https://youtu.be/pnymgv5m7i8>

## STEM 4: WATER BOTTLE ROCKET – VERTICAL LANDING

<https://youtu.be/mTUGKhr7fM> (water rocket with boosters)

<https://youtu.be/3SScAKiKiFg> (2-stage water rocket)

[https://youtu.be/oa\\_mtakPlfw](https://youtu.be/oa_mtakPlfw) (SpaceX landing)

<https://youtu.be/9pillaOxGCo> (Upright landing)

<https://youtu.be/1sJlFzUQVmY> (Upright Landing)