**Stick Together/Civil Structures**

**Introductory activities/small scale investigations**

File folder bridges:

<http://bridgecontest.org/resources/file-folder-bridges/>

Physics Bridge Builder Game:

<http://www.physicsgames.net/game/Bridge_Builder.html>

Spaghetti Bridges:

Science Max | Pasta Bridge | Season 1 Full Episode | Kids Science

<https://www.youtube.com/watch?v=xN0poIrm0q8>

Spaghetti Exercises:

<https://www.teachengineering.org/activities/view/wpi_spag_act_joy>

 Spaghetti Bridge

 <http://www.teacherstryscience.org/kidsexperiments/spaghetti-bridge>

Straw bridge:

 Hands-on Activity: Straw Bridges

<https://www.teachengineering.org/activities/view/cub_brid_lesson01_activity2>

Build a Straw Bridge <http://www.discovere.org/sites/default/files/Build%20a%20Straw%20Bridge_090116.pdf>

Geodesic Gumdrop Structures:

<https://mesa.ucop.edu/wp-content/uploads/2017/11/Geodesic-Gumdrop-Structures-Research.docx>

 Powerpoint:

<https://mesa.ucop.edu/wp-content/uploads/2017/11/Geodesic-Gumdrops.ppt>

Geodesic Gumdrop

<https://www.exploratorium.edu/science_explorer/geo_gumdrops.html>

Bridge Types: Tensile & Compressive Forces:

<https://www.teachengineering.org/activities/view/cub_brid_lesson01_activity1>

Designs of Bridges:

 <https://www.teachengineering.org/activities/view/cub_brid_lesson02_activity1>

Science Buddies - Building Bridges

 <https://www.sciencebuddies.org/blog/2011/06/building-bridges.php>