

## Structures Scavenger Hunt

Find your group topic below and go on a scavenger hunt of structures! Your group will be responsible for teaching the rest of the class about your topic using presentation software. Your presentation needs to include the following:

1. The definition of your type of structure (if applicable)
2. Visual examples from around the world, noting the characteristics that make them your type of structure
3. One visual example of a structure that illustrates:
  - Types of polygons that are seen most often within your structure's design
  - Combination of side lengths that make up those polygons (using your exploration of polygons activities from the past two days)
4. Strengths and weaknesses of this type of structure
5. How shapes factor into the strengths and weaknesses
6. What shapes are missing from your structure and why you think this is
7. What you think would improve your structure's strength
8. How math helps in the design of structures
9. How math helps me understand my world

### Beam and Truss Bridges

Explore the Web sites below to find out about beam and truss bridges:

<http://science.howstuffworks.com/bridge1.htm>\*

[www.pghbridges.com/basics.htm](http://www.pghbridges.com/basics.htm)\*

[www.pennridge.org/works/brbeam.html](http://www.pennridge.org/works/brbeam.html)\*

[www.ce.ufl.edu/activities/cdrom/civil/sample.html](http://www.ce.ufl.edu/activities/cdrom/civil/sample.html)\*

[www.pbs.org/wgbh/buildingbig/bridge/basics.html](http://www.pbs.org/wgbh/buildingbig/bridge/basics.html)\*

[www.faculty.fairfield.edu/jmac/rs/bridges.htm](http://www.faculty.fairfield.edu/jmac/rs/bridges.htm)\*

### Suspension Bridges

Explore the Web sites below to find photos and information about suspension bridges:

[www.pbs.org/wgbh/buildingbig/bridge/basics.html](http://www.pbs.org/wgbh/buildingbig/bridge/basics.html)\*

[www.pghbridges.com/basics.htm](http://www.pghbridges.com/basics.htm)\*

<http://science.howstuffworks.com/bridge1.htm>\*

[www.faculty.fairfield.edu/jmac/rs/bridges.htm](http://www.faculty.fairfield.edu/jmac/rs/bridges.htm)\*

### Arch Bridges

Explore the Web sites below to find photos and information about arch bridges:

[www.pbs.org/wgbh/buildingbig/bridge/basics.html](http://www.pbs.org/wgbh/buildingbig/bridge/basics.html)\*

[www.pghbridges.com/basics.htm](http://www.pghbridges.com/basics.htm)\*

<http://science.howstuffworks.com/bridge1.htm>\*

[www.faculty.fairfield.edu/jmac/rs/bridges.htm](http://www.faculty.fairfield.edu/jmac/rs/bridges.htm)\*

### **Cantilever Bridges**

Explore the Web sites below to find photos and information about cantilever bridges:

[www.richmangalleries.com/cantilever\\_bridges.htm](http://www.richmangalleries.com/cantilever_bridges.htm)\*

[www.brantacan.co.uk/cantilever.htm](http://www.brantacan.co.uk/cantilever.htm)\*

<http://en.wikipedia.org/wiki/Cantilever>\*

[www.faculty.fairfield.edu/jmac/rs/bridges.htm](http://www.faculty.fairfield.edu/jmac/rs/bridges.htm)\*

### **Skyscrapers**

Explore the Web sites below to find photos and information about skyscrapers:

[www.pbs.org/wgbh/buildingbig/skyscraper](http://www.pbs.org/wgbh/buildingbig/skyscraper)\*

[www.howstuffworks.com/skyscraper.htm](http://www.howstuffworks.com/skyscraper.htm)\*

[www.greatbuildings.com/types/types/skyscraper.html](http://www.greatbuildings.com/types/types/skyscraper.html)\*

[www.emporis.com/en/bu/](http://www.emporis.com/en/bu/)\*

### **Airports**

Explore the Web sites below to find photos and information about airports:

[www.GreatBuildings.com/types/types/airport.html](http://www.GreatBuildings.com/types/types/airport.html)\*

[www.kdmodels.com/Airport\\_structures.htm](http://www.kdmodels.com/Airport_structures.htm)\*

[www.architecturalfabrics.com/ch11.html](http://www.architecturalfabrics.com/ch11.html)\*

[www.flysfo.com/about/press/as\\_min\\_presskit\\_new\\_photo.asp](http://www.flysfo.com/about/press/as_min_presskit_new_photo.asp)\*

### **Stadiums**

Explore the Web sites below to find photos and information about stadiums:

[www.worldstadiums.com/](http://www.worldstadiums.com/)\*

[www.cadinfo.net/editorial/sydney2k.htm](http://www.cadinfo.net/editorial/sydney2k.htm)\*

[www.bjghw.gov.cn/forNationalStadium/indexeng.asp](http://www.bjghw.gov.cn/forNationalStadium/indexeng.asp)\*

[www.tjhsst.edu/~kdomina/CAD02/dngsui/](http://www.tjhsst.edu/~kdomina/CAD02/dngsui/)\*

### **Your School**

Explore your school's structure. Use a digital camera to take photos of the structural design of your gym, the cafeteria, the office, the front of the school, etc.