

Grade 9 Integrated Technologies

Structures Chapter Questions

Mr. Brunato

- 1) What is a structure?
- 2) What 2 things must an engineer do before a structure is made?
- 3) What is force?
- 4) In addition to static and dynamic loads, what kind of forces must a structure withstand?
- 5) What elements act on a structure?
- 6) What is a load?
- 7) What is a dynamic load? Give an example
- 8) What is a static load? What kind of materials make up the static load of a bridge? What is the static load of a bookshelf?
- 9) What is compression?
- 10) What structure can support a long bridge? What is it made of?
- 11) What is tension? Give one example
- 12) What is one of the first materials to build a bridge? What was its advantage with regard to compression? Disadvantage? What replaced it?
- 13) What property of wood gives it an advantage to building bridges? Disadvantage?
- 14) What are 2 advantages of iron for building bridges?
- 15) What is fatigue? Give an example
- 16) What eventually replaced iron in bridge building? Name 2 qualities of this material
- 17) Draw and label a suspension bridge.
- 18) Why is a triangular shape ideal for structures?
- 19) What is the function of a brace?
- 20) Draw and label 4 kinds of trusses.
- 21) What is a trestle bridge?
- 22) What is a cantilever bridge? What does a long cantilever bridge consist of?
- 23) Draw and label a girder.