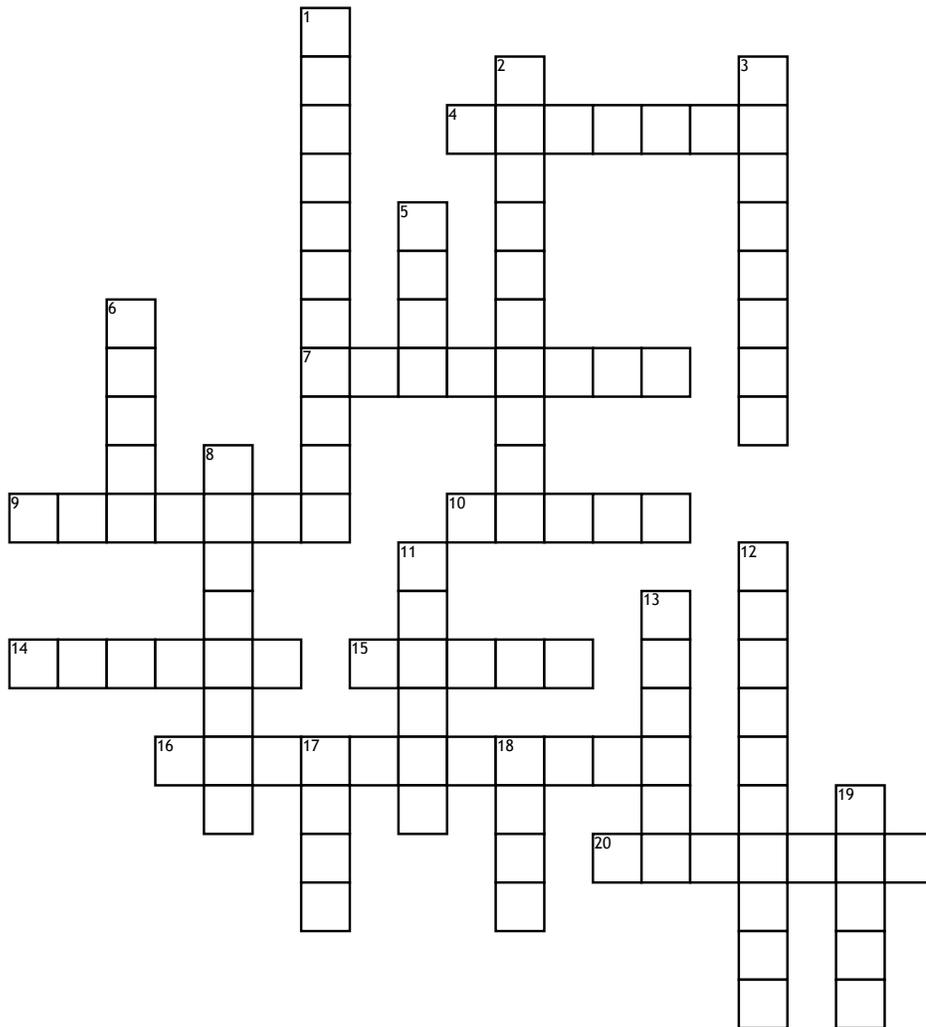


# Bridges



**Across**

- 4. A hinged bridge that acts like a seesaw. Sections can be lifted using weights as a counterbalance.
- 7. An arrangement that is balanced and equal on opposite sides of a central dividing line
- 9. The strain produced when a material is twisted.
- 10. A type of beam bridge, reinforced by a framework of girders that form triangular shapes.
- 14. A condition that occurs when structures bend under compression.
- 15. A framework of girders, some in tension and some in compression, comprising triangles and other stable shapes.

16. A modern design of bridge in which the deck is supported by cables directly attached to towers.

20. A force that tends to lengthen or stretch part of a structure

**Down**

- 1. A force that tends to shorten, push or squeeze a structure.
- 2. Similar to the beam bridge, this design gets its support from counterbalanced beams meeting in the middle of the bridge rather than from supports at either end.
- 3. The weight of the bridge's structure.
- 5. The simplest type of bridge. It is made from a rigid, straight structure resting on supports at either end.

6. A force that acts to move a material in a sideways motion.

- 8. The weight of traffic using the bridge.
- 11. A force that tends to distort the shape of a structure
- 12. A type of bridge in which the deck hangs from wires attached to thick cables. The cables themselves pass over towers and are securely anchored in concrete anchorages.
- 13. It is a structure that makes it easier to cross a barrier.
- 17. The distributions of weights on a structure.
- 18. A bridge having a curved structure. The design provides strength by exerting force downwards and sideways against the abutments.
- 19. A push or pull. In the case of bridges, it is applied to the bridge in the form of a load.

**Word Bank**

- |           |             |         |              |            |
|-----------|-------------|---------|--------------|------------|
| Bridge    | Truss       | Force   | Cable-Stayed | Buckle     |
| Stress    | Load        | Bascule | Cantilever   | Beam       |
| Torsion   | Truss       | Tension | Dead Load    | Shear      |
| Live Load | Compression | Arch    | Symmetry     | Suspension |