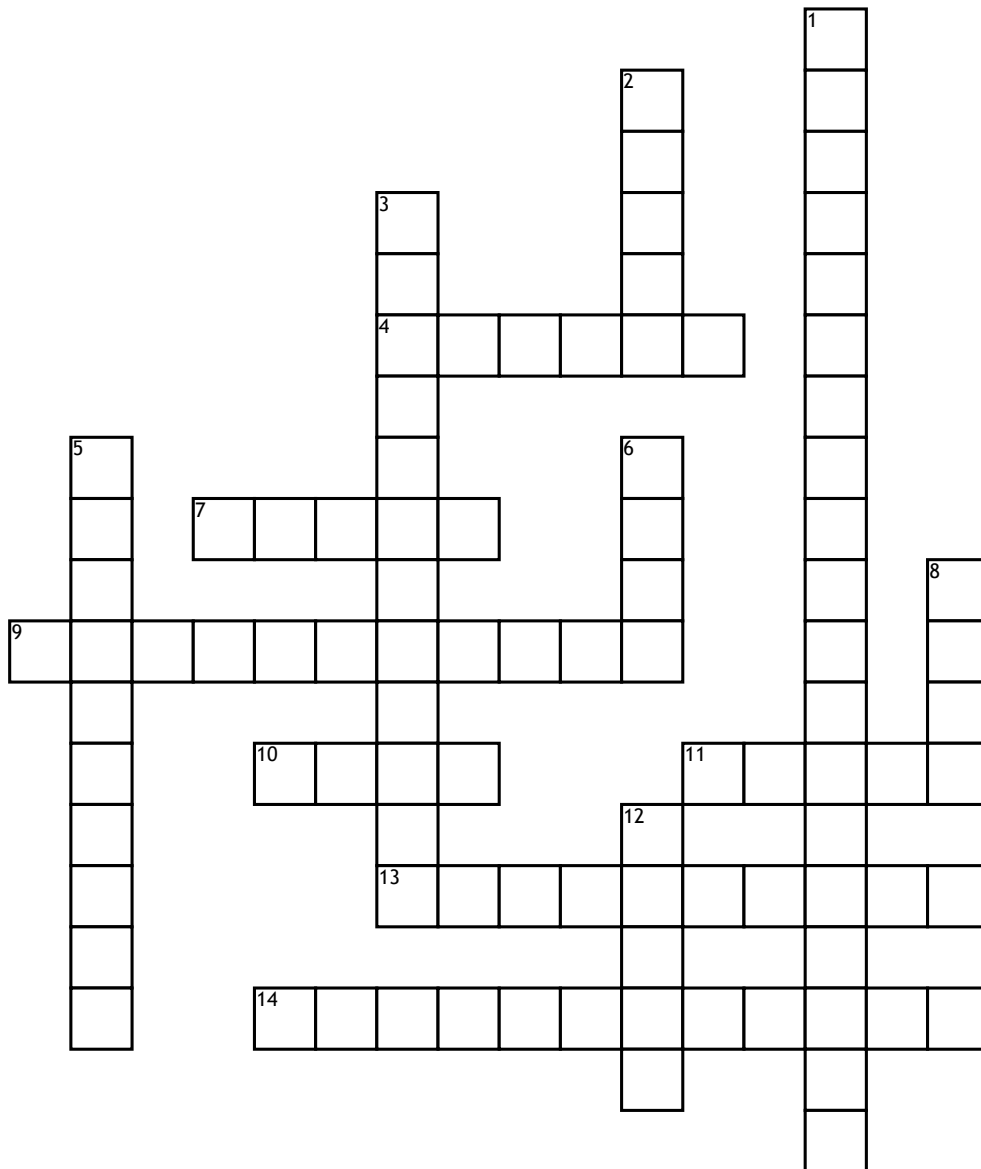


# simple machines



**Across**

- 4. a wheel with a grooved rim around which a cord passes. It acts to change the direction of a force applied to the cord and is chiefly used (typically in combination) to raise heavy weights.
- 7. the ability to do something or act in a particular way, especially as a faculty or quality:
- 9. the force that a specific object has as a result of the input force.
- 10. activity involving mental or physical effort done in order to achieve a purpose or result:
- 11. a rigid bar resting on a pivot, used to help move a heavy or firmly fixed load with one end when pressure is applied to the other:
- 13. the state or quality of being efficient:

- 14. a plane inclined at an angle to the horizontal.

**Down**

- 1. the ratio of the force produced by a machine to the force applied to it, used in assessing the performance of a machine.
- 2. a piece of wood, metal, or some other material having one thick end and tapering to a thin edge, that is driven between two objects or parts of an object to secure or separate them.
- 3. an interaction of one object on another that causes the second object to accelerate or change velocity or direction.
- 5. the amount of force that you put into another object
- 6. a pin or shaft on or with which a wheel or pair of wheels revolves.

- 8. one of a set of toothed wheels that work together to alter the relation between the speed of a driving mechanism (such as the engine of a vehicle or the crank of a bicycle) and the speed of the driven parts
- 12. a short, slender, sharp-pointed metal pin with a raised helical thread running around it and a slotted head, used to join things together by being rotated so that it pierces wood or other material and is held tightly in place.