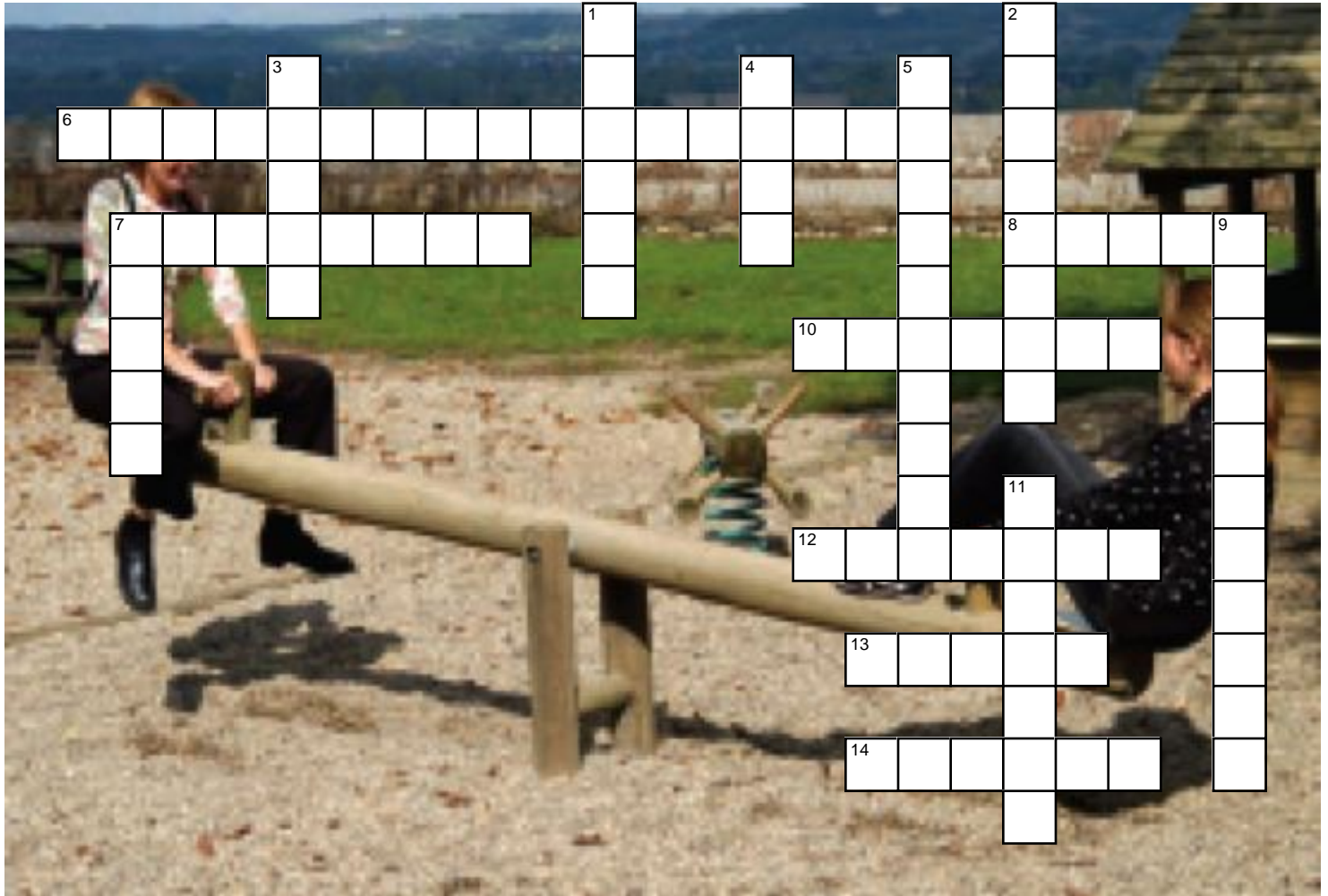


4.1 Mechanical Systems Use Forces to Transfer Energy



Across

6. _____ - - - _____ forces can push or pull an object without touching it.
7. _____ is a force that opposes the relative motion of an object.
8. Small masses are often measured in _____ (g).
10. _____ forces must touch the object that they push or pull.
12. In a teeter-totter (like the one in the background picture of this puzzle), by adjusting how far the two people sit from the centre of the board (the _____), you can compensate for people having different masses.
13. The term “gravity” comes from the Latin word “gravitas,” meaning _____.
14. The metric unit for force is the _____ (N).

Down

1. _____ is the force of gravity acting on an object.
2. The metric unit for measuring mass is the _____ (kg).
3. A _____ is a push or a pull that acts on an object.
4. _____ is the amount of matter in an object.
5. A _____ system is a group of physical parts that interact with each other.
7. The value of 9.8 N/kg represents the Earth’s gravitational _____ and is symbolized by g.
9. The most common force meter is called a Newton gauge or _____.
11. The most common action-at-a-distance force, the force of _____, is the attraction between two objects due to their mass.