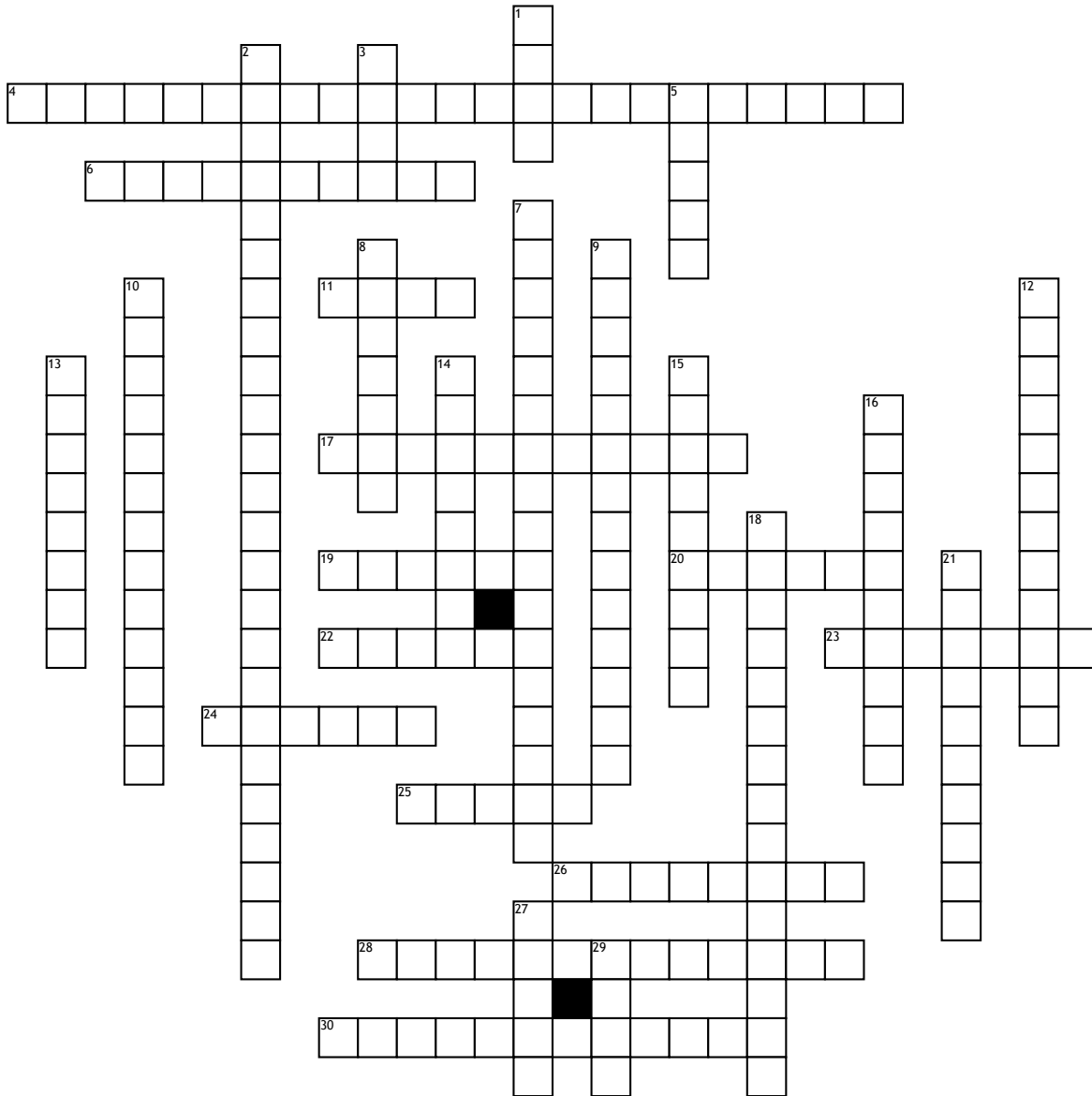


# LSRV Design Challenge: CO2 Dragster Unit



## Across

4. For every action (or force) there is an equal reaction (or opposing force) in the opposite direction.
6. A unit of length equal to one thousandth of a meter.
11. The amount of matter in an object.
17. A straight, layered flow of air without turbulent air pockets known as eddies.
19. Swirls of air movement that breaks away from the boundary layer causing turbulence.
20. A force that pushes or propels an object forward.
22. This country was the first to develop and use the metric system of measurement.
23. A property of matter by which it remains at rest or in uniform motion in the same straight line unless acted upon by some external force.
24. A measurement of the gravitational force acting on an object.
25. Simply a measure of how fast something is moving.
26. The speed at which something moves in a certain direction.

28. The chemical compound produced by burning carbon or by respiration for this colorless and odorless gas naturally present in our atmosphere.

30. The rate of change in velocity of a dragster.

## Down

1. Friction causes energy to be lost in this form.
2. A machine that rotates and oscillates up and down used for sanding concave curves and contours.
3. An upward force acting on an object.
5. The base unit of measuring distance in the metric system.
7. Very simple and quick drawings usually done very rapidly and with no corrections to develop possible design solutions.
8. A machine with a long, sharp blade consisting of a continuous band of toothed metal stretched between two or more wheels to cut curves in material.
9. A detailed list of requirements that can include measurements, capabilities, or limitations on a project's size, weight, or functionality.
10. A stage used in the design and problem-solving process to generate a number and variety of ideas.

12. The study of the properties of moving air and the interaction between the air and solid bodies moving through it.

13. Tool used to tighten the drill bit in the chuck on a drill press.

14. The force that resists motion between two points of contact.

15. A model used to test and evaluate a car design before final production.

16. An apparatus through which air is blown at a known velocity to investigate airflow around an object used to measure aerodynamic efficiency.

18. A measure of the force that a particular fluid exerts on a particular object.

21. Unsteady movement of air causing eddies, which increases aerodynamic drag.

27. A three-dimensional representation of an object to show what it looks like.

29. A resistance force to the forward motion of an object moving through a fluid (air).