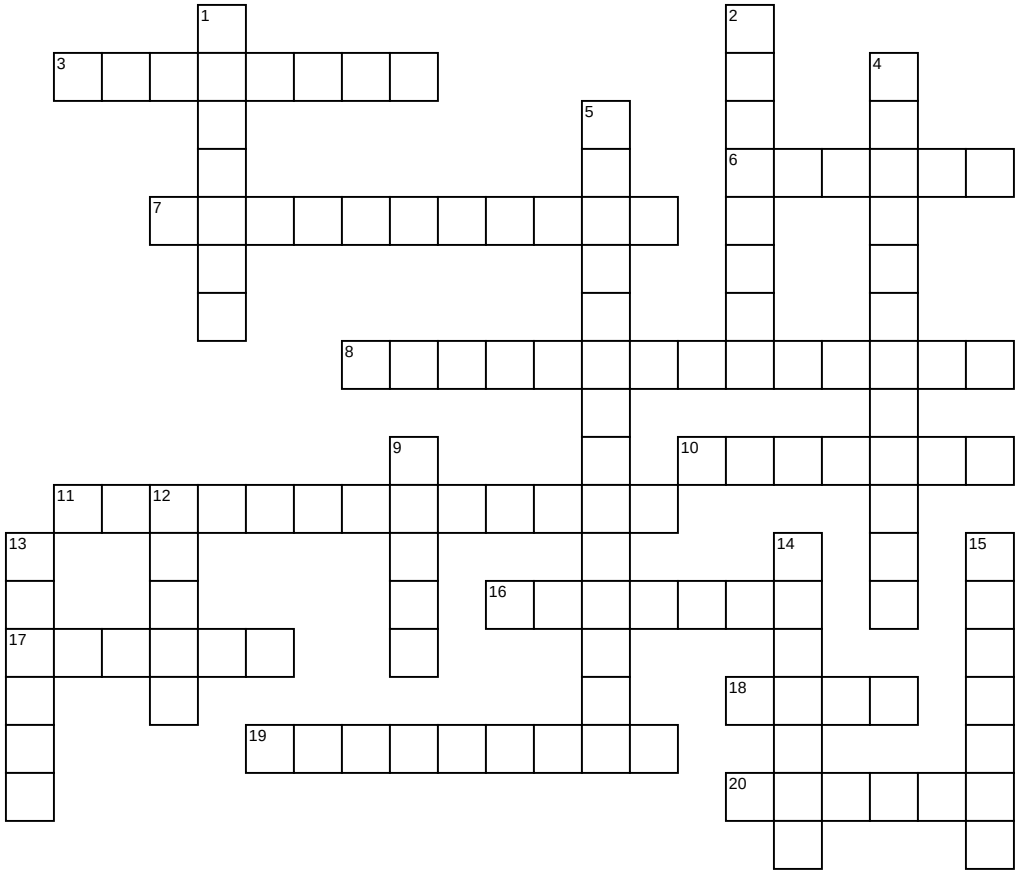

ACROSS

3 _____ gravity is the nominal acceleration due to gravity at the Earth's surface at sea level.
6 The _____ of mass of a system of particles is a specific point at which, for many purposes, the system's mass behaves as if it were concentrated.
7 _____ is a natural phenomenon by which all objects with mass attract each other.
8 A _____ orbit is an orbit around the Earth with an orbital period matching the Earth's sidereal rotation period.
10 The gravitational _____ energy of an object consisting of loose material, held together by gravity alone, is the amount of energy required to pull all of the material apart, to infinity.
11 A _____ orbit is a geosynchronous orbit directly above the Earth's equator, with orbital eccentricity of zero. From the ground, such an object appears motionless in the sky.
16 _____ relativity is the geometrical theory of gravitation published by Albert Einstein in 1915-16 unifying special relativity and Newton's law of universal gravitation.
17 The orbital _____ is the time it takes a planet (or another object) to make one full orbit.
18 _____s are the cyclic rising and falling of Earth's ocean surface caused by the tidal forces of the Moon and the Sun acting on the oceans.
19 The _____ experiment, performed in 1797 - 1798, was the first experiment to measure the force of gravity between laboratory masses.
20 _____ velocity is the speed where the kinetic energy of an object is equal in magnitude to its potential energy in a gravitational field.

DOWN

1 A _____-square law is any physical law stating that some physical quantity or strength decreases proportional to the square of the distance from the source of that physical quantity.
2 A _____ orbit is an elliptic orbit with the eccentricity equal to zero.
4 The _____ unit is a unit of length nearly equal to the semi-major axis of Earth's orbit around the Sun.
5 A _____ satellite is a satellite whose orbital track on the Earth repeats regularly over points on the Earth over time.
9 The gravitational _____ around a single particle in classical mechanics is a vector field pointing directly towards the particle giving the magnitude of the force per unit mass for the array of points in space.
12 A _____ is the path that an object makes around another object while under the influence of a centripetal force such as gravity.
13 Johannes _____ (1571 - 1630) was a German mathematician whose primary contributions to astronomy and astrophysics were his three laws of planetary motion.
14 A _____ is the locus of points on a plane where the sum of the distances from any point on the curve to two fixed points is constant.
15 _____ is the point at which an object in orbit around the Earth makes its closest approach to the Earth.