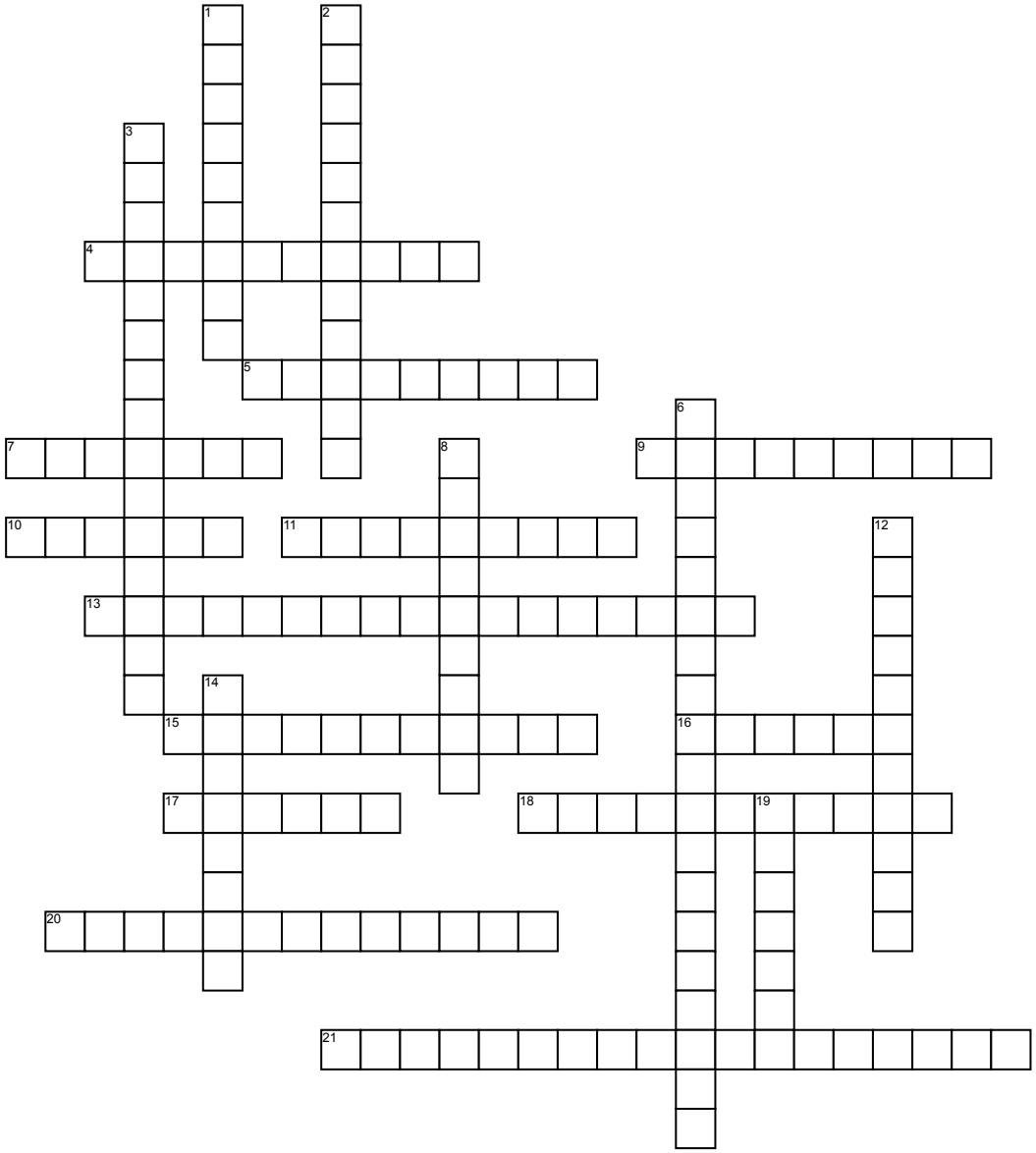
Name: _____ Date: _____ Period: _____

Aircraft Materials Vocabulary



Across

4. A mechanical property of a material that shows how effective the material is absorbing mechanical energy without sustaining any permanent damage.

5. The ability of a material to resist deflection or stretching.

7. The loss of the load-bearing ability of a material under repeated load application, as opposed to a single load.

9. Mechanical property of a material that indicates the ability of the material to handle overloading before it fractures.

10. The force acting across a unit area in a solid material resisting the separation, compacting, or sliding that tends to be induced by external forces.

11. Something made up of interdependent parts in a definite pattern of organization, such as trusses, frames, or machines.

13. A condition where there are no net external forces acting upon a particle or rigid body and the body remains at rest or continues at a constant velocity.

15. Any alteration of shape or dimensions of a body caused by stresses, thermal expansion or contraction, chemical or metallurgical transformations, or shrinkage and expansions due to moisture change.

16. A broad ridge or pair of ridges projecting at a right angle from the edge of a structural shape in order to strengthen or stiffen it.

17. Change in the length of an object in some direction per unit.

18. A force with its resultant passing through the centroid of a particular section and being perpendicular to the plane of the section. A force in a direction parallel to the long axis of the structure.

20. The way a material responds to specific machining techniques.

21. A surface or shape exposed by making a straight cut through something at right angles to the axis.

Down

1. A material made of multiple layers of fibers held together with a matrix.

2. Condition caused by collapse, break, or bending, so that a structure or structural element can no longer fulfill its purpose.

3. A mathematical property of a cross section that is concerned with a surface area and how that area is distributed about a centroidal axis.

6. The ratio of the increment of some specified form of stress to the increment of some specified form of strain, such as Young's modulus, the bulk modulus, or the shear modulus. Also known as coefficient of elasticity, elasticity modulus, elastic modulus.

8. The amount of plasticity that precedes failure

12. When a material is reduced in volume by the application of pressure; the reciprocal of the bulk modulus.

14. The geometric center of an area.

19. The condition of a string, wire, or rod that is stretched between two points.