1. **F) Force** Which of the following words means "push" or "pull"?

2. **True** A heavy plane needs more lift than a lighter plane.

3. **C) changes speed.** If an object "accelerates," it…

4. **D) the rubber motor** Where is the potential energy stored in your balsa model?

5. **L) Lift** In general, heavier planes require more _____ to fly.

6. **L) The LIGHTER plane has a longer flight distance.** What is the effect on flight distance?

7. **L) The LIGHTER plane has a longer flight time.** What is the effect on flight time?

8. **L) Lift** In level flight, which force of flight opposes "Weight"?

9. **True** In general, heavy planes require more thrust.

10. **I) Inward** A plane is flying around its pylon. In what direction is centripetal force acting?

11. **W) Weight** What is the only force that acts on a plane when it sits on the ground?

12. **P) Potential** What kind of energy is stored in the wound rubber motor of a model plane?

13. **False** Increasing speed DECREASES lift.

14. **W) Weight** Which force on a rubber-powered airplane remains the same before, during, and after landing?

15. **B) At the center of gravity.** Where would you add the penny so as not to affect the pitch of the plane?

16. **C) The air and propeller always push with equal and opposite force.** A plane's propeller pushes air back and the plane moves forward. What is true?

17. **L) Lift, T) Thrust (speed)** In general, heavy planes require more ____ and ____.

18. **L) The LIGHTER plane requires less takeoff distance.** How does takeoff distance differ according to Newton's 2nd Law, F=MA?

19. **True** A force is required to change the speed of a plane.