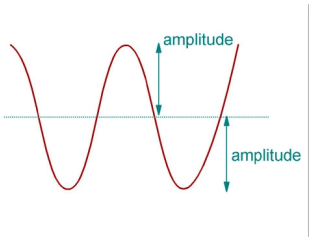
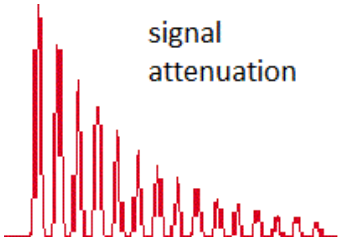
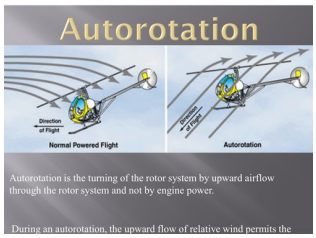
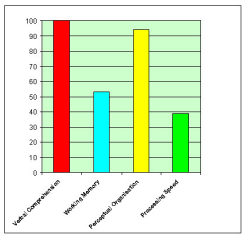
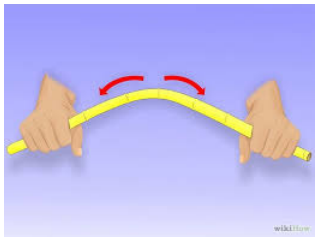
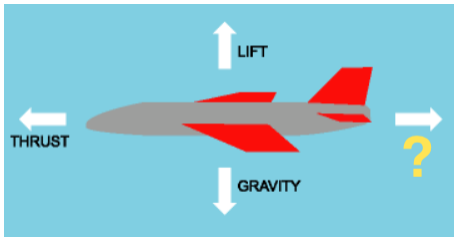
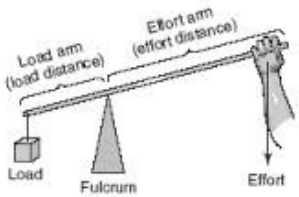
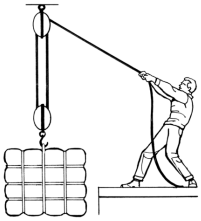
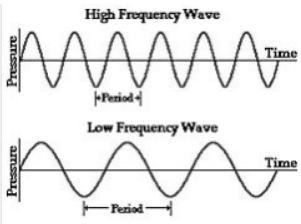
BioBox Unit 11Essential Vocabulary Dictionary

Acoustics	 An interdisciplinary science that studies the nature of mechanical waves including vibration and sound.
Amplitude	 Degree in which particles in a wave are distributed.
Attenuation	 Gradual loss of intensity in the sound wave as it travels. Caused by scattering and absorption of the wave as it moves along.
Autorotation	 Process of generation of rotation and lift purely due to aerodynamic forces of pressure and friction of air acting on a wing's surface.
Bar Chart	 A form of graph in which numeric values are represented by horizontal or vertical rectangles.

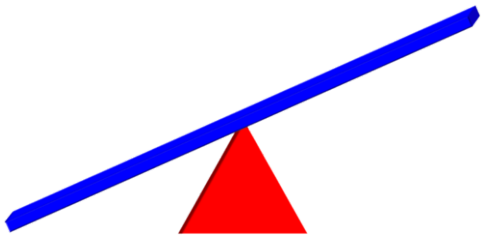
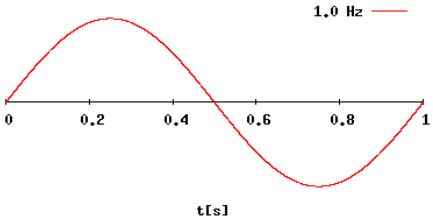
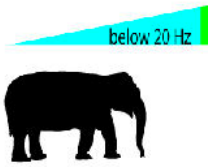
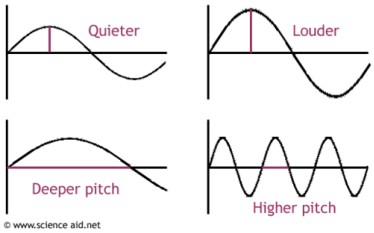
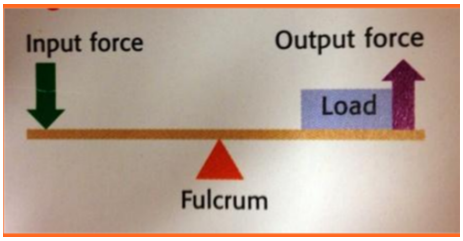
BioBox Unit 11Essential Vocabulary Dictionary

Bending	 When force is applied at a right angle to a certain object.
Bio	 Life
Biomechanics	 Study of the mechanical laws relating to the movement or structure of living organisms.
Compression	 When forces push on an object from opposite sides.
Density	$$d = \frac{m}{v}$$ Unit of mass per unit of volume.

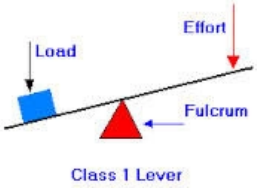
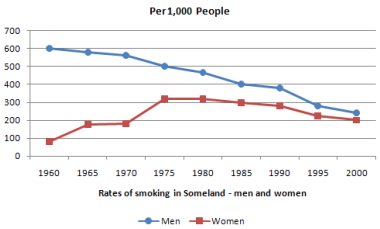
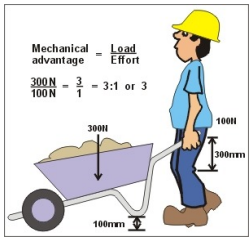
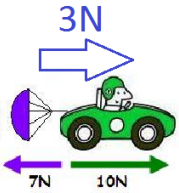
BioBox Unit 11Essential Vocabulary Dictionary

Drag	 Resistance by friction from air or water moving over a surface.
Effort Arm	 In-lever and load arm = Out-lever.
Effort Force	 In-force and load force = Out-force.
Free Fall	 Motion of a falling object when the only force acting on it is gravity.
Frequency	 Number of periods per unit of time.

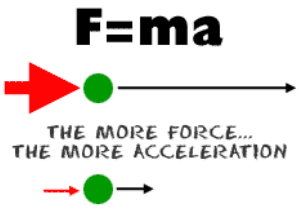
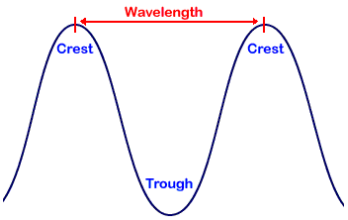
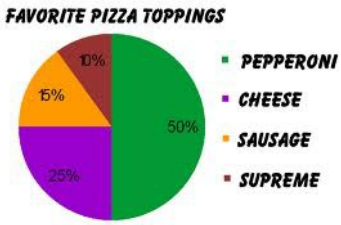
BioBox Unit 11Essential Vocabulary Dictionary

Fulcrum	 The solid beam that can rotate on a support in a lever.
Hertz	 Measurement of frequency of sound unit (one vibration or wave cycle per second).
Infrasound	 Sounds that fall below the lower limit of "normal" human hearing.
Intensity	 The amount of energy per second carried through a unit area by a wave.
Law of the Lever	 Ratio used to describe the relationship between force applied and the subsequent force output based on the length of the lever.

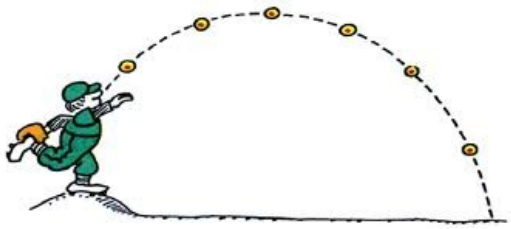
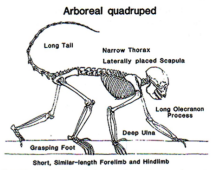
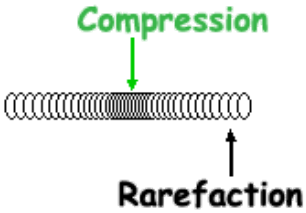
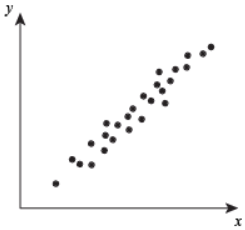
BioBox Unit 11Essential Vocabulary Dictionary

Lever	 Simple machine that is used to move heavy objects or gain a mechanical advantage in applying a force to an object (like chewing food).
Line Graph	 A graph that uses line segments to show changes that occur over time.
Mechanical Advantage	 Ratio of force achieved to force exerted to a lift a load.
Mimicry	 Ability of an animal to look like another more harmful animal.
Net Force	 Sum of all forces acting on an object.

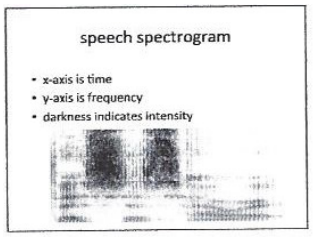
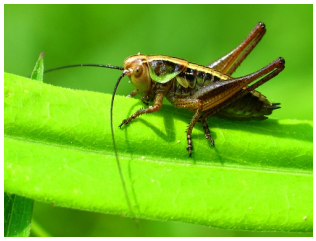
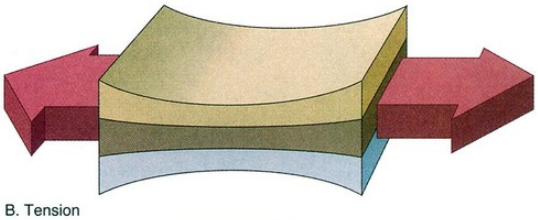
BioBox Unit 11Essential Vocabulary Dictionary

Newton's 2nd Law	 States an object subject to a net force undergoes an acceleration that has the same direction as the force, and a magnitude that is directly proportional to the force and inversely proportional to the mass.
Niche	 The specific role an organism has in its ecosystem.
Period	 Time in between two successive peaks of a wave.
Pie Chart	 Circular chart divided into triangular areas proportional to the percentages of the whole.
Pitch	 How high or low a sound is.

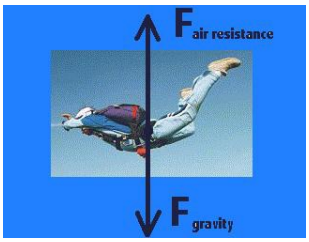
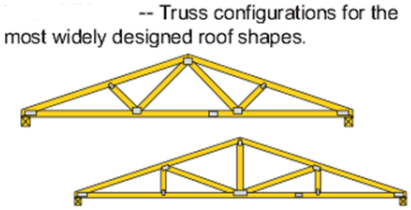
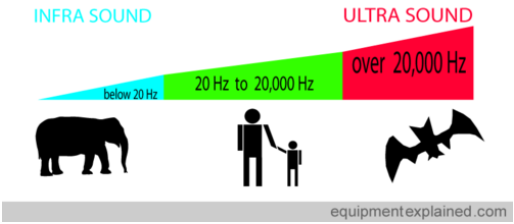
BioBox Unit 11Essential Vocabulary Dictionary

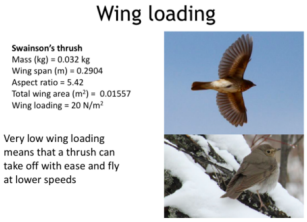
Power	$P = \frac{W}{t}$ Rate of doing work. Measured by multiplying the force applied to an object by the velocity of that object.
Projectile Motion	 Physical principle that assumes that once an object is dropped or thrown (projected) it will continue in motion until it is influenced by the pull of gravity.
Quadrupeds	 FIGURE 9.11 The skeleton of a primate arboreal quadruped, illustrating some of the distinctive anatomical features associated with that type of locomotion. Apes and humans with a similar arch in their spine that helps relieve the stresses of tension and bending.
Rarefaction	 Causes molecules to move closer to molecules further down the direction of movement, causing condensation/compression.
Scatter Plot	 A graph with points plotted to show a possible relationship between two sets of data.

BioBox Unit 11Essential Vocabulary Dictionary

Sonogram	 An image formed using reflected ultrasound waves.
Sound	 Vibration of molecules in traveling in waves.
Spectrogram	 Graphic representation of the three major parameters that describe the acoustic characteristic of any sound: time, frequency, and intensity.
Stridulation	 When organisms produce sound by scraping a stiff structure against a rough surface, essentially a file and scraper mechanism.
Tension	 When forces pull on an object from opposite sides.

BioBox Unit 11Essential Vocabulary Dictionary

Terminal Velocity	 Constant velocity of a falling object when the force of air resistance is equal in magnitude and opposite in direction to the force of gravity.
Tone	 Pitch and timbre of a sound.
Truss	 Framework of tiny ridges called trabeculae.
Truss Bridge	 Bridge built in a way that each member of the unit distributes the weight of the load to reduce bending stress (most commonly in form of triangles that form an arch).
Ultrasound	 Sounds that are the typical upper range of human hearing (20,000 Hz).

Wing Loading	 Total mass of the fruit divided by the area of the wing.