Science	DNA, Diffusion and Sensory Organs	Year 8	Term 6

1: Cell Structures and DNA

Nucleus	contains DNA and controls the cell's activites
Gene	a short section of DNA that codes for characteristics (proteins)
Chromosome	a long strand of DNA
Allele	a different form of the same gene
Double Helix	the structure of DNA
Mutation	a random change to the DNA
Characteristic	a feature of a living organism

2: Inheritance and Variation

Gamete	the sex cell of an organism e.g. sperm and egg cells
Variation	differences between organisms caused by DNA
Continuous Variation	characteristics that can change gradually over time, with no in-between values
Discontinuous Variation	characteristics that can be placed into categories
Inherited	passed from parent to offspring through DNA
Genetic Variation	variation caused by the DNA inherited from the parents of an organism
Environmental Variation	variation caused by the surroundings of an organism

3: Diffusion

Diffusion	the net movement of particles from an area of high concentration to an area of low concentration
Net Movement	the overall or total movement
Concentration	the number of particles in a given volume
Concentration Gradient	the difference in concentration between two areas
Fluid	substances that are either liquid or gas
Rate	how quickly a process happens in a given period of time

4: Brownian Motion

Brownian motion the random movement of particles in a fluid e.g. liquid or gas

	Brownian Motion in Hot Liquids	Brownian Motion in Cold Liquids
Description	particles move faster and rate of diffusion increases	particles move slower and rate of diffusion decreases
Explanation	the particles have more energy in their kinetic store and collide more frequently	the particles have less energy in their kinetic store and collide less frequently

5: The Ear and Sound Waves

Wave	the transfer of energy without transferring matter
Longitudinal Waves	the direction of vibrations are parallel to the direction of energy transfer
Frequency	how many waves pass a certain point per second. Measure in Hertz (Hz)
Amplitude	particle vibration from rest line to peak/trough which determines volume
Wavelength	the distance between two identical points on a wave
Oscilloscope	equipment that shows wavelength, frequency and amplitude of a wave
Auditory Range	the different frequencies that can be heard by animals

6: The Eye and Light Waves

Transverse Waves	the direction of vibrations are perpendicular to direction of energy transfer
Peak	the highest point of a transverse wave
Trough	the lowest point of a transverse wave
Oscillation / Vibration	regular movement back and forth of a particle/object
Focal Point	the point at which light should focus in the eye (on the retina)
Lens	structure in the eye that focusses light rays onto the retina
Ray Diagram	an image to show the direction of travel for a light ray