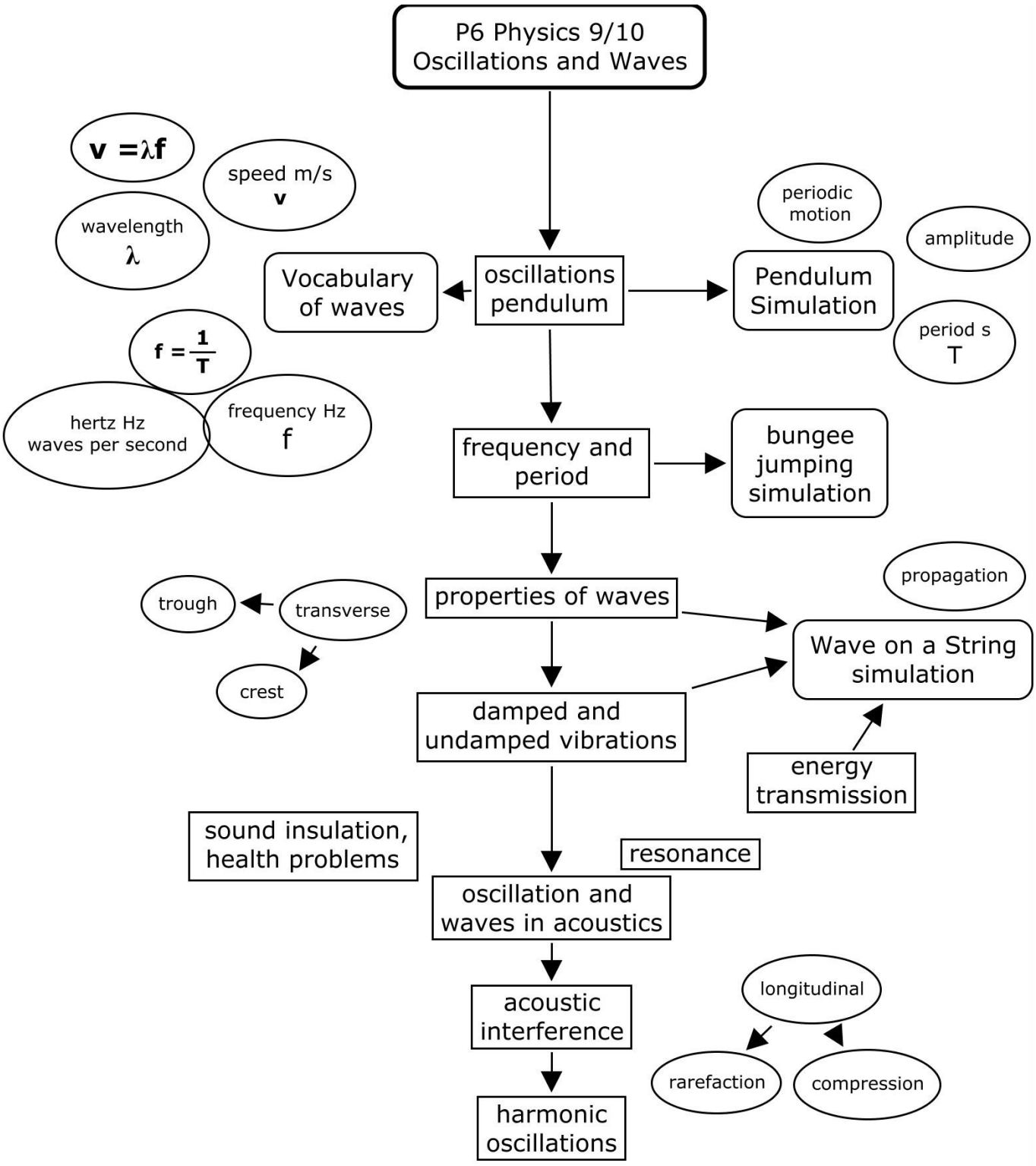
P6 Physics 9/10
Oscillations and Waves
v =λf
speed m/s
v
wavelength
λ
Vocabulary
of waves
oscillations
pendulum
periodic
motion
amplitude
Pendulum
Simulation
period s
T
f = 1/T
hertz Hz
waves per second
frequency Hz
f
frequency and
period
bungee
jumping
simulation
properties of waves
trough
transverse
crest
propagation
Wave on a String
simulation
damped and
undamped vibrations
energy
transmission
sound insulation,
health problems
resonance
oscillation and
waves in acoustics
acoustic
interference
harmonic
oscillations
longitudinal
rarefaction
compression

A	the value of the maximum displacement from a zero value during one period of an oscillation L	Schwingungsweite
amplitude	the value of the maximum displacement from a zero value during one period of an oscillation	Schwingungsweite
bob	a dangling or hanging object, such as the weight on a pendulum or on a plumb line	Pendelgewicht
compression	a region of high pressure in a fluid is called a _____; thus sound waves are said to propagate as _____ and rarefactions (regions of low pressure) of their medium, such as air.	Kompression
crest	The part of a wave with greatest magnitude; the highest part of a wave. Compare: trough	Wellenscheitel
f	Symbol: for frequency L	f
freq	Abbreviation: frequency	
frequency	the number of cycles or completed alternations per unit time of a wave or oscillation. Symbol: F; Abbreviation: freq.	Schwingungszahl
kg	basic unit of mass in the metric system, equal to the mass of the international prototype of the _____, a platinum-iridium cylinder kept at the International Bureau of Weights and Measures laboratory at Sevres, France. A kilogram is very nearly equal (it was originally intended to be exactly equal) to the mass of 1,000 cubic cm of water.	kg
L wave	a wave in which the direction of displacement is the same as the direction of propagation, as a sound wave. LW	Längswelle, Longitudinalwelle
longitudinal wave	a wave in which the direction of displacement is the same as the direction of propagation, as a sound wave. 2W	Längswelle, Longitudinalwelle
mass	A measure of the amount of matter contained in a physical body.	Masse
oscillation	regular fluctuation in value, position, or state about a mean value, such as the variation in an alternating current or the regular swinging of a pendulum	Schwingung
pendulum	A mass hung from a fixed support so that it is able to swing freely under the influence of gravity. Since the motion of _____ is regular and periodic, they are often used to regulate the action of various devices, especially clocks.	Pendel
period	T ; the time taken to complete one cycle of a regularly recurring phenomenon; the reciprocal of frequency	Schwingungszeit
periodic motion	any motion that recurs in identical forms at equal intervals of time. 2W	periodische Bewegung
phase	the fraction of the wave cycle which has elapsed relative to the origin	Phase (Schwingung)

pivot point	place from which a pendulum is suspended. 2W	Schwenkpunkt
propagation	to move through, cause to move through, or transmit, esp in the form of a wave	Ausbreitung
rarefaction	A decrease in density and pressure in a medium, such as air, especially when caused by the passage of a wave, such as a sound wave.	Verdünnung
reed	a small, flexible piece of cane or metal that, attached to the mouth of any of various wind instruments, is set into vibration by a stream of air and, in turn, sets into vibration the air column enclosed in the tube of the instrument.	Stimmzunge
resonance	The tendency of a system to oscillate with greater amplitude at some frequencies than at others. Oscillation induced in a physical system when it is affected by another system that is itself oscillating at the right frequency.	Resonanz
speed	distance travelled by the wave in a fixed time. Usually metres per second m/s	Geschwindigkeit
T	the time taken to complete one cycle of a regularly recurring phenomenon; the reciprocal of frequency L	
T wave	a wave in which the direction of displacement is perpendicular to the direction of propagation, as a surface wave of water. LW	Querwelle, Transversalwelle
transverse wave	a wave in which the direction of displacement is perpendicular to the direction of propagation, as a surface wave of water. 2W	Querwelle, Transversalwelle
trough	The part of a wave with the least magnitude; the lowest part of a wave. Compare: crest	Wellental
wave	A disturbance, oscillation, or vibration, either of a medium and moving through that medium (such as water and sound _____), or of some quantity with different values at different points in space, moving through space (such as electromagnetic _____)	Welle
wavefront	the locus of points having the same phase: a line or curve in 2D, or a surface for a wave propagating in 3D.	Wellenfront
wavelength	λ ;The distance between one peak* or crest** of a wave and the next peak or crest. It is equal to the speed of the wave divided by its frequency, and to the speed of a wave times its period. *compression, **rarefaction in L waves	Wellenlänge