***Formula Sheet***

***Density***

$Density= \frac{mass}{volume}$ $1 gram H\_{2}O=1 ml H\_{2}O$ $Density of H\_{2}O=1 g/ml$

 $speed= \frac{distance}{time}$ $v=\frac{d}{t}$ $velocity= \frac{displacement}{time}$ $acceleration= \frac{change in velocity}{time}= \frac{(v\_{f}-v\_{i})}{t}$

 g=9.8 m/s2
$Force=mass∙acceleration$ $F=ma$ $Weight=mass∙gravity$ $W=mg$
$momentum=mass∙velocity$ $p=mv$

$Work=force∙distance$ $w=F∙d$ $Power= \frac{work}{time}$ $P=\frac{w}{t}$

***Work, Power, Energy***

***Motion***

***Forces***

$GPE=mass ∙acceleration of gravity∙height$ $GPE=mgh$
$KE=\frac{1}{2} mass∙velocity^{2}$ $KE=\frac{1}{2}mv^{2}$

***Waves***

$Period= \frac{1}{frequency}$ $frequency=\frac{1}{period}$ $Wave speed=wavelength∙frequency$ $v=λf$

$Light speed=wavelength∙frequency$ $c=λf$ $c=300,000,000 m/s$



***Electricity***

$$ Voltage=Current∙Resistance$$

$$V=IR$$