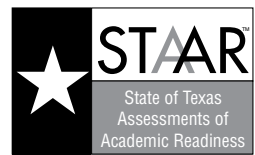


# STAAR GRADE 8 SCIENCE REFERENCE MATERIALS



## FORMULAS

$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

$$D = \frac{m}{V}$$

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$$\text{Average speed} = \frac{\text{total distance}}{\text{total time}}$$

$$s = \frac{d}{t}$$

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$$\text{Net force} = (\text{mass})(\text{acceleration})$$

$$F = ma$$

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$$\text{Work} = (\text{force})(\text{distance})$$

$$W = Fd$$

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# STAAR GRADE 8 SCIENCE REFERENCE MATERIALS

## PERIODIC TABLE OF THE ELEMENTS

																		Atomic number — 14															
																		<b>Si</b>															
																		28.086															
																		Silicon		Name													
																		8		9		10											
																		11		12		13		14		15		16		17		18	
																		1B		2B		3A		4A		5A		6A		7A		8A	
																		29		30		31		32		33		34		35		36	
																		Cu		Zn		Ga		Ge		As		Se		Br		Kr	
																		63.546		65.38		69.723		72.64		74.922		78.96		79.904		83.798	
																		Copper		Zinc		Gallium		Germanium		Arsenic		Selenium		Bromine		Krypton	
																		47		48		49		50		51		52		53		54	
																		Ag		Cd		In		Sn		Sb		Te		I		Xe	
																		107.868		112.412		114.818		118.711		121.760		127.60		126.904		131.294	
																		Silver		Cadmium		Indium		Tin		Antimony		Tellurium		Iodine		Xenon	
																		79		80		81		82		83		84		85		86	
																		Au		Hg		Tl		Pb		Bi		Po		At		Rn	
																		196.967		200.59		204.383		207.2		208.980		(209)		(210)		(222)	
																		Gold		Mercury		Thallium		Lead		Bismuth		Polonium		Astatine		Radon	
																		110		111		112		113		114		115		116		117	
																		Ds		Rg		Cf		Bh		Hl		Mt		Lv		Ts	
																		(281)		(280)		(284)		(283)		(285)		(286)		(287)		(288)	
																		Darmstadtium		Roentgenium		Curium		Bohrium		Livermorium		Tennessine		Oganesson		(294)	
																		110		111		112		113		114		115		116		117	
																		Pt		Au		Hg		Tl		Pb		Bi		Po		At	
																		195.085		196.967		200.59		204.383		208.980		(209)		(210)		(222)	
																		Platinum		Gold		Mercury		Thallium		Lead		Bismuth		Polonium		Astatine	
																		78		79		80		81		82		83		84		85	
																		Ir		Au		Hg		Tl		Pb		Bi		Po		At	
																		192.217		196.967		200.59		204.383		208.980		(209)		(210)		(222)	
																		Iridium		Gold		Mercury		Thallium		Lead		Bismuth		Polonium		Astatine	
																		109		110		111		112		113		114		115		116	
																		Mt		Ds		Rg		Cf		Bh		Hl		Mt		Lv	
																		(276)		(281)		(280)		(284)		(285)		(286)		(287)		(288)	
																		Meitnerium		Darmstadtium		Roentgenium		Curium		Bohrium		Livermorium		Tennessine		Oganesson	
																		77		78		79		80		81		82		83		84	
																		Rh		Pd		Ag		Cd		In		Sn		Sb		Te	
																		102.906		106.42		107.868		112.412		114.818		118.711		121.760		127.60	
																		Rhodium		Palladium		Silver		Cadmium		Indium		Tin		Antimony		Tellurium	
																		45		46		47		48		49		50		51		52	
																		Ru		Rh		Pd		Ag		Cd		In		Sn		Sb	
																		101.07		102.906		106.42		107.868		112.412		114.818		118.711		121.760	
																		Ruthenium		Rhodium		Palladium		Silver		Cadmium		Indium		Tin		Antimony	
																		76		77		78		79		80		81		82		83	
																		Os		Ir		Pt		Au		Hg		Tl		Pb		Bi	
																		190.23		192.217		195.085		196.967		200.59		204.383		208.980		(209)	
																		Osmium		Iridium		Platinum		Gold		Mercury		Thallium		Lead		Bismuth	
																		108		109		110		111		112		113		114		115	
																		Hs		Mt		Ds		Rg		Cf		Bh		Hl		Mt	
																		(270)		(276)		(281)		(280)		(284)		(285)		(286)		(287)	
																		Hassium		Meitnerium		Darmstadtium		Roentgenium		Curium		Bohrium		Livermorium		Tennessine	
																		74		75		76		77		78		79		80		81	
																		W		Re		Os		Ir		Pt		Au		Hg		Tl	
																		183.84		186.207		190.23		192.217		195.085		196.967		200.59		204.383	
																		Tungsten		Rhenium		Osmium		Iridium		Platinum		Gold		Mercury		Thallium	
																		106		107		108		109		110		111		112		113	
																		Sg		Bh		Hs		Mt		Ds		Rg		Cf		Bh	
																		(271)		(272)		(270)		(276)		(281)		(280)		(284)		(285)	
																		Seaborgium		Bohrium		Hassium		Meitnerium		Darmstadtium		Roentgenium		Curium		Bohrium	
																		72		73		74		75		76		77		78		79	
																		Hf		Ta		W		Re		Os		Ir		Pt		Au	
																		178.49		180.948		183.84		186.207		190.23		192.217		195.085		196.967	
																		Hafnium		Tantalum		Tungsten		Rhenium		Osmium		Iridium		Platinum		Gold	
																		104		105		106		107		108		109		110		111	
																		Rf		Db		Sg		Bh		Hs		Mt		Ds		Rg	
																		(267)		(268)		(271)		(272)		(270)		(276)		(281)		(280)	
																		Rutherfordium		Dubnium		Seaborgium		Bohrium		Hassium		Meitnerium		Darmstadtium		Roentgenium	
																		71		72		73		74		75		76		77		78	
																		Lu		Hf		Ta		W		Re		Os		Ir		Pt	
																		174.967		178.49		180.948		183.84		186.207		190.23		192.217		195.085	
																		Lutetium		Hafnium		Tantalum		Tungsten		Rhenium		Osmium		Iridium		Platinum	
																		103		104		105		106		107		108		109		110	
																		Lr		Rf		Db		Sg		Bh		Hs		Mt		Ds	
																		(262)		(267)		(268)		(271)		(272)		(270)		(276)		(281)	
																		Lawrencium		Rutherfordium		Dubnium		Seaborgium		Bohrium		Hassium		Meitnerium		Darmstadtium	
																		19		20		21		22		23		24		25		26	
																		K		Ca		Sc		Ti									