

Morning Reading

Grade 11 · AS · Week 10

Read each word aloud, then copy the English word three times.

Reading

Read the passage aloud twice.

Pluck a guitar string and the sound you hear left the string as a **progressive wave** through the air. Its **frequency**, measured in **hertz**, sets the pitch; its **amplitude** sets the loudness. The air is pushed back and forth along the direction of travel, so sound is a **longitudinal wave**; light, vibrating across its direction of travel, is a **transverse wave**.

Malicious software comes in families, and the names matter. A **virus** attaches itself to a real program and spreads when the program runs; a **worm** travels through **networks** on its own. A **Trojan horse** pretends to be something useful. **Spyware** quietly watches what you type, and **ransomware** locks your files and demands payment. Most attacks still begin with **phishing**, a fake message that harvests passwords from busy people.

When one firm controls a market, it is a **monopoly**, and it may raise prices above the competitive level. Governments answer with **regulation** or, for essentials, a legal **maximum price**.

Talk about it :

1. Which is more dangerous: a virus or a phishing email? Argue your case.
2. Your city has one water company. Why might the government watch its prices?

Physics

Topic 7 · Waves



time-base

/taɪm beɪs/



y-gain

/waɪ geɪn/



intensity

/ɪn'tensɪti/



point source

/pɔɪnt sɔːs/



wavefront

/'weɪvfrʌnt/



rarefaction

/'rɛəri'fækʃn/



sine curve

/saɪn kɜːv/



source

/sɔːs/



observer

/əb'zɜːvə/



Doppler effect

/'dɒplə i'fekt/



electromagnetic wave

/ɪˌlektɹəmæg'netɪk weɪv/



electromagnetic spectrum

/ɪˌlektɹəmæg'netɪk 'spektrəm/



microwaves

/'maɪkrəʊweɪvz/



infrared

/ˌɪnfɹə'red/

 ultraviolet <i>/ˈʊltrəˈvaɪələɪt/</i>			
 X-rays X <i>/eks reɪz/</i>			
 gamma-rays γ <i>/'gæmə reɪz/</i>			
 polarisation <i>/ˌpəʊləraɪˈzeɪʃn/</i>			
 plane-polarised <i>/pleɪn ˈpəʊləraɪzd/</i>			
 polarising filter <i>/'pəʊləraɪzɪŋ ˈfɪltə/</i>			

Chemistry

Topic 7 · Equilibria

 equilibrium constant <i>/ˌiːkwɪˈlɪbrɪəm ˈkɒnstənt/</i>			
 partial pressure <i>/'pɑːʃl ˈpreʃə/</i>			
 mole fraction <i>/məʊl ˈfrækʃn/</i>			
 Haber process <i>/'heɪbə ˈprəʊses/</i>			
 Contact process <i>/'kɒntækt ˈprəʊses/</i>			
 acid <i>/'æsɪd/</i>			
 proton donor <i>/'prəʊtɒn ˈdəʊnə/</i>			
 base <i>/beɪs/</i>			
 proton acceptor <i>/'prəʊtɒn ək'septə/</i>			

 strong acid <i>/strɒŋ ˈæsɪd/</i>			
 strong base <i>/strɒŋ beɪs/</i>			
 dissociated <i>/dɪ'səʊsɪeɪtɪd/</i>			
 weak acid <i>/wiːk ˈæsɪd/</i>			
 weak base <i>/wiːk beɪs/</i>			
 universal indicator <i>/ˌjuːnɪˈvɜːsl ˈɪndɪkeɪtə/</i>			
 Neutralisation <i>/ˌnjuːtrəlaɪˈzeɪʃn/</i>			
 salt <i>/sɒlt/</i>			
 titration curve <i>/taɪˈtreɪʃn kɜːv/</i>			

Biology

Topics 4–5 · Cell membranes and transport, The mitotic cell cycle

 dialysis tubing <i>/daɪˈæləsɪs ˈtjuːbɪŋ/</i>			
 solute <i>/'sɒljʊt/</i>			
 distilled water <i>/dɪˈstɪld ˈwɔːtə/</i>			
 turgid <i>/'tɜːdʒɪd/</i>			
 plasmolysis <i>/plæzˈmɒləsɪs/</i>			
 haemolysis <i>/hiːˈmɒləsɪs/</i>			

 chromosome <i>/ˈkrəʊməsəʊm/</i>			
 histone <i>/ˈhɪstəʊn/</i>			
 replication <i>/ˌreplɪˈkeɪʃn/</i>			
 sister chromatids <i>/ˈsɪstə ˈkrəʊmætɪdz/</i>			
centromere <i>/ˈsentɹəʊmə/</i>			
 telomere <i>/ˈteləʊmə/</i>			
 mitosis <i>/maɪˈtəʊsɪs/</i>			
 daughter cell <i>/ˈdɔːtə sel/</i>			
 gene <i>/dʒiːn/</i>			
 multicellular <i>/ˌmʌltɪˈseɪljələ/</i>			
 organism <i>/ˈɔːɡənɪzəm/</i>			
 tissue <i>/ˈtɪʃuː/</i>			
 asexual reproduction <i>/eɪˈseksjuəl rɪprəˈdʌkʃn/</i>			
 cell cycle <i>/sel ˈsaɪkl/</i>			
 interphase <i>/ˌɪntəˈfeɪz/</i>			
 cytokinesis <i>/ˌsaɪtəkeɪˈniːsɪs/</i>			

 stem cell <i>/stem sel/</i>			
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Mathematics

Topic 2 · Pure Mathematics 2

 cosecant <i>/ˈkəʊsekənt/</i>			
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 cotangent <i>/ˈkəʊtændʒənt/</i>			
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= trigonometric identities <i>/ˌtrɪɡənəʊˈmetrɪk aɪˈdentɪtɪz/</i>			
--	--	--	--

+ compound angle <i>/ˈkɒmpaʊnd ˈæŋɡl/</i>			
---	--	--	--

 double angle <i>/ˈdʌbl ˈæŋɡl/</i>			
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 R-formula <i>/ɑː ˈfɔːmjələ/</i>			
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× product rule <i>/ˈprɒdʌkt ruːl/</i>			
---	--	--	--

÷ quotient rule <i>/ˈkwɒʃənt ruːl/</i>			
--	--	--	--

(×) parametric equations <i>/ˌpærəˈmetrɪk ɪˈkweɪʒnz/</i>			
--	--	--	--

 implicitly <i>/ɪmˈplɪsɪtli/</i>			
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Further Mathematics

Topic 3 · Further Mechanics

 equilibrium <i>/ˌɪkwɪˈlɪbrɪəm/</i>			
--	--	--	--

 toppling <i>/ˈtɒplɪŋ/</i>			
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→	sliding			
	<i>/ˈslaɪdɪŋ/</i>			
↻	angular speed			
	<i>/ˈæŋɡjələ spiːd/</i>			
⦿	centripetal acceleration			
	<i>/senˈtrɪpɪtl əkˌsələˈreɪʃn/</i>			

Computer Science

Topics 5–7 · System Software, Security, privacy and data integrity, Ethics and Ownership

↻	cyclic redundancy check			
	<i>/ˈsaɪklɪk rɪˈdʌndənsi tʃek/</i>			
🕸	pharming			
	<i>/ˈfɑːmɪŋ/</i>			
🧑	hackers			
	<i>/ˈhækəz/</i>			
👤	user accounts			
	<i>/ˈjuːzə əˈkaʊnts/</i>			
✍	digital signatures			
	<i>/ˈdɪdʒɪtl ˈsɪɡnətʃəz/</i>			
🕵	anti-spyware			
	<i>/ˈænti ˈspaɪweə/</i>			
🔑	access rights			
	<i>/ˈækses raɪts/</i>			
👤	biometrics			
	<i>/baɪəʊˈmetrɪks/</i>			
⚖	ethics			
	<i>/ˈeθɪks/</i>			
🔒	confidentiality			
	<i>/ˌkɒnfɪˌdenʃiˈæləti/</i>			
⚔	conflicts of interest			
	<i>/ˈkɒnflikt ɒv ˈɪntrest/</i>			

©	intellectual property			
	<i>/ˌɪntəˈlektʃuːəl ˈprɒpəti/</i>			
©	copyright			
	<i>/ˈkɒpraɪt/</i>			
📜	patent			
	<i>/ˈpeɪtənt/</i>			
📄	software licence			
	<i>/ˈsɒftweə ˈlaɪsəns/</i>			
🔒	proprietary			
	<i>/prəˈpraɪətəri/</i>			
📄	open-source			
	<i>/ˈəʊpən sɔːs/</i>			
🕸	copyleft			
	<i>/ˈkɒpɪleft/</i>			
📄	freeware			
	<i>/ˈfriːweə/</i>			
🔗	shareware			
	<i>/ˈʃeəweə/</i>			
🧠	artificial intelligence			
	<i>/ɑːtɪˈfɪʃl ɪnˈtelɪdʒəns/</i>			
🧠	machine learning			
	<i>/məˈʃiːn ˈlɜːnɪŋ/</i>			
🧠	Deep learning			
	<i>/diːp ˈlɜːnɪŋ/</i>			
🧠	neural networks			
	<i>/ˈnjuːrəl ˈnetwɜːks/</i>			
🗣	speech recognition			
	<i>/spiːtʃ ˌrekəɡˈnɪʃn/</i>			
🖼	image recognition			
	<i>/ˈɪmɪdʒ ˌrekəɡˈnɪʃn/</i>			

 machine translation			
/məʹʃi:n trænʹsleɪʃn/			
 recommendation systems			
/,rekəməneɹdeɪʃn ʹsɪstəməz/			

Economics

Topics 3–4 · Government microeconomic intervention, The macroeconomy

 buffer stock			
/ˈbʌfə stɒk/			
 regulation			
/,regjə˹leɪʃn/			
 state provision			
/steɪt prə˹vɪʒn/			
 tradable permits			
/˹treɪdəbl ˹pɜ:mɪts/			
 government failure			
/˹gʌvənmənt ˹feɪliə/			
 black market			
/blæk ˹mɑ:kɪt/			
 flow			
/fləʊ/			
 wealth			
/welθ/			
 stock			
/stɒk/			
 progressive tax			
/prə˹gresɪv tæks/			
 percentage			
/pə˹sentɪdʒ/			
 benefits			
/˹benɪfɪts/			

 transfer payments			
/˹trænsfə: ˹peɪmənts/			
 redistribution			
/,rɪ:dɪstrɪ˹bjʊ:ʃn/			
 national income			
/˹næʃənl ˹ɪŋkʌm/			
 gross domestic product			
/grəʊs də˹mestɪk ˹prɒdʌkt/			