

Morning Reading 晨读

Grade 11 · AS · Week 10

Read each word aloud, then copy the English word three times. 朗读每个单词，然后把英语单词抄写三遍。

Reading 阅读

Read the passage aloud twice. 把短文朗读两遍。

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 说一说:

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** 时基
/taɪm beɪs/

 **y-gain** 垂直增益
/waɪ geɪn/

 **intensity** 强度
/ɪn'tensɪti/

• **point source** 点源
/pɔɪnt sɔːs/

» **wavefront** 波前
/ˈweɪvfrʌnt/

<> **rarefaction** 稀疏
/ˈreəriˈfækʃn/

≈ **sine curve** 正弦曲线
/saɪn kɜːv/

↑ **source** 波源
/sɔːs/

👁️ **observer** 观察者
/əb'zɜːvə/

🔊 **Doppler effect** 多普勒效应
/'dɒplə i'fekt/

📡 **electromagnetic wave** 电磁波
/ɪˌlektɹəmæg'netɪk weɪv/

📶 **electromagnetic spectrum** 电磁波谱
/ɪˌlektɹəmæg'netɪk 'spektrəm/

📡 **microwaves** 微波
/ˈmaɪkrəweɪvz/

🔭 **infrared** 红外线
/ɪnfrə'red/

 ultraviolet 紫外线			
/ˌʊltrəˈvaɪəlit/			
 X-rays X 射线			
/eks reɪz/			
 gamma-rays γ 射线			
/ˈɡæmə reɪz/			
 polarisation 偏振			
/ˌpəʊləraɪˈzeɪʃn/			
 plane-polarised 平面偏振			
/pleɪn ˈpəʊləraɪzd/			
 polarising filter 偏振片			
/ˈpəʊləraɪzɪŋ ˈfɪltə/			

Chemistry

Topic 7 · Equilibria

 equilibrium constant 平衡常数			
/ˌɪkwɪˈlɪbrɪəm ˈkɒnstənt/			
 partial pressure 分压			
/ˈpɑːʃl ˈpreʃə/			
 mole fraction 摩尔分数			
/məʊl ˈfrækʃn/			
 Haber process 哈伯法			
/ˈheɪbə ˈprəʊses/			
 Contact process 接触法			
/ˈkɒntækt ˈprəʊses/			
 acid 酸			
/ˈæsɪd/			
 proton donor 质子供体			
/ˈprəʊtɒn ˈdəʊnə/			
 base 碱			
/beɪs/			
 proton acceptor 质子受体			
/ˈprəʊtɒn əkˈseptə/			

 strong acid 强酸			
/strɒŋ ˈæsɪd/			
 strong base 强碱			
/strɒŋ beɪs/			
 dissociated 解离			
/dɪˈsəʊsieɪtɪd/			
 weak acid 弱酸			
/wɪk ˈæsɪd/			
 weak base 弱碱			
/wɪk beɪs/			
 universal indicator 通用指示剂			
/juːnɪˈvɜːsl ˈɪndɪkeɪtə/			

 Neutralisation 中和			
/ˌnjuːtrəlaɪˈzeɪʃn/			
 salt 盐			
/sɒlt/			
 titration curve 滴定曲线			
/taɪˈtreɪʃn kɜːv/			

Biology

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

 dialysis tubing 透析袋			
/daɪˈæləsɪs ˈtjuːbɪŋ/			
 solute 溶质			
/ˈsɒljʊt/			
 distilled water 蒸馏水			
/dɪˈstɪld ˈwɔːtə/			
 turgid 膨胀			
/ˈtɜːdʒɪd/			
 plasmolysis 质壁分离			
/plæzˈmɒləsɪs/			
 haemolysis 溶血			
/hiːˈmɒləsɪs/			

 chromosome 染色体			
/ˈkrəʊməsaʊm/			
 histone 组蛋白			
/ˈhɪstəʊn/			
 replication 复制			
/ˌreplɪˈkeɪʃn/			
 sister chromatids 姐妹染色单体			
/ˈsɪstə ˈkraʊmætɪdz/			
 centromere 着丝粒			
/ˈsentrəʊmə/			
 telomere 端粒			
/ˈteləʊmə/			
 mitosis 有丝分裂			
/maɪˈtaʊsɪs/			
 daughter cell 子细胞			
/ˈdɔ:tə sel/			
 gene 基因			
/dʒiːn/			
 multicellular 多细胞			
/ˌmʌltɪˈseljələ/			
 organism 生物体			
/ˈɔ:ɡənɪzəm/			
 tissue 组织			
/ˈtɪʃuː/			
 asexual reproduction 无性生殖			
/eɪˈseksjuəl rɪprəˈdʌkʃn/			
 cell cycle 细胞周期			
/sel ˈsaɪkl/			
 interphase 间期			
/ˌɪntəˈfeɪz/			
 cytokinesis 胞质分裂			
/ˌsaɪtəˈkiːsɪs/			

 stem cell 干细胞			
/stem sel/			
Mathematics			
<i>Topic 2 · Pure Mathematics 2</i>			
 cosecant 余割			
/ˈkəʊsekənt/			
 cotangent 余切			
/ˈkəʊtændʒənt/			
 trigonometric identities 三角恒等式			
/ˈtrɪɡənəʊˈmetrɪk aɪˈdentɪtɪz/			
 compound angle 复合角			
/ˈkɒmpaʊnd ˈæŋɡl/			
 double angle 二倍角			
/ˈdʌbl ˈæŋɡl/			
 R-formula 辅助角公式			
/ɑːˈfɔːmjələ/			
 product rule 乘积法则			
/ˈprɒdʌkt ruːl/			
 quotient rule 商法则			
/ˈkwɒʃjənt ruːl/			
 parametric equations 参数方程			
/ˈpærəˈmetrɪk ɪˈkweɪʒnz/			
 implicitly 隐式			
/ɪmˈplɪsɪtli/			
Further Mathematics			
<i>Topic 3 · Further Mechanics</i>			
 equilibrium 平衡			
/ˌɪkwɪˈlɪbrɪəm/			
 toppling 翻倒			
/ˈtɒplɪŋ/			

→ sliding 滑动			
/ˈslaɪdɪŋ/			
↻ angular speed 角速度			
/ˈæŋɡjələ spiːd/			
⦿ centripetal acceleration 向心加速度			
/senˈtrɪpɪtl əkˌsələˈreɪʃn/			

Computer Science

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

↻ cyclic redundancy check 循环冗余校验			
/ˈsaɪklɪk rɪˈdʌndənsi tʃek/			
🕸 pharming 域名欺骗			
/ˈfɑːmɪŋ/			
👤 hackers 黑客			
/ˈhækəz/			
👤 user accounts 用户账户			
/ˈjuːzə əˈkaʊnts/			
📄 digital signatures 数字签名			
/ˈdɪdʒɪtl ˈsɪɡnətʃəz/			
🕸 anti-spyware 反间谍软件			
/ˈæntɪ ˈspaɪweə/			
🔑 access rights 访问权限			
/ˈækses raɪts/			
👤 biometrics 生物识别			
/ˌbaɪəˈmetrɪks/			
⚖️ ethics 伦理			
/ˈeθɪks/			
🔒 confidentiality 保密性			
/ˌkɒnfɪˌdɛnʃiˈæləti/			
⚔️ conflicts of interest 利益冲突			
/ˈkɒnflikt əv ˈɪntrest/			

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/ˈkɒpraɪt/			
👤 patent 专利			
/ˈpeɪtənt/			
✓ software licence 软件许可证			
/ˈsɒftweə ˈlaɪsəns/			
🔒 proprietary 专有			
/prəˈpraɪətəri/			
🔒 open-source 开源			
/ˈəʊpən sɔːs/			
© copyleft 著佐权			
/ˈkɒpɪləft/			
📄 freeware 免费软件			
/ˈfriːweə/			
🔗 shareware 共享软件			
/ˈʃeəweə/			
🧠 artificial intelligence 人工智能			
/ˌɑːtrɪˈfɪʃl ɪnˈtelɪdʒəns/			
🧠 machine learning 机器学习			
/məˈʃiːn ˈlɜːnɪŋ/			
🧠 Deep learning 深度学习			
/diːp ˈlɜːnɪŋ/			
🧠 neural networks 神经网络			
/ˈnjuːrəl ˈnetwɜːks/			
🗣️ speech recognition 语音识别			
/spiːtʃ ˌrekəɡˈnɪʃn/			
🖼️ image recognition 图像识别			
/ˈɪmɪdʒ ˌrekəɡˈnɪʃn/			

📖 machine translation 机器翻译
/məʃiːn trænˈsleɪʃn/

📖 recommendation systems 推荐系统
/ˌrekəmenˈdeɪʃn ˈsɪstəmz/

Economics

Topic 3 · Government microeconomic intervention

📖 external benefit 外部收益
/ekˈstɜːnl ˈbenɪfɪt/

📖 monopoly 垄断
/məˈnɒpəli/

📖 monopoly power 垄断势力
/məˈnɒpəli ˈpaʊə/

📖 inequality 不平等
/ɪniːˈkwɒləti/

📖 asymmetric information 信息不对称
/ˌeɪsɪˈmetrɪk ˌɪnfəˈmeɪʃn/

📖 indirect tax 间接税
/ɪndaiˈrekt tæks/

📖 incidence of a tax 税收归宿
/ˈɪnsɪdəns əvə tæks/

📖 maximum price 最高限价
/ˈmæksɪməm praɪs/

📖 minimum price 最低限价
/ˈmɪnɪməm praɪs/

📖 buffer stock 缓冲库存
/ˈbʌfə stɒk/

📖 regulation 管制
/ˌregjʊˈleɪʃn/

📖 state provision 政府提供
/steɪt prəˈvɪʒn/

📖 tradable permits 可交易许可证
/ˈtreɪdəbl ˈpɜːmits/

📖 government failure 政府失灵
/ˈɡʌvənmənt ˈfeɪliə/

📖 black market 黑市
/blæk ˈmɑːkɪt/