
Morning Reading 晨读

Grade 10 · 十年级

Complete Volume · 18 Weeks

Morning Reading 晨读

Grade 10 · Week 1

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。

Science starts with **measurement**. In the laboratory 实验室, we do not guess. We use a **ruler** to measure length, a **measuring cylinder** to measure the volume of a liquid, and a balance to measure **mass**. Good scientists measure carefully, because every measurement has a small **uncertainty**.

Everything around you is made of tiny **particles**. In a **solid**, the particles are close together and only vibrate. In a **liquid**, they can move past each other. In a **gas**, they fly around quickly and are far apart. When you smell breakfast from the kitchen, gas particles have travelled 移动 to your nose!

Economists also study the world, but they study people. People have unlimited **wants**, but **resources** are **scarce**. This is the basic **economic problem**: we cannot have everything, so we must choose.

Talk about it 说一说:

1. What did you measure this week, and what did you use to measure it?
2. You have 20 yuan and one hour of free time. What do you choose to do, and what do you give up?

Physics

Topic 1 · Motion, forces and energy

 **measurement** 测量

 **ruler** 直尺

 **measuring cylinder** 量筒

 **meniscus** 弯月面

÷ measure many and
divide 测多个再相除

🕒 pendulum 摆

↺ period 周期

⊕ uncertainty 不确定度

scalar 标量

📏 magnitude 大小

↗ vector 矢量

🧑 mass 质量

⚡ energy 能量

🔗 principle of conservation
of energy 能量守恒定律

⚖️ Principle of moments 力
矩原理

↔ Conservation of
momentum 动量守恒

⇨ momentum 动量

🌡 temperature 温度

→ force 力

↗ resultant force 合力

↗ resultant 合矢量

Chemistry

Topic 1 · States of matter

⋯ particles 粒子

⊠ atoms 原子

 molecules 分子			
 ions 离子			
 kinetic particle theory 粒子动理论			
 kinetic energy 动能			
 energy 能量			
 thermal energy 热能			
 solid 固体			
 liquid 液体			
 gas 气体			
 volume 体积			
 compress 压缩			
 density 密度			
 mass 质量			
 relative molecular mass 相对分子质量			
 separation 间距			
 arrangement 排列			
 motion 运动			
 regular 规则			
 vibrate 振动			
 forces of attraction 引力			

Biology

Topic 1 · Characteristics and classification of living organisms

 characteristics 特征			
 life processes 生命过程			
 organisms 生物体			
 movement 运动			
 respiration 呼吸作用			
 cells 细胞			
 nutrient molecules 营养物质			
 energy 能量			
 metabolism 新陈代谢			
 sensitivity 应激性			
 environment 环境			
 growth 生长			
 dry mass 干重			
 reproduction 生殖			
 excretion 排泄			
 waste products 废物			
 nutrition 营养			
 classify 分类			
 species 物种			
 fertile offspring 可育后代			
 scientific name 学名			
 binomial system 双名法			
 genus 属			

 **dichotomous key** 二歧检索表

 **evolutionary relationships** 进化关系

 **ancestor** 祖先

 **base sequence** 碱基序列

 **genes** 基因

 **kingdoms** 界

 **animal** 动物

 **cell wall** 细胞壁

 **plant** 植物

 **photosynthesis** 光合作用

 **chloroplasts** 叶绿体

 **fungus** 真菌

 **moulds** 霉菌

 **mushrooms** 蘑菇

Mathematics

Topic 1 · Number

natural number 自然数

± integer 整数

× factor 因数

% remainder 余数

*** multiple** 倍数

 **common factor** 公因数

 common multiple 公倍数			
 prime number 质数			
 square number 平方数			
 cube number 立方数			
 rational number 有理数			
 fraction 分数			
 irrational number 无理数			
 reciprocal 倒数			
 product 乘积			
 prime factor 质因数			
 highest common factor 最大公因数			

Computer Science

Topic 1 · Data representation

 digit 数字			
 binary 二进制			
 data 数据			
 logic gate 逻辑门			
 processor 处理器			
 register 寄存器			
 number system 数制			
 denary 十进制			
 hexadecimal 十六进制			
 base 基数			

 place value 位值			
 bit 位			
 byte 字节			
 nibble 半字节			
 memory address 内存地址			
 overflow 溢出			
 logical binary shift 逻辑二进制移位			
 least significant bit 最低有效位			
 two's complement 补码			
 most significant bit 最高有效位			

Economics

Topic 1 · The basic economic problem

 resources 资源			
 economic problem 经济问题			
 finite 有限的			
 wants 欲望			
 scarce 稀缺			
 scarcity 稀缺性			
 goods 物品			
 services 服务			
 consumers 消费者			

 workers 工人			
 producers 生产者			
 firms 企业			
 governments 政府			
 economic goods 经济物品			
 opportunity cost 机会成本			

English

Topic 1 · Reading skills

 skim 略读			
 gist 大意			
 paragraph 段落			
 scan 扫读			
 predict 预测			
 phrase 短语			
 multiple matching 多项匹配			

Morning Reading 晨读

Grade 10 · Week 2

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。

Li Wei cycles to school every morning. When the road is empty, his **speed** is high. When he sees the school gate, he slows down. This is called **deceleration**. At the gate he stops and waits for his friend, so he is **at rest**. If you draw his journey on a **distance-time graph**, the **gradient** of the line shows his speed.

Before school, his mother boils water for tea. **Boiling** turns the liquid into gas. Some water is also **evaporating** slowly from the wet cups by the window. On the cold glass, the steam is **condensing** back into water drops.

His aunt is an **entrepreneur**. She opened a small noodle shop this year. She needed **land** for the shop, **labour** to cook and serve, and **capital** such as pots and tables. Her reward is **profit**. Every choice has an **opportunity cost**: the money she spent on tables cannot buy a new sign.

Talk about it 说一说:

1. Describe your journey to school using the words speed, acceleration, and at rest.
2. If you started a small shop, what land, labour, and capital would you need?

Physics

Topic 1 · Motion, forces and energy

↓ **weight** 重力

↻ **velocity** 速度

↓ **terminal velocity** 收尾速度

↻ **acceleration** 加速度

↓ acceleration of free fall 自由落体加速度			
🌀 Speed 速率			
📈 speed-time graph 速度-时间图			
📈 load-extension graph 载 荷-伸长图			
📈 distance-time graph 距 离-时间图			
↕ extension 伸长量			
⏏ deceleration 减速			
🛑 at rest 静止			
↗ gradient 斜率			
∑ area under the line 线下 面积			
🌀 air resistance 空气阻力			
📦 matter 物质			
🌐 Gravitational field strength 重力场强度			
⚖ gravitational potential 重力势能			
⚖ balance 天平			
📦 Regular solid 规则固体			
📦 Irregular solid 不规则固 体			

Chemistry

Topics 1-2 · States of matter, Atoms, elements and compounds

 melting 熔化			
 melting point 熔点			
 boiling point 沸点			
 boiling 沸腾			
 freezing 凝固			
 evaporating 蒸发			
 condensing 凝结			
 sublimation 升华			
 heating curve 加热曲线			
 cooling curve 冷却曲线			
 collide 碰撞			
 diffusion 扩散			
 concentration 浓度			
 rate 速率			
 pressure 压强			
 ammonia 氨气			
 hydrogen chloride 氯化氢			
 ammonium chloride 氯化铵			
 compound 化合物			
 ionic compound 离子化合物			
 ionic bond 离子键			
 covalent bond 共价键			

Biology

Topic 1 · Characteristics and classification of living organisms

⊙ yeast 酵母

⊖ prokaryote 原核生物

🦠 bacteria 细菌

○ single-celled 单细胞

◎ nucleus 细胞核

⊗ protocist 原生生物

≡ algae 藻类

🐾 vertebrates 脊椎动物

🦴 backbone 脊柱

🐾 mammals 哺乳动物

🐾 fur 毛发

🐦 birds 鸟类

🪶 feathers 羽毛

△ beak 喙

🐍 reptiles 爬行动物

🛡 scales 鳞片

🐸 amphibians 两栖动物

🐟 fish 鱼类

🐟 fins 鳍

🐟 gills 鳃

🦋 arthropods 节肢动物

🦴 exoskeleton 外骨骼

 joints 关节			
 insects 昆虫			
 antennae 触角			
 arachnids 蛛形类			
 crustaceans 甲壳类			
 myriapods 多足类			
 segments 体节			
 ferns 蕨类植物			
 spores 孢子			
 flowering plants 开花植物			
 seeds 种子			
 cotyledons 子叶			
 monocotyledons 单子叶植物			
 leaf veins 叶脉			
 dicotyledons 双子叶植物			

Mathematics

Topic 1 · Number

 lowest common multiple 最小公倍数			
 set 集合			
• element 元素			
 universal set 全集			
 complement 补集			

⌀ empty set 空集			
⊆ subset 子集			
∪ union 并集			
∩ intersection 交集			
⊙ Venn diagram 维恩图			
⌘ power 幂			
# index 指数			
√ square root 平方根			
∛ cube root 立方根			
$\times_2$ base 底数			
→ standard form 科学记数法			
√ surd 根式			

Computer Science

Topics 1–2 · Data representation, Data transmission

T character set 字符集			
😊 emoji 表情符号			
💾 storage 存储			
🔊 sound wave 声波			
📊 sampling 采样			
🕒 sample rate 采样率			
📏 sample resolution 采样分辨率			
↕ amplitude 振幅			

 pixel 像素			
 resolution 分辨率			
 colour depth 颜色深度			
 compression 压缩			
 bandwidth 带宽			
 transmission 传输			
 lossless 无损			
 run-length encoding 行程编码			
 lossy 有损			
 data transmission 数据传输			
 packets 数据包			
 packet header 包头			

Economics

Topic 1 · The basic economic problem

 free goods 免费物品			
 factors of production 生产要素			
 land 土地			
 labour 劳动			
 capital 资本			
 enterprise 企业家才能			
 entrepreneur 企业家			
 reward 报酬			

 rent 地租			
 wages 工资			
% interest 利息			
 profit 利润			
 mobility 流动性			
 alternative 替代选择			
 production possibility curve 生产可能性曲线			

English

Topic 1 · Reading skills

 paraphrase 改写			
 signal words 信号词			
+ addition 递进			
 contrast 对比			
→ cause and effect 因果			
 note-making 做笔记			
 summary 概括			

Morning Reading 晨读

Grade 10 · Week 3

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。

When you send a photo to a friend, your phone does something clever. It cuts the photo into small **packets**. Each packet gets a **packet header** with the **address** of your friend's phone. **Routers** on the internet read the address and push each packet forward. This is called **packet switching**. At the other end, the packets join together again, and your friend sees the photo.

In science class this week, we learned about balance. A seesaw 跷跷板 turns around a **pivot**. The turning effect of a force is called a **moment**. When the moments on both sides are equal, the seesaw is in **equilibrium**. Every object also has a **centre of gravity**, the point where its weight seems to act.

In economics, a country must choose what to make. A **production possibility curve** shows the choices. Making more phones may mean making less food. That is a **trade-off**.

Talk about it 说一说:

1. Explain to a younger student how a photo travels across the internet.
2. Give one trade-off you made this week. What did you give up?

Physics

Topic 1 · Motion, forces and energy

💧 **displacement method** 排水法

🛶 **floats** 漂浮

📐 **shape** 形状

📈 **limit of proportionality** 比例极限

 spring constant 弹簧常数			
 Friction 摩擦力			
 moment 力矩			
 pivot 支点			
 equilibrium 平衡			
 centre of gravity 重心			
 lamina 薄片			
 stable 稳定			
 Impulse 冲量			
 stored 储存			
 transferred 转移			
 kinetic 动能			
 chemical 化学能			
 elastic (strain) 弹性势能			
 nuclear 核能			
 electrostatic 静电能			
 internal (thermal) 内能			

Chemistry

Topics 2-7 · Atoms, elements and compounds, Acids, bases and salts

 giant covalent structure 巨型共价结构			
 mixture 混合物			
 electrons 电子			
 atom 原子			

 element 元素			
+ proton 质子			
 nucleus 原子核			
 charge 电荷			
# proton number 质子数			
Σ nucleon number 核子数			
$\pm$ ion 离子			
 delocalised electrons 离域电子			
 shells 电子层			
+ protons 质子			
 neutrons 中子			
Z atomic number 原子序数			
A mass number 质量数			
A_r relative atomic mass 相对原子质量			
 electronic configuration 电子排布			
 Periodic Table 周期表			
 Period 周期			
 Group 族			

Biology

Topics 1–2 · Characteristics and classification of living organisms, Organisation of the organism

 viruses 病毒			
 protein coat 蛋白质外壳			

 genetic material 遗传物质			
 host 宿主			
 digestion 消化			
 bacterium 细菌			
 division 分裂			
 cell membrane 细胞膜			
 cytoplasm 细胞质			
 ribosomes 核糖体			
 mitochondria 线粒体			
 vacuole 液泡			
 proteins 蛋白质			
 cellulose 纤维素			
 chlorophyll 叶绿素			
 cell sap 细胞液			
 plasmids 质粒			
 specialised cells 特化细胞			
 ciliated cells 纤毛细胞			
 mucus 黏液			
 trachea 气管			
 bronchi 支气管			
 root hair cells 根毛细胞			
 absorption 吸收			
 palisade mesophyll cells 栅栏叶肉细胞			

 neurons 神经元			
 electrical impulses 电脉冲			
 red blood cells 红细胞			
 oxygen 氧气			
 sperm 精子			
 egg cells 卵细胞			
 gametes 配子			
 organism 生物体			
 tissue 组织			
 muscle 肌肉			
 organ 器官			
 organ system 器官系统			

Mathematics

Topic 1 · Number

 rationalise the denominator 分母有理化			
 denominator 分母			
 numerator 分子			
 proper fraction 真分数			
 improper fraction 假分数			
 mixed number 带分数			
 decimal 小数			
 percentage 百分比			

↖ simplest form 最简形式

↺ recurring decimal 循环小数

≡ order of operations 运算顺序

↗ magnitude 大小

× multiplier 乘数

% interest 利息

💰 principal 本金

% simple interest 单利

↗ compound interest 复利

Computer Science

Topic 2 · Data transmission

📦 payload 有效载荷

📺 trailer 尾部

📍 address 地址

🔄 packet switching 数据包交换

📶 routers 路由器

→ serial 串行

= parallel 并行

→ simplex 单工

↔ half-duplex 半双工

↔ full-duplex 全双工

🔌 universal serial bus 通用串行总线

 interface 接口			
 interference 干扰			
 parity check 奇偶校验			
 parity bit 奇偶校验位			
 checksum 校验和			
 echo check 回送校验			
 automatic repeat request 自动重传请求			
 acknowledgements 确认			
 timeout 超时			

Economics

Topics 1-2 · The basic economic problem, The allocation of resources

 unemployment 失业			
 trade-off 取舍			
 economic growth 经济增长			
 economic decline 经济衰退			
 non-renewable resources 不可再生资源			
 microeconomics 微观经济学			
 macroeconomics 宏观经济学			
 market 市场			
 price mechanism 价格机制			

📦 allocate 配置

📡 signalling 信号

🎁 incentive 激励

🕒 rationing 配给

👉 demand 需求

📦 good 物品

English

Topic 1 · Reading skills

📄 repetition 重复

🔗 inference 推断

↗ implies 暗示

😊 attitude 态度

🔍 word choice 用词

☑ multiple-choice 选择题

📖 context 语境

Morning Reading 晨读

Grade 10 · Week 4

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。

Lifting your school bag is **work done**. Energy is measured in **joules**, and **power**, measured in **watts**, tells us how fast energy is used. A bright old lamp feels hot because much of its energy is **wasted** as heat. A good LED lamp has high **efficiency**: most of the electrical energy becomes light. A **Sankey diagram** shows with wide and narrow arrows where the energy goes.

Your messages also need protection. Before a message leaves your phone, an app turns the readable **plaintext** into secret **ciphertext**. This is **encryption**. Only someone with the right **key** can read it, even if the message is **intercepted** on the way.

Shops watch our choices carefully. The **law of demand** says that when the price of a good rises, the **quantity demanded** usually falls. If milk tea gets expensive, many students switch to **substitutes** such as juice.

Talk about it 说一说:

1. Name one thing at home that wastes energy. How could you improve its efficiency?
2. The price of your favourite snack doubles. What do you buy instead, and why?

Physics

Topics 1–2 · Motion, forces and energy, Thermal physics

🔗 **Sankey diagram** 桑基图

🗑️ **wasted** 浪费

🔧 **Work done** 做功

🔊 **joule** 焦耳

⚡ **Power** 功率

💡 watt 瓦特			
% Efficiency 效率			
↓ pressure 压强			
↻ pascal 帕斯卡			
↓ depth 深度			
≡ states of matter 物态			
→ motion 运动			
≡ density 密度			
📦 solid 固体			
💧 liquid 液体			
≡ gas 气体			
🔊 vibrate 振动			
↔ kinetic energy 动能			
🔥 melting 融化			
🍷 boiling 沸腾			
💧 condensation 凝结			

Chemistry

Topics 2-4 · Atoms, elements and compounds, Electrochemistry

≡ noble gases 稀有气体			
🔗 isotopes 同位素			
📊 abundance 丰度			
⊕ cation 阳离子			
⊖ anion 阴离子			

 **electrostatic attraction**
静电引力

 **metal** 金属

 **non-metal** 非金属

 **lattice** 晶格

 **alternating** 交替

 **electrical conductivity**
导电性

 **electric current** 电流

 **molten** 熔融

 **aqueous** 水溶液

 **intermolecular forces** 分子间作用力

 **diamond** 金刚石

 **cutting tools** 切割工具

 **graphite** 石墨

 **layers** 层

 **lubricant** 润滑剂

 **electrode** 电极

 **silicon(IV) oxide** 二氧化硅

Biology

Topics 2-4 · Organisation of the organism, Movement into and out of cells, Biological molecules

 **digestive system** 消化系统

 **microscope** 显微镜

 magnification 放大倍数			
 specimen 标本			
 micrometres 微米			
 diffusion 扩散			
 net movement 净移动			
 particles 粒子			
 concentration 浓度			
 concentration gradient 浓度梯度			
 random movement 随机 运动			
 kinetic energy 动能			
 molecules 分子			
 ions 离子			
 gases 气体			
 solutes 溶质			
 carbon dioxide 二氧化碳			
 surface area 表面积			
 temperature 温度			
 solvent 溶剂			
 dissolve 溶解			
 solution 溶液			
 transport 运输			
 osmosis 渗透			
 partially permeable membrane 半透膜			

	water potential	水势			
	turgid	膨胀			
	turgor pressure	膨压			
	flaccid	松软			
	plasmolysis	质壁分离			
	dialysis tubing	透析管			
	active transport	主动运输			
	root hairs	根毛			
	protein carriers	载体蛋白			
	molecule	分子			
	elements	元素			
	carbohydrates	碳水化合物			

Mathematics

Topic 1 · Number

	reverse percentage	逆百分比			
	exponential growth	指数增长			
	exponential decay	指数衰减			
	depreciation	折旧			
	ratio	比			
	proportion	比例			
	scale	比例尺			

 rate 比率			
 average speed 平均速度			
 density 密度			
 mass 质量			
 volume 体积			
 population density 人口 密度			
 pressure 压强			
 decimal place 小数位			
 significant figure 有效数 字			
 estimate 估算			

Computer Science

Topics 2-3 · Data transmission, Hardware

 check digit 校验码			
 transposition error 换位 错误			
 barcodes 条形码			
 encryption 加密			
 intercepted 拦截			
 plaintext 明文			
 ciphertext 密文			
 symmetric encryption 对称加密			
 key 密钥			

 **asymmetric encryption** 非对称加密

 **public key** 公钥

 **private key** 私钥

 **central processing unit** 中央处理器

 **instructions** 指令

 **arithmetic logic unit** 算术逻辑单元

 **control unit** 控制单元

 **registers** 寄存器

 **buses** 总线

 **address bus** 地址总线

 **data bus** 数据总线

Economics

Topic 2 · The allocation of resources

 **law of demand** 需求定律

 **inverse relationship** 反向关系

 **ceteris paribus** 其他条件不变

 **quantity demanded** 需求量

 **demand curve** 需求曲线

 **shift** 移动

 **income** 收入

♥ tastes 偏好			
↔ substitutes 替代品			
✚ complements 互补品			
👥 population 人口			
📣 advertising 广告			
📦 supply 供给			
⚖ law of supply 供给定律			

English

Topic 2 · Writing: purpose, audience and accuracy

🎯 purpose 目的			
📢 inform 告知			
⚖ argue 论证			
🗣 discuss 讨论			
👥 audience 读者			
💬 register 语域			
👔 formal 正式			

Morning Reading 晨读

Grade 10 · Week 5

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。

On a cold morning, a metal spoon feels colder than a wooden one, but they have the same temperature. Metal is a good **thermal conductor**: it carries heat away from your warm hand quickly. Wood is a **thermal insulator**. Your coat does not make heat; it traps air, which is a poor conductor, so your body's heat stays close to you. Water needs a lot of energy to warm up because it has a high **specific heat capacity**.

Inside every computer, the processor repeats the **fetch-execute cycle** many millions of times each second. Instructions wait in **memory**, small fast **registers** hold the data being used right now, and a **cache** keeps popular data near the processor, like a pencil case on your desk.

In the market, sellers respond to prices. The **law of supply** says a higher price usually raises the **quantity supplied**. When demand and supply meet, the market reaches **equilibrium**. If the price is set too low, there is a **shortage**.

Talk about it 说一说:

1. Why does a metal chair feel colder than a plastic one in the same room?
2. Concert tickets sell out in one minute. Is the price too high or too low? Explain.

Physics

Topic 2 · Thermal physics

❄ **solidification** 凝固

⊠ **kinetic particle model** 分子动理论

⋮ **particle** 粒子

🔥 **internal energy** 内能

 transfer of thermal energy 热能传递			
 thermal conductor 热导体			
 thermal insulator 热绝缘体			
 thermal radiation 热辐射			
 thermal expansion 热膨胀			
 absolute zero 绝对零度			
 Brownian motion 布朗运动			
 kelvin 开尔文			
 specific heat capacity 比热容			
 evaporation 蒸发			
 cools down 冷却			
 conduction 热传导			
 delocalised electrons 自由电子			
 convection 对流			
 infrared 红外线			
 dull 暗淡			
 emitter 发射体			

Chemistry

Topics 2-3 · Atoms, elements and compounds, Stoichiometry

 metallic bonding 金属键			
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 malleability 展性			
$\leftrightarrow$ ductility 延性			
 stoichiometry 化学计量			
 formula 化学式			
 molecular formula 分子式			
$\div$ empirical formula 实验式			
 relative formula mass 相对式量			
 molar mass 摩尔质量			
$\rightleftharpoons$ molar gas volume 摩尔气体体积			
% percentage composition by mass 质量分数			
 percentage purity 纯度			
% percentage yield 产率			
 molecule 分子			
$\div$ ratio 比例			
 spectator ions 旁观离子			
$=$ ionic equation 离子方程式			
T word equation 文字方程式			
Σ symbol equation 化学方程式			
$\rightarrow$ reactants 反应物			
 products 生成物			

 **balanced** 配平

Biology

Topics 4–6 · Biological molecules, Enzymes, Plant nutrition

 **fats** 脂肪

 **carbon** 碳

 **hydrogen** 氢

 **nitrogen** 氮

 **starch** 淀粉

 **glycogen** 糖原

 **glucose** 葡萄糖

 **amino acids** 氨基酸

 **fatty acids** 脂肪酸

 **glycerol** 甘油

 **iodine solution** 碘液

 **reducing sugars** 还原糖

 **Benedict's solution** 本尼迪特试剂

 **biuret** 双缩脲

 **ethanol** 乙醇

 **emulsion** 乳浊液

 **vitamin** 维生素

 **strands** 链

 **double helix** 双螺旋

 **bases** 碱基

 bonds 化学键			
 catalyst 催化剂			
 rate 速率			
 chemical reaction 化学反应			
 enzymes 酶			
 active site 活性位点			
 substrate 底物			
 complementary 互补			
 enzyme-substrate complex 酶底物复合物			
 products 产物			
 specific 专一			
 collisions 碰撞			
 optimum temperature 最适温度			
 denatured 变性			
 raw materials 原料			
 pigment 色素			
 cell walls 细胞壁			

Mathematics

Topics 1–2 · Number, Algebra and graphs

 lower bound 下界			
 upper bound 上界			
 area 面积			

 time zone 时区			
 exchange rate 汇率			
 algebra 代数			
 variable 变量			
 substitute 代入			
 term 项			
 expression 表达式			
 like terms 同类项			
 coefficient 系数			
 expand 展开			
 brackets 括号			
 factorise 因式分解			
 difference of two squares 平方差			
 perfect square 完全平方			

Computer Science

Topic 3 · Hardware

 control bus 控制总线			
 program counter 程序计数器			
 memory address register 内存地址寄存器			
 memory data register 内存数据寄存器			
 current instruction register 当前指令寄存器			

+ accumulator 累加器

↺ fetch-execute cycle 取指
执行周期

💻 memory 内存

⚡ Cache 高速缓存

🖨 cores 核心

🕒 clock speed 时钟速度

🖨 embedded system 嵌入式
系统

📊 barcode scanner 条形码
扫描器

📊 QR code scanner 二维码
扫描器

🖨 optical mouse 光电鼠标

📊 sensors 传感器

🖨 touch screen 触摸屏

🔗 resistive 电阻式

⚡ capacitive 电容式

🔗 infrared 红外线

Economics

Topic 2 · The allocation of resources

↗ direct relationship 正向
关系

quantity supplied 供给量

↗ supply curve 供给曲线

💰 costs of production 生产
成本

 technology 技术			
 tax 税收			
 subsidy 补贴			
 equilibrium 均衡			
 disequilibrium 非均衡			
 excess demand 超额需求			
 shortage 短缺			
 excess supply 超额供给			
 surplus 过剩			
 price elasticity of demand 需求价格弹性			

English

Topic 2 · Writing: purpose, audience and accuracy

 informal 非正式			
 slang 俚语			
 plan 计划			
 linking words 衔接词			
 range 多样性			
 accuracy 准确性			
 tenses 时态			

Morning Reading 晨读

Grade 10 · Week 6

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。

Music is physics you can hear. Sound travels as a **wave**. The **frequency** of the wave decides the pitch 音高: fast waves sound high, slow waves sound low. The **amplitude** decides how loud the sound is. Light is a **transverse wave**, like a rope shaken up and down, with a **crest** at the top and a **trough** at the bottom. Sound is a **longitudinal wave**: the air is pushed forward and back. The **wavelength** is the distance from one crest to the next.

Chemists count particles in a special way. Atoms are far too small to count one by one, so they use the **mole**. One mole of any substance contains the same huge number of particles, the **Avogadro constant**.

Why are concert tickets so expensive? Fans will pay almost any price, so demand is **inelastic**. But if the price of one brand of cola rises, people simply buy another brand: that demand is **elastic**. Sellers study **price elasticity of demand** before they set prices.

Talk about it 说一说:

1. Draw a wave in the air with your finger. Point to the crest, the trough, and one wavelength.
2. Name one product you would still buy if its price doubled. Why?

Physics

Topics 2-3 · Thermal physics, Waves

☒ **absorber** 吸收体

☒ **reflector** 反射体

≈ **wave** 波

↻ **wave speed** 波速

 transverse wave 横波			
 longitudinal wave 纵波			
 wavefront 波前			
 wavelength 波长			
 frequency 频率			
 crest 波峰			
 trough 波谷			
 amplitude 振幅			
 propagation 传播			
 ripple tank 波纹水槽			
 reflection 反射			
 angle of reflection 反射角			
 angle of refraction 折射角			
 total internal reflection 全反射			
 critical angle 临界角			
 refraction 折射			
 angle of incidence 入射角			

Chemistry

Topics 3-4 · Stoichiometry, Electrochemistry

 state symbols 状态符号			
 mole 摩尔			
 amount of substance 物质的量			

Σ Avogadro constant 阿伏伽德罗常数

🧂 solution 溶液

⊖ limiting reactant 限量反应物

🧪 titration 滴定

⋮ solute 溶质

⚡ electrolysis 电解

🔪 decomposition 分解

🔌 electrolytic cell 电解池

🔋 fuel cell 燃料电池

🔌 electrodes 电极

💧 electrolyte 电解质

⊕ anode 阳极

⊖ cathode 阴极

🚫 inert 惰性

💎 platinum 铂

💎 metals 金属

🚫 non-metals 非金属

💧 dilute 稀

💧 concentrated 浓

Biology

Topics 6-7 · Plant nutrition, Human nutrition

🍬 sucrose 蔗糖

↕ phloem 韧皮部			
💧 nectar 花蜜			
🐝 pollination 传粉			
± nitrate ions 硝酸根离子			
⊕ magnesium ions 镁离子			
☀ light intensity 光照强度			
🌒 limiting factor 限制因素			
≡ control 对照			
↔ gas exchange 气体交换			
🧪 indicator 指示剂			
🔄 adapted 适应			
🛡 cuticle 角质层			
🏠 epidermis 表皮			
🏠 mesophyll 叶肉			
🏠 palisade mesophyll 栅栏 叶肉			
🏠 spongy mesophyll 海绵叶 肉			
🌬 air spaces 气腔			
🔍 stomata 气孔			
🏠 guard cells 保卫细胞			
🏠 vascular bundles 维管束			
↑ xylem 木质部			
🍽 balanced diet 均衡饮食			
🔑 calcium 钙			

💎 mineral ions 矿物质离子

🔗 iron 铁

🌀 fibre 膳食纤维

😞 scurvy 坏血病

🦴 rickets 佝偻病

🌀 alimentary canal 消化道

↓ oesophagus 食道

○ stomach 胃

🌀 small intestine 小肠

🌀 duodenum 十二指肠

🌀 ileum 回肠

🌀 large intestine 大肠

🌀 colon 结肠

Mathematics

Topic 2 · Algebra and graphs

×² quadratic 二次

☐ completing the square
配方法

÷ algebraic fraction 分式

÷ rational expression 有理
式

×² indices 指数

= equation 方程

— linear 一次

② unknown 未知数

÷ fractional equation 分式方程

☒ simultaneous equations 联立方程

ƒ quadratic formula 求根公式

↔ change the subject 公式变形

≠ inequality 不等式

📏 number line 数轴

☐ region 区域

≡ sequence 数列

→ term-to-term rule 递推规则

Computer Science

Topic 3 · Hardware

⚙️ actuator 执行器

📽️ projector 投影仪

🖨️ inkjet printer 喷墨打印机

🖨️ laser printer 激光打印机

🔊 speaker 扬声器

💾 Primary storage 主存储器

💾 random access memory 随机存取存储器

🔒 read only memory 只读存储器

 volatile 易失性			
 non-volatile 非易失性			
 Secondary storage 辅助存储器			
 magnetic storage 磁存储			
 optical storage 光存储			
 solid state storage 固态存储			
 flash memory 闪存			
 virtual memory 虚拟内存			
 network interface card 网络接口卡			
 media access control 介质访问控制			
 internet protocol 网际协议			
 router 路由器			

Economics

Topic 2 · The allocation of resources

 determinants 决定因素			
 elastic 富有弹性			
 inelastic 缺乏弹性			
 unit elastic 单位弹性			
 total revenue 总收益			
 total expenditure 总支出			
 price elasticity of supply 供给价格弹性			

 spare capacity 闲置产能			
 stocks 库存			
 market economy 市场经济			
 planned economy 计划经济			
 market failure 市场失灵			
 inefficient 低效率			
 private cost 私人成本			

English

Topics 2-3 · Writing: purpose, audience and accuracy, Writing an informal email

 vocabulary 词汇			
 synonyms 同义词			
 grammar 语法			
 spelling 拼写			
 punctuation 标点			
 informal email 非正式电子邮件			
 prompts 提示			

Morning Reading 晨读

Grade 10 · Week 7

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。

Why does a straw look bent in a glass of water? Light changes direction when it moves from water into air. This is **refraction**. Glasses and cameras use a **converging lens** to bend light and make a clear **real image**. The distance from the lens to its **principal focus** is the **focal length**. Even the internet uses light: an **optical fibre** is a thin glass thread that carries light signals under the sea. The light cannot escape, because it always hits the wall of the fibre at more than the **critical angle**.

A computer is two things working together. **Hardware** is the physical machine you can touch. **Software** is the **programs** that tell it what to do. The most important program is the **operating system**: it starts the computer, manages memory, and runs your apps.

Markets are useful, but they are not perfect. A factory may make cheap toys but dirty the river. The factory pays its **private cost**, yet the village pays an **external cost**. Together these make the **social cost**. Economists call this **market failure**.

Talk about it 说一说:

1. Where have you seen refraction this week? Describe it.
2. A firework factory moves next to your school. What external costs does it bring?

Physics

Topics 3-6 · Waves, Space physics

田 **diffraction** 衍射

☀ **Light** 光

十 **normal** 法线

□ **plane mirror** 平面镜

% refractive index 折射率			
 converging lens 凸透镜			
 diverging lens 凹透镜			
 principal focus 焦点			
 focal length 焦距			
 real image 实像			
 virtual image 虚像			
Q magnifying glass 放大镜			
 prism 棱镜			
 spectrum 光谱			
 electromagnetic spectrum 电磁波谱			
 dispersion 色散			
 monochromatic 单色			
 vacuum 真空			
 radio waves 无线电波			
 microwaves 微波			
 ultraviolet 紫外线			

Chemistry

Topics 4–10 · Electrochemistry, Chemical energetics, Chemistry of the environment

 bromine 溴			
 chlorine 氯气			
 sulfuric acid 硫酸			
 oxygen 氧气			

 external circuit 外电路			
↓ reduction 还原			
↑ oxidation 氧化			
÷ half-equation 半反应式			
 copper 铜			
 electroplating 电镀			
 corrosion 腐蚀			
 pollutants 污染物			
 cancer 癌症			
 exothermic reaction 放热反应			
 endothermic reaction 吸热反应			
 reaction pathway diagram 反应进程图			
 activation energy 活化能			
 bond energy 键能			
 bond breaking 断键			
 bond making 成键			
 surroundings 环境			
 combustion 燃烧			

Biology

Topic 7 · Human nutrition

↓ rectum 直肠			
⊙ anus 肛门			

 salivary glands 唾液腺			
 pancreas 胰腺			
 liver 肝脏			
 gall bladder 胆囊			
 ingestion 摄入			
 nutrients 营养物质			
 assimilation 同化			
 egestion 排遗			
 faeces 粪便			
 teeth 牙齿			
 incisors 门齿			
 canines 犬齿			
 premolars 前臼齿			
 molars 臼齿			
 enamel 牙釉质			
 dentine 牙本质			
 pulp 牙髓			
 nerves 神经			
 blood vessels 血管			
 cement 牙骨质			
 gums 牙龈			
 bile 胆汁			
 emulsifies 乳化			
 lipase 脂肪酶			

 insoluble 不溶性			
 soluble 可溶性			
 amylase 淀粉酶			
 protease 蛋白酶			
 hydrochloric acid 盐酸			
 gastric juice 胃液			
 microorganisms 微生物			
 acidic 酸性			
 maltose 麦芽糖			
 maltase 麦芽糖酶			
 epithelium 上皮			

Mathematics

Topic 2 · Algebra and graphs

 cubic 三次			
 exponential sequence 指数数列			
 direct proportion 正比例			
 constant 常数			
 inverse proportion 反比例			
 gradient 斜率			
 rate of change 变化率			
 travel graph 行程图			
 conversion graph 换算图			

 acceleration 加速度			
 deceleration 减速度			
 distance 距离			
 table of values 数值表			
 coordinates 坐标			
+ axis 坐标轴			
 roots 根			
× intersection point 交点			

Computer Science

Topic 4 · Software

 Hardware 硬件			
 physical 物理的			
 Software 软件			
<> programs 程序			
 System software 系统软件			
 operating system 操作系统			
 compiler 编译器			
 linker 链接器			
 device driver 设备驱动程序			
 utility software 实用程序			
 Application software 应用软件			

 word processing 文字处理			
 spreadsheet 电子表格			
 database management system 数据库管理系统			
 web browser 网页浏览器			
 user interface 用户界面			
 peripherals 外围设备			
 multitasking 多任务处理			
 platform 平台			
 interrupt 中断			

Economics

Topic 2 · The allocation of resources

 external cost 外部成本			
 social cost 社会成本			
 private benefit 私人效益			
 external benefit 外部效益			
 social benefit 社会效益			
 merit goods 有益物品			
 demerit goods 有害物品			
 public goods 公共物品			
 monopoly 垄断			
 mixed economy 混合经济			
 private sector 私营部门			

 public sector 公共部门			
 intervention 干预			
 maximum price 最高价格			

English

Topic 3 · Writing an informal email

 tone 语气			
 greeting 问候语			
 closing 结束语			
 paragraphs 段落			
 short forms 缩略形式			
 developed 展开的			
 reason 原因			

Morning Reading 晨读

Grade 10 · Week 8

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。

Invisible waves are all around you right now. **Radio waves** carry music to cars. **Microwaves** heat food and carry phone signals. **Ultraviolet** light from the Sun can burn your skin. Doctors use **X-rays** to see bones, and **gamma rays** to treat cancer. All of these can travel through empty space, a **vacuum**. Sound cannot: it always needs a **medium** such as air or water. Shout at a big wall and you hear an **echo**, your own sound wave reflected back.

Before money, people used **barter**: they traded fish for rice or shoes for tea. It was slow, because both sides had to want what the other had. **Money** solved this. It is a **medium of exchange** that everyone accepts, and a **store of value** you can keep for later.

Computers only understand **machine code**, patterns of ones and zeros. People write in a **high-level language** like Python, and a **translator** turns it into machine code.

Talk about it 说一说:

1. Name three invisible waves you used today and what they did for you.
2. Imagine one week without money. How would you get your lunch?

Physics

Topics 3-4 · Waves, Electricity and magnetism

[] **X-rays** X 射线

☸ **gamma rays** 伽马射线

🔊 **Sound** 声音

✕ **compression** 压缩

<> **rarefaction** 稀疏

 medium 介质			
 echo 回声			
 magnet 磁体			
 temporary magnet 临时磁体			
 permanent magnet 永磁体			
 magnetic pole 磁极			
 north pole 北极			
 south pole 南极			
 magnetic material 磁性材料			
 magnetic field 磁场			
 magnetic field lines 磁场线			
 electric field 电场			
 electric current 电流			
 conventional current 常规电流			
 direct current 直流电			
 alternating current 交流电			

Chemistry

Topics 5–6 · Chemical energetics, Chemical reactions

 neutralisation 中和			
 enthalpy change 焓变			

 colliding 碰撞			
 physical change 物理变化			
 chemical change 化学变化			
 precipitate 沉淀			
 rate of reaction 反应速率			
 reversible reaction 可逆反应			
 forward reaction 正反应			
 reverse reaction 逆反应			
 redox reaction 氧化还原反应			
 collision theory 碰撞理论			
 surface area 表面积			
 catalyst 催化剂			
 enzymes 酶			
 syringe 注射器			
 hydrated 水合			
 anhydrous 无水			
 closed system 密闭系统			
 position of equilibrium 平衡位置			
 equilibrium 平衡			
 endothermic 吸热反应			

Biology

Topics 7–9 · Human nutrition, Transport in plants, Transport in animals

 pepsin 胃蛋白酶			
 trypsin 胰蛋白酶			
 alkaline 碱性			
 neutralises 中和			
 villi 绒毛			
 microvilli 微绒毛			
 capillaries 毛细血管			
 lacteal 乳糜管			
 support 支撑			
 vessels 导管			
 lignin 木质素			
 cortex 皮层			
 stain 染色剂			
 transpiration 蒸腾作用			
 water vapour 水蒸气			
 evaporates 蒸发			
 diffuses 扩散			
 wind speed 风速			
 humidity 湿度			
 transpiration pull 蒸腾拉力			
 forces of attraction 吸引力			
 column 水柱			
 wilts 萎蔫			

↕ **translocation** 转运

↑ **sources** 源

↓ **sinks** 库

♡ **circulatory system** 循环系统

♡ **heart** 心脏

⚡ **pump** 泵

⌂ **valves** 瓣膜

○ **single circulation** 单循环

🐾 **mammal** 哺乳动物

∞ **double circulation** 双循环

↓ **pressure** 压力

⟷ **septum** 隔膜

⌂ **atrium** 心房

♡ **ventricle** 心室

Mathematics

Topics 2–3 · Algebra and graphs, Coordinate geometry

[:] **symmetry** 对称

⊕ **intercept** 截距

🌀 **parabola** 抛物线

↻ **turning point** 转折点

— **asymptote** 渐近线

⚡ **differentiation** 微分

 tangent 切线			
 derivative 导数			
 stationary point 驻点			
 maximum 最大值			
 minimum 最小值			
 function 函数			
 domain 定义域			
 range 值域			
 inverse function 反函数			
 composite function 复合函数			
 axes 坐标轴			

Computer Science

Topics 4–5 · Software, The internet and its uses

 programming language 编程语言			
 high-level language 高级语言			
 low-level language 低级语言			
 machine code 机器码			
 assembly language 汇编语言			
 specific 特定的			
 translator 翻译程序			
 interpreter 解释器			

<> **integrated development environment** 集成开发环境

📄 **code editor** 代码编辑器

▶ **run time environment** 运行时环境

🚨 **error diagnostics** 错误诊断

✳️ **auto-completion** 自动补全

🔧 **auto-correction** 自动纠错

≡ **prettyprinting** 美化打印

🌐 **internet** 互联网

🏗️ **infrastructure** 基础设施

🌐 **world wide web** 万维网

💻 **websites** 网站

🔗 **uniform resource locator** 统一资源定位符

Economics

Topics 2–3 · The allocation of resources, Microeconomic decision-makers

⬆️ **minimum price** 最低价格

💰 **indirect tax** 间接税

📋 **regulation** 监管

📁 **direct provision** 直接提供

↔️ **barter** 物物交换

💵 **money** 货币

↔️ **medium of exchange** 交换媒介

 store of value 价值储藏			
 unit of account 记账单位			
 means of deferred payment 延期支付手段			
 durable 耐用的			
 portable 便于携带的			
$\div$ divisible 可分割的			
 central bank 中央银行			

English

Topics 3-4 · Writing an informal email, Writing a formal letter or email

 example 例子			
 detail 细节			
 semi-formal 半正式			
 head teacher 校长			
 manager 经理			
 event organiser 活动组织者			
 format 格式			

Morning Reading 晨读

Grade 10 · Week 9

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。

Take off a wool hat on a dry winter day and your hair stands up. Rubbing gives your hair extra **electric charge**. Charges push and pull: like charges **repel**, opposite charges **attract**. When charge flows through a wire, we call it an **electric current**. A battery gives **direct current**, which flows one way. The sockets at home give **alternating current**, which changes direction many times each second.

When you type an address into a browser, you use the **world wide web**. Every device on the **internet** has an **IP address**, like a house number. Your browser asks a **web server** for the page, and the server sends it back to you.

Where does your money sleep at night? In a bank. **Commercial banks** keep savings safe and lend money to firms. The **central bank** is the bank of the whole country: it prints the money and sets the **interest rate**, the price of **borrowing**.

Talk about it 说一说:

1. Why does your hair stand up after you take off a wool hat?
2. If the interest rate rises, will people save more or borrow more? Why?

Physics

Topic 4 · Electricity and magnetism

⊕ **electric charge** 电荷

⊕ **positive charge** 正电荷

⊖ **negative charge** 负电荷

• **point charge** 点电荷

↔ **repel** 排斥

 attract 吸引			
 induced magnetism 感应磁性			
 soft iron 软铁			
 iron filings 铁屑			
 soft-iron core 软铁芯			
 magnetise 磁化			
 steel 钢			
 unmagnetised 未磁化			
 region 区域			
 compass 指南针			
 electromagnet 电磁铁			
 electron 电子			
 charging by friction 摩擦起电			
 conductor 导体			
 insulator 绝缘体			
 coulomb 库仑			

Chemistry

Topics 6–7 · Chemical reactions, Acids, bases and salts

 exothermic 放热反应			
 Haber process 哈伯法			
 Contact process 接触法			
 methane 甲烷			

 nitrogen 氮气			
 iron 铁			
 sulfur 硫			
 vanadium(V) oxide 五氧化二钒			
 compromise 折中			
# oxidation number 氧化数			
 oxidising agent 氧化剂			
 reducing agent 还原剂			
 potassium manganate(VII) 高锰酸钾			
 potassium iodide 碘化钾			
 iodine 碘			
 acid 酸			
 strong acid 强酸			
 hydrochloric acid 盐酸			
 weak acid 弱酸			
 ethanoic acid 乙酸			
 salt 盐			
 carbonates 碳酸盐			

Biology

Topics 7-10 · Human nutrition, Transport in animals, Diseases and immunity

 coronary arteries 冠状动脉			
 oxygenated blood 含氧血			

☒ deoxygenated blood 缺氧血

☐ atrioventricular valves 房室瓣

☐ semilunar valves 半月瓣

✂ contract 收缩

⚡ pulse 脉搏

❤ heart rate 心率

❤ coronary heart disease 冠心病

⚠ risk factors 风险因素

○ lumen 管腔

🩸 arteries 动脉

🩸 veins 静脉

🩸 aorta 主动脉

🩸 vena cava 腔静脉

🩸 pulmonary artery 肺动脉

🩸 pulmonary vein 肺静脉

🩸 renal artery 肾动脉

🩸 renal vein 肾静脉

🩸 hepatic artery 肝动脉

🩸 hepatic vein 肝静脉

🩸 hepatic portal vein 肝门静脉

🩸 haemoglobin 血红蛋白

🛡 white blood cells 白细胞

⋮ platelets 血小板			
⊙ clot 凝血			
☼ plasma 血浆			
⚗ urea 尿素			
⚡ hormones 激素			
⚗ pathogens 病原体			
🛡 phagocytes 吞噬细胞			
🍽 phagocytosis 吞噬作用			
🛡 lymphocytes 淋巴细胞			
🛡 antibodies 抗体			
🔗 fibrinogen 纤维蛋白原			
🧬 fibrin 纤维蛋白			
⚗ pathogen 病原体			

Mathematics

Topics 3-4 · Coordinate geometry, Geometry

↔ horizontal 水平			
↑↓ vertical 竖直			
⊙ origin 原点			
田 quadrants 象限			
— line segment 线段			
↔ length 长度			
△ Pythagoras' theorem 勾股定理			
• midpoint 中点			

= parallel 平行			
+ perpendicular 垂直			
□ right angle 直角			
↯ perpendicular bisector 垂直平分线			
• vertex 顶点			
> acute angle 锐角			
» obtuse angle 钝角			
↺ reflex angle 优角			
× vertically opposite angles 对顶角			

Computer Science

Topic 5 · The internet and its uses

🖼 rendering 渲染			
<> hypertext markup language 超文本标记语言			
📍 IP address 网际协议地址			
🌐 domain name service 域名服务			
🌐 web server 网页服务器			
🕒 session 会话			
💾 persistent 持久			
⚙ user preferences 用户偏好			
₿ digital currency 数字货币			
📄 electronic form 电子形式			

 **blockchain** 区块链

 **digital ledger** 数字账本

 **transaction** 交易

 **timestamp** 时间戳

 **hash value** 哈希值

 **cyber security** 网络安全

 **brute force attack** 暴力破解

 **data interception** 数据拦截

 **distributed denial of service** 分布式拒绝服务

 **hacking** 黑客攻击

Economics

Topic 3 · Microeconomic decision-makers

 **interest rate** 利率

 **commercial banks** 商业银行

 **household** 家庭

 **saving** 储蓄

 **borrowing** 借贷

 **confidence** 信心

 **occupation** 职业

 **wage** 工资

 **skill** 技能

🎓 **qualifications** 资格

👥 **trade unions** 工会

⚖️ **discrimination** 歧视

👉 **division of labour** 劳动分工

🔧 **specialisation** 专业化

English

Topics 4–5 · Writing a formal letter or email, Writing a report

😊 **polite** 礼貌

♥️ **grateful** 感激

📄 **report** 报告

📅 **event** 事件

📍 **situation** 情况

✓ **facts** 事实

✓✓ **factual** 事实性的

Morning Reading 晨读

Grade 10 · 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。

A message says you have won a phone: just click the link and enter your password. Stop! This is **phishing**, a trick to steal your details. Criminals also use **malware**, harmful software such as a **virus**, or try a **brute force attack**, testing thousands of passwords until one works. Some do not attack computers at all; they trick people. That is **social engineering**. Good **cyber security** habits, such as strong passwords and careful clicking, protect you.

Why are factories so fast? Because of the **division of labour**. Each worker repeats one small job and becomes an expert at it. This **specialisation** raises **productivity**: more is made in the same time. Big factories also enjoy **economies of scale**, so each item costs less to make.

In physics you built an **electromagnet** this week: a coil of wire around soft iron. Switch on the current and it becomes a magnet; switch off and the magnetism is gone.

Talk about it 说一说:

1. A stranger's email asks for your password. What do you do, and why?
2. Making dumplings with your class: how would you divide the labour?

Physics

Topic 4 · Electricity and magnetism

± ion 离子

⌚ ampere 安培

⌚ ammeter 电流表

⌚ free electrons 自由电子

 mains supply 市电			
 power supply 电源			
 electrical power 电功率			
 electrical energy 电能			
 volt 伏特			
 electromotive force 电动势			
 circuit 电路			
 potential difference 电势差			
 potential divider 分压器			
 voltmeter 电压表			
 resistance 电阻			
 total resistance 总电阻			
 ohm 欧姆			
 directly proportional 成正比			
 inversely proportional 成反比			
 cross-sectional area 横截面积			

Chemistry

Topic 7 · Acids, bases and salts

 carbon dioxide 二氧化碳			
 indicator 指示剂			
 universal indicator 通用指示剂			

 litmus 石蕊			
 thymolphthalein 百里酞			
 methyl orange 甲基橙			
 oxides 氧化物			
 hydroxides 氢氧化物			
 alkali 可溶性碱			
 base 碱			
 ammonium salts 铵盐			
 dissociated 电离			
 acidic 酸性			
 neutral 中性			
 alkaline 碱性			
 amphoteric 两性			
 soluble 可溶			
 insoluble 不溶			
 nitrates 硝酸盐			
 chlorides 氯化物			
 sulfates 硫酸盐			
 excess 过量			

Biology

Topics 10–11 · Diseases and immunity, Gas exchange in humans

 disease 疾病			
 transmissible disease 传染病			

 transmitted 传播			
 direct contact 直接接触			
 body fluids 体液			
 contaminated 污染			
 defences 防御			
 stomach acid 胃酸			
 hygienic 卫生			
 sewage treatment 污水处理			
 antigens 抗原			
 active immunity 主动免疫			
 vaccination 疫苗接种			
 memory cells 记忆细胞			
 passive immunity 被动免疫			
 placenta 胎盘			
 breast milk 母乳			
 breast-feeding 母乳喂养			
 infants 婴儿			
 cholera 霍乱			
 toxin 毒素			
 chloride ions 氯离子			
 diarrhoea 腹泻			
 dehydration 脱水			

≡ ventilation 通气			
🗣️ larynx 喉			
🌬️ bronchioles 细支气管			
⋮ alveoli 肺泡			
🦴 ribs 肋骨			
— diaphragm 膈肌			
🦷 intercostal muscles 肋间肌			
📦 cartilage 软骨			
🛡️ thorax 胸腔			
↓ inhaling 吸气			
↑ exhaling 呼气			
💧 limewater 石灰水			
🧠 brain 大脑			

Mathematics

Topic 4 · Geometry

📏 corresponding angles 同位角			
↔️ alternate angles 内错角			
[] co-interior angles 同旁内角			
⊕ supplementary 互补			
△ triangle 三角形			
△ equilateral 等边			
📐 isosceles 等腰			

 scalene 不等边			
 quadrilateral 四边形			
 square 正方形			
 rectangle 矩形			
 parallelogram 平行四边形			
 rhombus 菱形			
 kite 鸢形			
 trapezium 梯形			
 polygon 多边形			

Computer Science

Topic 5 · The internet and its uses

 malware 恶意软件			
 pharming 域名欺骗			
 phishing 网络钓鱼			
 social engineering 社会工程			
 virus 病毒			
 worm 蠕虫			
 Trojan horse 特洛伊木马			
 spyware 间谍软件			
 adware 广告软件			
 ransomware 勒索软件			
 access levels 访问权限			
 anti-malware 反恶意软件			

 anti-virus 杀毒软件			
 anti-spyware 反间谍软件			
 authentication 身份验证			
 biometrics 生物识别			
* password 密码			
 two-step verification 两步验证			
 firewall 防火墙			
 privacy settings 隐私设置			

Economics

Topic 3 · Microeconomic decision-makers

 merger 合并			
 horizontal merger 横向合并			
 vertical merger 纵向合并			
 conglomerate merger 混合合并			
 business failure 企业倒闭			
 labour-intensive 劳动密集型			
 capital-intensive 资本密集型			
 productivity 生产率			
 economies of scale 规模经济			
 diseconomies of scale 规模不经济			

 cost 成本			
 fixed costs 固定成本			
 variable costs 可变成本			
 total cost 总成本			

English

Topics 5–6 · Writing a report, Writing an article

 headings 小标题			
 opinion 观点			
 recommendations 建议			
 conclusion 结论			
 article 文章			
 informs 告知			
 entertains 娱乐			

Morning Reading 晨读

Grade 10 · Week 11

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。

Imagine you open a milk-tea shop. Some costs stay the same every month, such as the rent. These are **fixed costs**. Other costs rise when you sell more, such as milk and cups. These are **variable costs**. Add them together for the **total cost**. The money coming in from sales is your **revenue**. If a new shop opens across the street, that is **competition**, and you may have to lower your price.

Protect the shop's computer too. Use a strong **password**, and turn on **two-step verification**, so a thief needs your phone as well. A **firewall** checks the traffic between your computer and the internet. Some systems use **biometrics**, such as a fingerprint, to check who you are.

In the electricity lab, you measured **resistance** in **ohms**. A long thin wire resists the current more than a short thick one. A **variable resistor** lets you turn the current up and down, like a volume knob.

Talk about it 说一说:

1. List two fixed costs and two variable costs of a milk-tea shop.
2. Which is safer: one strong password, or two-step verification? Why?

Physics

Topic 4 · Electricity and magnetism

 **resistor** 电阻器

 **variable resistor** 可变电阻器

 **light-dependent resistor**
光敏电阻

 **light-emitting diode** 发
光二极管

 **diode** 二极管

 **filament lamp** 灯丝灯泡

 **kilowatt-hour** 千瓦时

 **appliance** 电器

 **heater** 加热器

 **cell** 电池

 **battery** 电池组

 **switch** 开关

 **trip switch** 跳闸开关

 **fuse** 保险丝

 **fuse rating** 额定值

 **thermistor** 热敏电阻

 **relay** 继电器

 **motor** 电动机

 **d.c. motor** 直流电动机

 **bell** 电铃

Chemistry

Topics 7-8 · Acids, bases and salts, The Periodic Table

 **filter** 过滤

 **evaporate** 蒸发

 **crystallise** 结晶

 **precipitation** 沉淀

💧 **water of crystallisation**
结晶水

⊠ **elements** 元素

田 **transition elements** 过渡元素

目 **periods** 周期

田 **groups** 族

💎 **alkali metals** 碱金属

💎 **lithium** 锂

💎 **sodium** 钠

💎 **potassium** 钾

🔪 **soft** 柔软

↗ **trends** 趋势

⚡ **reactivity** 活泼性

⚗ **halogens** 卤素

🔗 **diatomic** 双原子

⬡ **halide** 卤化物

↔ **displacement reaction** 置换反应

🎨 **coloured** 有色

⊠ **compounds** 化合物

Biology

Topics 11–14 · Gas exchange in humans, Respiration, Excretion in humans, Coordination and response

💧 **goblet cells** 杯状细胞

 **protein synthesis** 蛋白质合成

 **nerve impulses** 神经冲动

 **aerobic respiration** 有氧呼吸

 **anaerobic respiration** 无氧呼吸

 **alcohol** 酒精

 **lactic acid** 乳酸

 **oxygen debt** 氧债

 **kidneys** 肾脏

 **urine** 尿液

 **ureters** 输尿管

 **bladder** 膀胱

 **urethra** 尿道

 **dialysis** 透析

 **renal cortex** 皮质

 **medulla** 髓质

 **nephrons** 肾单位

 **filtration** 过滤

 **glomerulus** 肾小球

 **reabsorption** 重吸收

 **deamination** 脱氨基作用

 **toxic** 有毒

 **coordinate** 协调

 nervous system 神经系统			
 central nervous system 中枢神经系统			
 spinal cord 脊髓			
 peripheral nervous system 周围神经系统			
 regulates 调节			
 sensory neurones 感觉神经元			
 relay neurones 中间神经元			
 motor neurones 运动神经元			
 reflex 反射			
 response 反应			
 stimulus 刺激			
 reflex arc 反射弧			
 receptor 感受器			
 effector 效应器			

Mathematics

Topic 4 · Geometry

 regular polygon 正多边形			
 pentagon 五边形			
 hexagon 六边形			
 octagon 八边形			
 interior angle 内角			

» exterior angle 外角

[:] line symmetry 轴对称

↻ rotational symmetry 旋转对称

☐ plane of symmetry 对称面

— axis of symmetry 对称轴

○ circle 圆

• centre 圆心

↗ radius 半径

— diameter 直径

⊙ circumference 圆周

— chord 弦

Computer Science

Topics 5–6 · The internet and its uses, Automated and emerging technologies

☎ proxy server 代理服务器

⚙ automated system 自动化系统

🌱 environment 环境

👤 human intervention 人工干预

🔥 central heating 中央供暖

⚗ chemical process 化学过程

🏠 greenhouse 温室

— car park barrier 停车场道闸

 **sensor** 传感器

 **microprocessor** 微处理器

 **stored values** 存储值

 **agriculture** 农业

✓ **consistent** 一致的

 **Robotics** 机器人技术

 **robots** 机器人

 **physical structure** 物理结构

 **mechanical** 机械的

 **electrical components** 电子元件

<> **programmable instructions** 可编程指令

 **factory equipment** 工厂设备

Economics

Topics 3-4 · Microeconomic decision-makers, Government and the macroeconomy

— **average cost** 平均成本

 **revenue** 收益

— **average revenue** 平均收益

 **objectives** 目标

 **survival** 生存

↗ **growth** 增长

 **competition** 竞争

🚧 barriers to entry 进入壁垒

🌐 macroeconomy 宏观经济

👥 full employment 充分就业

⚖️ price stability 价格稳定

↗️ inflation 通货膨胀

⚖️ balance of payments 国际收支

🔄 redistribution of income 收入再分配

English

Topics 6-7 · Writing an article, Writing a review

🌟 engage 吸引

📄 title 标题

% interest 兴趣

📖 introduction 引言

🔄 varied 多样的

★ review 评论

👁️ describes 描述

Morning Reading 晨读

Grade 10 · Week 12

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。

In a modern car factory, **robots** do the heavy work. A robot has a **mechanical** arm, sensors, and a **microprocessor** that follows **programmable instructions**. Robots weld 焊接 the same joint perfectly, thousands of times, without getting tired. At home, smaller machines help too: a robot **vacuum cleaner** finds its own way around your floor. These are **domestic appliances** with tiny computers inside.

Electric circuits this week: in a **series** circuit, the same current flows through every part, and one broken bulb switches off the whole string of lights. In a **parallel** circuit, each bulb has its own path, so the others stay on. A **fuse** is a thin wire that melts if the current gets dangerously large, protecting the circuit.

When prices in a country keep rising year after year, we call it **inflation**. A government can respond with **fiscal policy**: changing **taxation** and **government spending** through its yearly **budget**.

Talk about it 说一说:

1. Which jobs in your city are now done by robots? Which jobs are safe, and why?
2. Your holiday lights use a series circuit. Why is that a bad design?

Physics

Topic 4 · Electricity and magnetism

⚡ **transformer** 变压器

≡ **series** 串联

= **parallel** 并联

⚗ **junction** 节点

 hazard 危险			
 insulation 绝缘层			
 overheating 过热			
 damp 潮湿			
 overloading 过载			
 socket 插座			
 live wire 火线			
 neutral wire 零线			
 earth wire 地线			
 casing 外壳			
 earthed 接地			
 double-insulated 双重绝缘			
 solenoid 螺线管			
 coil 线圈			
 primary coil 原线圈			
 secondary coil 副线圈			

Chemistry

Topics 4-9 · Electrochemistry, The Periodic Table, Metals

 variable 可变			
 oxidation numbers 氧化数			
 unreactive 不活泼			
 monatomic 单原子			

 **thermal conductivity** 导热性

 **brittle** 易碎

 **acids** 酸

 **steam** 蒸汽

 **oxide** 氧化物

 **oxide layer** 氧化层

 **calcium oxide** 氧化钙

 **calcium** 钙

 **alloy** 合金

 **brass** 黄铜

 **zinc** 锌

 **stainless steel** 不锈钢

 **chromium** 铬

 **nickel** 镍

 **carbon** 碳

 **carbon monoxide** 一氧化碳

 **reactivity series** 金属活动性顺序

 **hydrogen** 氢气

Biology

Topic 14 · Coordination and response

 **gland** 腺体

 **synapse** 突触

⊙ vesicles 囊泡			
✱ neurotransmitter 神经递质			
— synaptic gap 突触间隙			
♂ receptor proteins 受体蛋白			
⇌ diffuse 扩散			
👁 sense organs 感觉器官			
⊙ cornea 角膜			
↷ refracts 折射			
🌀 iris 虹膜			
○ pupil 瞳孔			
👁 lens 晶状体			
[] retina 视网膜			
👁 optic nerve 视神经			
👁 blind spot 盲点			
↔ antagonistic 拮抗			
○ circular muscles 环肌			
☀ radial muscles 辐射肌			
👁 accommodation 视觉调节			
🌀 ciliary muscles 睫状肌			
🌀 suspensory ligaments 悬韧带			
▮ rods 视杆细胞			
👁 vision 视觉			

 cones 视锥细胞			
 fovea 中央凹			
 hormone 激素			
 target organs 靶器官			
 endocrine glands 内分泌腺			
 adrenal glands 肾上腺			
 adrenaline 肾上腺素			
 insulin 胰岛素			
 glucagon 胰高血糖素			
 testes 睾丸			
 testosterone 睾酮			
 ovaries 卵巢			
 oestrogen 雌激素			

Mathematics

Topic 4 · Geometry

 arc 弧			
 sector 扇形			
 segment 弓形			
 semicircle 半圆			
 cyclic quadrilateral 圆内接四边形			
 alternate segment theorem 弦切角定理			
 similar 相似			

 scale factor 比例因子			
= congruent 全等			
 bearing 方位角			
 clockwise 顺时针			
 construct 作图			
 compasses 圆规			
 net 展开图			
 scale drawing 比例图			
 solids 几何体			

Computer Science

Topics 6–7 · Automated and emerging technologies

 domestic appliances 家用电器			
 vacuum cleaner 吸尘器			
 lack of independent decision-making 缺乏独立决策			
 Artificial intelligence 人工智能			
 simulation 模拟			
 rules 规则			
 reason 推理			
 draw conclusions 得出结论			
 approximate 近似的			
 definite 确定的			

 learn 学习			
 adapt 适应			
 expert systems 专家系统			
 natural language processing 自然语言处理			
 self-driving cars 自动驾驶汽车			
 narrow AI 弱人工智能			
 general AI 通用人工智能			
 strong AI 强人工智能			
 program development life cycle 程序开发生命周期			
 analysis 分析			

Economics

Topic 4 · Government and the macroeconomy

 conflict 冲突			
 Fiscal policy 财政政策			
 government spending 政府支出			
 taxation 税收			
 budget 预算			
 budget deficit 预算赤字			
 budget surplus 预算盈余			
 direct tax 直接税			
 progressive tax 累进税			

↘ regressive tax 累退税

= proportional tax 比例税

🏦^① Monetary policy 货币政策

🏦 money supply 货币供给

↗ invest 投资

English

Topics 7-8 · Writing a review, Writing an essay

💡 examples 例子

⚖ evaluate 评价

👍 recommendation 建议

📄 essay 议论文

🗨 discursive 论述的

⚖ argumentative 议论的

≡ body 主体

Morning Reading 晨读

Grade 10 · Week 13

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。

Where does electricity come from? In a power station, a huge **coil** of wire spins inside a magnetic field. Moving a wire through a magnetic field creates a current. This is **electromagnetic induction**, and the machine is called an **a.c. generator**. Wind turbines, coal plants and dams all work this same way: something spins the coil, and electricity flows out.

Machines are also learning to think. **Expert systems** ask questions and give advice, like a doctor's assistant. **Self-driving cars** read the road with cameras and sensors. Today's systems are **narrow AI**: each one is clever at a single task, but it cannot do anything else.

How do we know if a country is doing well? Economists add up the value of everything it makes in a year: the **gross domestic product**. The economy moves in a **business cycle**: a **boom** with many jobs, then sometimes a **recession** when spending falls, and later a **recovery**. The central bank uses **monetary policy**, mainly the interest rate, to steady the ride.

Talk about it 说一说:

1. Trace the energy: how does a windy day become the light in your room?
2. Would you trust a self-driving taxi today? Give one reason for and one against.

Physics

Topics 4-5 · Electricity and magnetism, Nuclear physics

🔊 **loudspeaker** 扬声器

🌀 **electromagnetic induction** 电磁感应

 **a.c. generator** 交流发电机

 **slip rings** 滑环

 **brushes** 电刷

 **deflect** 偏转

 **turning effect** 转动效应

 **split-ring commutator**
换向器

 **step-up** 升压

 **step-down** 降压

 **high-voltage transmission** 高压输电

 **atom** 原子

 **orbit** 轨道

 **charge** 电荷

 **alpha particle** α 粒子

 **beta particle** β 粒子

 **gold foil** 金箔

 **scattering** 散射

 **nucleon** 核子

 **nucleus** 原子核

Chemistry

Topics 4–10 · Electrochemistry, Metals, Chemistry of the environment

 **lead** 铅

 **aluminium** 铝

 magnesium 镁			
 rusting 生锈			
 rust 铁锈			
 barrier methods 隔离法			
 galvanising 镀锌			
 sacrificial protection 牺牲保护			
 ore 矿石			
 hematite 赤铁矿			
 blast furnace 高炉			
 limestone 石灰石			
 slag 炉渣			
 bauxite 铝土矿			
 cryolite 冰晶石			
 distilled water 蒸馏水			
 impurities 杂质			
 sewage 污水			
 microbes 微生物			
 phosphates 磷酸盐			
 aquatic life 水生生物			
 minerals 矿物质			

Biology

Topics 14–16 · Coordination and response, Drugs, Reproduction

 duration 持续时间			
--	--	--	--

 homeostasis 稳态			
 negative feedback 负反馈			
 set point 设定点			
 diabetes 糖尿病			
 sweat glands 汗腺			
 sweating 出汗			
 hair erector muscles 立毛肌			
 fatty tissue 脂肪组织			
 insulation 隔热			
 arterioles 小动脉			
 vasodilation 血管舒张			
 shiver 颤抖			
 vasoconstriction 血管收缩			
 tropism 向性			
 gravitropism 向地性			
 gravity 重力			
 phototropism 向光性			
 auxin 生长素			
 shoot 嫩枝			
 elongate 伸长			
 drug 药物			
 chemical reactions 化学反应			

 antibiotics 抗生素			
 infections 感染			
 resistant 耐药			
 asexual reproduction 无性生殖			
 parent 亲本			
 offspring 后代			
 sexual reproduction 有性生殖			
 fusion 融合			
 nuclei 细胞核			
 zygote 合子			
 fertilisation 受精			
 variation 变异			
 haploid 单倍体			
 chromosomes 染色体			

Mathematics

Topics 4–5 · Geometry, Mensuration

 cube 立方体			
 cuboid 长方体			
 prism 棱柱			
 cylinder 圆柱			
 pyramid 棱锥			
 cone 圆锥			

○ sphere 球			
○ hemisphere 半球			
△ frustum 平截头体			
□ face 面			
— edge 棱			
≡ surface 表面			
📏 metric 公制			
📦 capacity 容量			
⬜ perimeter 周长			
↑↓ height 高			

Computer Science

Topic 7

📐 design 设计			
<> coding 编码			
🧪 testing 测试			
≡ abstraction 抽象			
↗ decomposition 分解			
🔗 sub-systems 子系统			
🔑 structure diagram 结构图			
↺ iterative testing 迭代测试			
📊 test data 测试数据			
🔄 flowchart 流程图			
📄 pseudocode 伪代码			

 algorithm 算法			
 input 输入			
 processing 处理			
 output 输出			
 validation 验证			
 range check 范围检查			
 length check 长度检查			
 type check 类型检查			
 presence check 存在性检查			

Economics

Topic 4 · Government and the macroeconomy

 Supply-side policy 供给侧政策			
 privatisation 私有化			
 deregulation 放松管制			
 incentives 激励			
 gross domestic product 国内生产总值			
 Real 实际			
 business cycle 经济周期			
 boom 繁荣			
 recession 衰退			
 slump 萧条			
 recovery 复苏			

 living standards 生活水平			
 claimant count 失业救济 申领人数			
 unemployment benefit 失业救济金			

English

Topic 9 · Listening skills

 recording 录音			
 specific 具体的			
 directions 方向			
 feelings 感受			
 connect 连接			
 suggests 暗示			

Morning Reading 晨读

Grade 10 · Week 14

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。

A recipe is a plan: first wash the rice, then add water, then cook. Computer scientists call such a plan an **algorithm**: a list of steps that turns **input** into **output**. You can write it as **pseudocode**, simple English-like lines, or draw it as a **flowchart** with boxes and arrows. Good programs also check their input. **Validation** stops silly answers: a **range check** rejects an age of 200, and a **presence check** makes sure the box is not empty.

Deep inside every atom is a tiny **nucleus** made of **protons** and **neutrons**. Atoms of the same element always have the same number of protons, but the number of neutrons can differ. Such atoms are called **isotopes**.

Not all joblessness is the same. **Frictional unemployment** is short: a worker is between jobs. **Structural unemployment** is deeper: the industry itself has changed, and old skills no longer fit. When the whole economy slows down, **cyclical unemployment** rises everywhere.

Talk about it 说一说:

1. Write a four-step algorithm for making your breakfast.
2. A robot factory replaces 100 workers. What kind of unemployment is this? What could help the workers?

Physics

Topics 1–5 · Motion, forces and energy, Nuclear physics

Σ nucleon number 核子数	_____	_____	_____
# proton number 质子数	_____	_____	_____
+ proton 质子	_____	_____	_____

 relative 相对			
 neutron 中子			
 nuclide 核素			
 isotope 同位素			
 nuclear fission 核裂变			
 nuclear fusion 核聚变			
 hydrogen 氢			
 helium 氦			
 unstable 不稳定			
 radiation 辐射			
 background radiation 背景辐射			
 gamma radiation γ 射线			
 radioactive 放射性			
 decay 衰变			
 spontaneous 自发			
 random 随机			
 radon 氡			

Chemistry

Topic 10 · Chemistry of the environment

 toxic 有毒			
 deoxygenation 缺氧			
 sedimentation 沉降			
 filtration 过滤			

 chlorination 氯消毒			
 fertilisers 肥料			
 oxides of nitrogen 氮氧化物			
 phosphorus 磷			
 greenhouse gases 温室气体			
 complete combustion 完全燃烧			
 incomplete combustion 不完全燃烧			
 particulates 颗粒物			
 fossil fuels 化石燃料			
 global warming 全球变暖			
 climate change 气候变化			
 respiratory 呼吸			
 acid rain 酸雨			
 photochemical smog 光化学烟雾			
 renewable energy 可再生能源			
 catalytic converters 催化转化器			
 flue gas desulfurisation 烟气脱硫			
 chlorophyll 叶绿素			

Biology

Topic 16 · Reproduction

⊙ diploid 二倍体			
🍃 sepals 萼片			
🌸 petals 花瓣			
🌿 stamens 雄蕊			
🧵 filament 花丝			
⊙ anther 花药			
🌾 pollen grains 花粉粒			
🌸 carpel 雌蕊			
⊙ stigma 柱头			
♂ style 花柱			
○ ovary 子房			
○ ovules 胚珠			
↔ self-pollination 自花传粉			
↔ cross-pollination 异花传粉			
🐝 pollinators 传粉者			
🌱 pollen tube 花粉管			
🌱 seed 种子			
🌱 germinate 萌发			
○ scrotum 阴囊			
🌱 sperm ducts 输精管			
⊙ prostate gland 前列腺			
↑ penis 阴茎			
🌱 oviducts 输卵管			

 uterus 子宫			
 cervix 子宫颈			
 vagina 阴道			
 flagellum 鞭毛			
 acrosome 顶体			
 jelly coat 胶质层			
 embryo 胚胎			
 implants 植入			
 fetus 胎儿			
 umbilical cord 脐带			
 amniotic sac 羊膜囊			
 amniotic fluid 羊水			
 toxins 毒素			
 puberty 青春期			

Mathematics

Topics 5–6 · Mensuration, Trigonometry

 minor sector 小扇形			
 major sector 大扇形			
 arc length 弧长			
 surface area 表面积			
 cross-section 横截面			
 curved surface area 侧面积			
 slant height 斜高			

 **compound shape** 组合图形

 **right-angled triangle** 直角三角形

 **hypotenuse** 斜边

 **opposite** 对边

 **adjacent** 邻边

 **sine** 正弦

 **cosine** 余弦

 **tangent ratio** 正切

 **angle of elevation** 仰角

Computer Science

Topics 7-8 · Programming

 **format check** 格式检查

 **verification** 核实

 **visual check** 目视检查

 **double entry** 双重输入

 **trace table** 追踪表

 **normal** 正常数据

 **abnormal** 异常数据

 **extreme** 极端数据

 **boundary** 边界数据

 **linear search** 线性查找

 **bubble sort** 冒泡排序

Σ totalling 求和			
# counting 计数			
$\wedge$ maximum 最大值			
$\vee$ minimum 最小值			
— average 平均值			
(x) variable 变量			
$\square$ constant 常量			
∇ declare 声明			
$\diamond$ data type 数据类型			

Economics

Topics 4–5 · Government and the macroeconomy, Economic development

$\square$ labour force survey 劳动力调查			
∞ labour force 劳动力			
$\rightleftharpoons$ frictional unemployment 摩擦性失业			
$\square$ structural unemployment 结构性失业			
$\rightleftharpoons$ cyclical unemployment 周期性失业			
$\searrow$ deflation 通货紧缩			
$\mathbb{C}$ Consumer Prices Index 消费者价格指数			
$\mathbb{A}$ weight 权重			
$\mathbb{D}$ demand-pull 需求拉动			
$\uparrow$ cost-push 成本推动			

 purchasing power 购买力			
 indicator 指标			
 per head 人均			
 Human Development Index 人类发展指数			

English

Topics 9–10 · Listening skills, Speaking skills

 distractors 干扰项			
 conversation 对话			
 respond 回应			
 turns 轮流			
 develop 展开			
 pronunciation 发音			

Morning Reading 晨读

Grade 10 · Week 15

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。

Is a country rich if it has money? Not only that. The **Human Development Index** measures three things together: income per person, education, and **life expectancy**, how long people live. A country can grow richer while some people stay poor. **Absolute poverty** means a family cannot afford basic food and shelter. **Relative poverty** means they have far less than others around them. One tool against low pay is a **minimum wage**.

In physics, you learned that some rocks and even the air are slightly **radioactive**. A detector clicks even with no sample nearby; this is **background radiation**, coming from space and from the ground. Radioactive **decay** is **random**: no one can say which atom will break next, only how many will decay on average.

How does a computer find one name in a list of millions? A **linear search** checks each item, one by one. To put a list in order, a **bubble sort** swaps neighbours again and again until the list is sorted.

Talk about it 说一说:

1. Which matters more for a good life: income, education, or health? Discuss.
2. How would you find one card in a shuffled deck? Compare your method with a linear search.

Physics

Topic 5 · Nuclear physics

☄ **cosmic rays** 宇宙射线

[] **detector** 探测器

⚡ **counter** 计数器

📶 count rate 计数率

✓ corrected 修正

⚡ ionising 电离

💎 aluminium 铝

📶 electromagnetic wave 电磁波

🛡️ lead 铅

➔ penetrating 穿透

📶 absorb 吸收

🧴 sample 样品

🕒 half-life 半衰期

🔔 smoke alarm 烟雾报警器

✂️ sterilise 消毒

🧬 cancer 癌症

🏠 living cells 细胞

🦠 bacteria 细菌

🔄 mutation 突变

💉 dose 剂量

Chemistry

Topics 10–11 · Chemistry of the environment, Organic chemistry

☀️ photosynthesis 光合作用

🍷 yeast 酵母

🍬 glucose 葡萄糖

🧪 displayed formula 结构式

⬡ structural formula 结构简式

Σ general formula 通式

🔗 Structural isomers 同分异构体

≡ homologous series 同系物

📦 functional group 官能团

○ saturated 饱和

🔗 unsaturated 不饱和

💎 coal 煤

🔥 natural gas 天然气

🛢️ petroleum 石油

⬡ hydrocarbon 碳氢化合物

≡ fractions 馏分

🔧 fractional distillation 分馏

🔧 fractionating column 分馏塔

🔧 chain length 链长

⇌ volatility 挥发性

💧 viscosity 黏度

Biology

Topics 16–17 · Reproduction, Inheritance

♂ secondary sexual characteristics 第二性征

↻	menstrual cycle	月经周期			
○	ovulation	排卵			
⌘	progesterone	孕酮			
☺	pregnancy	怀孕			
⚡	sexually transmitted infection	性传播感染			
⚡	infection	感染			
⚡	virus	病毒			
01 10	codes	编码			
↔	allele	等位基因			
♀	sex chromosomes	性染色体			
÷	ratio	比例			
✧	neurotransmitters	神经递质			
📢	expresses	表达			
✉	messenger	信使			
⊙	ribosome	核糖体			
📦	mitosis	有丝分裂			
📦	replication	复制			
⊙	daughter cell	子细胞			
🌱	stem cells	干细胞			
↗	meiosis	减数分裂			
📦	inheritance	遗传			
↔	genotype	基因型			

☉ phenotype 表现型			
↑ dominant 显性			
↓ recessive 隐性			
= homozygous 纯合子			
💎 pure-breeding 纯种			
± heterozygous 杂合子			
× cross 杂交			
田 Punnett square 庞纳特方格			
♂ pedigree diagram 系谱图			
× test cross 测交			
↔ codominance 共显性			
🩸 blood groups 血型			
♂ sex-linked 伴性遗传			

Mathematics

Topics 6–7 · Trigonometry, Transformations and vectors

↘ angle of depression 俯角			
∧ trigonometric equation 三角方程			
∧ sine rule 正弦定理			
∧ cosine rule 余弦定理			
② ambiguous case 两解情况			
□ plane 平面			
△ transformation 变换			

 reflection 反射			
— mirror line 对称轴			
 rotation 旋转			
 enlargement 放大			
 translation 平移			
 vector 向量			
 column vector 列向量			
# scalar 标量			
$\rightarrow$ directed line segment 有向线段			

Computer Science

Topic 8 · Programming

± integer 整数			
⊙ real 实数			
T char 字符			
〰 string 字符串			
⊙ Boolean 布尔值			
≡ sequence 顺序			
∞ selection 选择			
↺ iteration 迭代			
⊙ loop 循环			
↺ count-controlled loop 计数循环			
↑ pre-condition loop 前测循环			

↓ **post-condition loop** 后测循环

% **remainder** 余数

>≡ **nested statement** 嵌套语句

✂ **substring** 子串

↑ **upper case** 大写

↓ **lower case** 小写

↔ **length** 长度

ƒ **procedure** 过程

ƒ **function** 函数

Economics

Topic 5 · Economic development

♡ **life expectancy** 预期寿命

↗ **income distribution** 收入分配

☹ **poverty** 贫困

☹ **absolute poverty** 绝对贫困

⚖ **relative poverty** 相对贫困

↗ **redistribute** 再分配

⬇ **minimum wage** 最低工资

💰 **benefits** 福利

😊 **birth rate** 出生率

💀 **death rate** 死亡率

✈ migration 移民	_____	_____	_____
→] immigration 迁入	_____	_____	_____
[→ emigration 迁出	_____	_____	_____
↔ net migration 净移民	_____	_____	_____

English

Topics 10–11 · Speaking skills, Vocabulary and text types

🎵 intonation 语调	_____	_____	_____
↔ paraphrasing 释义	_____	_____	_____
🔗 collocations 词语搭配	_____	_____	_____
📖 set phrases 固定短语	_____	_____	_____
🗨 phrasal verbs 短语动词	_____	_____	_____
≈ fluent 流利	_____	_____	_____

Morning Reading 晨读

Grade 10 · Week 16

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。

Why is January cold and July hot? The Earth's **axis** is **tilted**. As the Earth travels around the **Sun**, our half of the planet sometimes leans towards the Sun and sometimes away. That gives us the **seasons**. The Earth also **rotates** once every 24 hours, which gives us day and night.

Programs repeat things too. A **loop** runs the same lines again and again. A **count-controlled loop** repeats an exact number of times: print a star, five times. **Selection** means the program chooses a path: IF it rains, THEN take an umbrella. With **sequence**, selection and **iteration**, you can build any program.

Countries also repeat a yearly cycle: they buy and sell with each other. Goods sold to other countries are **exports**; goods bought from them are **imports**. **Developed countries** often sell services and machines, while many **developing countries** sell food and raw materials, though this is changing fast.

Talk about it 说一说:

1. Explain to a child why summer days are long and winter days are short.
2. Name three things your family owns that were imported. Where were they made?

Physics

Topics 5-6 · Nuclear physics, Space physics

☀ **exposure** 照射

🛡 **shielding** 屏蔽

🔄 **rotate** 自转

✚ **axis** 轴

 tilted 倾斜			
 Sun 太阳			
 seasons 季节			
 Moon 月球			
 phases 月相			
 circumference 周长			
 orbital speed 轨道速率			
 Solar System 太阳系			
 planet 行星			
 dwarf planet 矮行星			
 white dwarf 白矮星			
 rocky 岩石			
 gaseous 气态			
 gas giant 气态巨行星			
 ice giant 冰巨行星			
 red giant 红巨星			

Chemistry

Topic 11 · Organic chemistry

 bitumen 沥青			
 Alkanes 烷烃			
 substitution reaction 取代反应			
 photochemical reaction 光化学反应			

 **ultraviolet light** 紫外线

 **Alkenes** 烯烃

 **Cracking** 裂化

+ addition reactions 加成
反应

 **addition polymerisation**
加聚

 **condensation
polymerisation** 缩聚

 **Alcohols** 醇

 **ethanol** 乙醇

 **fermentation** 发酵

 **ethene** 乙烯

 **solvent** 溶剂

 **Carboxylic acids** 羧酸

 **amino acid** 氨基酸

 **bases** 碱

 **vinegar** 醋

 **ester** 酯

 **polymer** 聚合物

Biology

Topics 17–19 · Inheritance, Variation and selection, Organisms and their environment

 **colour blindness** 色盲

 **continuous variation** 连
续变异

👁 phenotypes 表现型			
📊 discontinuous variation 不连续变异			
🩸 ABO blood groups 血型			
🔗 mutation 突变			
🧬 alleles 等位基因			
🔗 gene mutation 基因突变			
☢ ionising radiation 电离辐射			
🔄 adaptive feature 适应特征			
📦 inherited 遗传			
🛡 survive 生存			
😊 reproduce 生殖			
💧 hydrophytes 水生植物			
☀ xerophytes 旱生植物			
🔍 natural selection 自然选择			
👨 many offspring 后代			
⚔ competition 竞争			
🌿 resources 资源			
💊 antibiotic 抗生素			
🔍 selective breeding 选择育种			
👤 artificial selection 人工选择			
🌾 crops 农作物			

 food chain 食物链			
 food web 食物网			
 producer 生产者			
 consumer 消费者			
 herbivore 食草动物			
 carnivore 食肉动物			
 decomposer 分解者			
 decomposition 分解			
 trophic level 营养级			
 pyramid 金字塔			
 biomass 生物量			
 crop plants 农作物			
 overharvesting 过度捕捞			

Mathematics

Topics 7-8 · Transformations and vectors, Probability

 position vector 位置向量			
 collinear 共线			
 coplanar 共面			
 probability 概率			
 event 事件			
 outcome 结果			
 relative frequency 相对频率			
 fair 公平			

 bias 偏倚			
 random 随机			
 expected frequency 期望 频数			
 combined events 组合事 件			
 independent events 独立 事件			
 mutually exclusive 互斥			
 sample space diagram 样 本空间图			
 tree diagram 树状图			

Computer Science

Topics 8-9 · Programming, Databases

 parameter 参数			
 local variable 局部变量			
 global variable 全局变量			
 library routine 库程序			
 maintainable 可维护的			
 meaningful identifiers 有 意义的标识符			
 comments 注释			
 array 数组			
 index 索引			
 one-dimensional (1D) array 一维数组			

 **two-dimensional (2D)**
array 二维数组

 **file** 文件

 **database** 数据库

 **single-table database** 单
表数据库

 **record** 记录

 **field** 字段

 **text/alphanumeric** 文本

 **character** 字符

 **date/time** 日期时间

 **primary key** 主键

Economics

Topics 5–6 · Economic development, International trade and globalisation

 **population structure** 人
口结构

 **population pyramid** 人口
金字塔

 **ageing population** 人口老
龄化

 **economic development**
经济发展

 **developed countries** 发达
国家

 **developing countries** 发
展中国家

 **subsistence farming** 自给
农业

 debt 债务	_____	_____	_____
 trade 贸易	_____	_____	_____
 exports 出口	_____	_____	_____
 imports 进口	_____	_____	_____
 free trade 自由贸易	_____	_____	_____
 domestic 国内的	_____	_____	_____
 compete 竞争	_____	_____	_____

English

Topics 5–11 · Writing a report, Vocabulary and text types

 text type 文本类型	_____	_____	_____
 notice 通知	_____	_____	_____
 leaflet 传单	_____	_____	_____
 act 行动	_____	_____	_____
 phrases 短语	_____	_____	_____
 aim 目的	_____	_____	_____

Morning Reading 晨读

Grade 10 · Week 17

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。

Hundreds of machines fly silently above your head. A **satellite** is any object that orbits a planet. The Moon is a natural one; the others we built and launched. They stay in orbit because **gravity** keeps pulling them towards the Earth while they move forward at great speed. Satellites carry phone calls, take weather photos, and tell your map app exactly where you are.

Satellites collect mountains of data, and data needs a home. A **database** stores information in an organised way. Each row is a **record**, for example one weather station. Programs read the data from a **file** or search the database directly.

Trade now connects the whole planet; we call this **globalisation**. A **multinational company** makes phones in one country, writes software in another, and sells everywhere. Some governments use **trade protection**: a **tariff** taxes imports to make them dearer, and a **quota** limits how many may enter. Supporters of **free trade** say open markets make goods cheaper for everyone.

Talk about it 说一说:

1. Your phone map knows where you are. How do satellites make this possible?
2. A tariff makes imported shoes expensive. Who wins and who loses?

Physics

Topic 6 · Space physics

💎 **asteroid** 小行星

📡 **satellite** 卫星

✧ **comet** 彗星

↓ gravity 引力			
Δ gravitational potential energy 重力势能			
☒ conservation of energy 能量守恒			
○ ellipse 椭圆			
✧ dust 尘埃			
⊗ element 元素			
≡ accretion 吸积			
☉ accretion disc 吸积盘			
☆ star 恒星			
☆ neutron star 中子星			
⊗ nuclear reaction 核反应			
✧ galaxy 星系			
≡ Milky Way 银河系			
📏 light-year 光年			
— diameter 直径			
🌐 Universe 宇宙			
☁ interstellar cloud 星际云			

Chemistry

Topics 11–12 · Organic chemistry, Experimental techniques and chemical analysis

○ monomers 单体			
↔ repeat unit 重复单元			
🔗 Polyamides 聚酰胺			

 Nylon 尼龙			
 Polyesters 聚酯			
 Plastics 塑料			
 landfill 填埋			
 Proteins 蛋白质			
 stop-watch 秒表			
 thermometer 温度计			
 balance 天平			
 measuring cylinder 量筒			
 burette 滴定管			
 volumetric pipette 移液管			
 gas syringe 注射器			
 saturated solution 饱和溶液			
 residue 残渣			
 filtrate 滤液			
 end-point 终点			
 paper chromatography 纸色谱法			
 locating agent 显色剂			

Biology

Topics 19–20 · Organisms and their environment, Human influences on ecosystems

 foreign species 外来物种			
 carbon cycle 碳循环			

 combustion 燃烧			
 fossil fuels 化石燃料			
 nitrogen cycle 氮循环			
 ammonium ions 铵离子			
 nitrification 硝化作用			
 nitrogen fixation 固氮作用			
 denitrification 反硝化作用			
 population 种群			
 community 群落			
 ecosystem 生态系统			
 predation 捕食			
 lag phase 延迟期			
 exponential phase 对数期			
 stationary phase 稳定期			
 death phase 衰亡期			
 fertilisers 化肥			
 yields 产量			
 insecticides 杀虫剂			
 herbicides 除草剂			
 weeds 杂草			
 livestock 牲畜			
 monoculture 单一栽培			
 biodiversity 生物多样性			

 habitats 栖息地			
 pollution 污染			
 food webs 食物网			
 food chains 食物链			
 deforestation 森林砍伐			
 extinction 灭绝			
 sewage 污水			
 ecosystems 生态系统			
 eutrophication 富营养化			
 producers 生产者			
 decomposers 分解者			

Mathematics

Topics 8–9 · Probability, Statistics

 with replacement 有放回			
 without replacement 无放回			
 conditional probability 条件概率			
 statistical 统计			
 data 数据			
 tally table 计数表			
 two-way table 双向表			
 mean 平均数			
 median 中位数			

 mode 众数			
 frequency 频数			
 grouped data 分组数据			
 modal class 众数组			
 quartile 四分位数			
 interquartile range 四分位距			
 bar chart 条形图			

Computer Science

Topics 2-10 · Data transmission, Databases, Boolean logic

 unique 唯一的			
 structured query language 结构化查询语言			
 query 查询			
 condition 条件			
 ascending 升序			
 descending 降序			
 Boolean logic 布尔逻辑			
 truth table 真值表			
 NOT gate 非门			
 AND gate 与门			
 OR gate 或门			
 NAND gate 与非门			
 NOR gate 或非门			

 **XOR gate** 异或门

() logic expression 逻辑表达式

 **logic circuit** 逻辑电路

 **problem statement** 问题陈述

 **parity block** 奇偶校验块

 **parity byte** 奇偶校验字节

Economics

Topic 6 · International trade and globalisation

 **dependent** 依赖

 **globalisation** 全球化

 **multinational company**
跨国公司

 **host country** 东道国

 **trade protection** 贸易保护

 **tariff** 关税

 **quota** 配额

 **embargo** 禁运

 **infant industry** 幼稚产业

 **dumping** 倾销

 **exchange rate** 汇率

 **currency** 货币

 **floating exchange rate**
浮动汇率

↗ appreciation 升值

English

Topics 5–7 · Writing a report, Writing an article, Writing a review

💡 solution 解决办法

— flat 平淡

🗑️ decide 决定

👍 believable 可信

🗨️ criticise 批评

⚖️ fair 公正

Morning Reading 晨读

Grade 10 · Week 18

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。

Look up on a clear night. Every star you see belongs to our **galaxy**, the **Milky Way**, a slowly turning city of more than one hundred billion stars. Distances in space are so huge that we measure them in **light-years**, the distance light travels in one year. When a giant star dies, it can explode as a **supernova**, and the heaviest ones collapse into a **black hole**, whose gravity is so strong that even light cannot escape. The **Universe** contains billions of galaxies like ours.

Astronomers keep their star data in databases and search it with **structured query language**. A **query** like `SELECT name FROM stars WHERE distance < 10` finds every star within ten light-years. Underneath, computers decide everything with **Boolean logic**: an **AND gate** outputs true only if both inputs are true; an **OR gate** needs just one. A **truth table** lists every case.

Money also travels between countries. The **exchange rate** is the price of one **currency** in another. When the yuan buys more dollars than before, it has seen an **appreciation**.

Talk about it 说一说:

1. If a star is 100 light-years away, when did the light you see leave it?
2. You are travelling abroad and the yuan appreciates. Is your trip cheaper or dearer? Why?

Physics

Topics 3-6 · Waves, Space physics

✧ **protostar** 原恒星

🔥 **fuel** 燃料

☁ **nebula** 星云

☆ red supergiant 红超巨星

✦ supernova 超新星

○ black hole 黑洞

← receding 退行

→ redshift 红移

[] expanding 膨胀

✦ Big Bang 大爆炸

📡 microwave 微波

📡 cosmic microwave
background radiation 宇宙
微波背景辐射

📏 Hubble constant 哈勃常
数

📡 optical fibres 光纤

analogue 模拟

digital 数字

loudness 响度

pitch 音调

Ultrasound 超声波

The electromagnetic
spectrum 电磁波谱

Chemistry

Topics 7–12 · Acids, bases and salts, Organic chemistry, Experimental techniques and chemical analysis

📊 chromatogram 色谱图

💎 crystallisation 结晶

 simple distillation 蒸馏			
 carbonate 碳酸盐			
 chloride 氯化物			
 nitric acid 硝酸			
 silver nitrate 硝酸银			
 nitrate 硝酸盐			
 barium nitrate 硝酸钡			
 barium 钡			
 bromide 溴化物			
 iodide 碘化物			
 sodium hydroxide 氢氧化钠			
 sulfate 硫酸盐			
 sulfite 亚硫酸盐			
 ammonium 铵			
 limewater 石灰水			
 flame test 焰色试验			
effervescence 泡腾			
amide linkage 酰胺键			
ester linkage 酯键			

Biology

Topics 20–21 · Human influences on ecosystems, Biotechnology and genetic modification

 non-biodegradable 不可降解			
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 plastics 塑料			
 methane 甲烷			
 greenhouse effect 温室效应			
 climate change 气候变化			
 sustainable 可持续			
 conserved 保护			
 quotas 配额			
 closed seasons 禁渔期			
 endangered 濒危			
 hunting 狩猎			
 introduced species 外来物种			
 captive breeding 圈养繁殖			
 artificial insemination 人工授精			
 in vitro fertilisation 体外受精			
 seed banks 种子库			
 drugs 药物			
 genetic variation 变异			
 biotechnology 生物技术			
 ethical 伦理			
 biofuel 生物燃料			
 pectinase 果胶酶			

 washing powders 洗衣粉			
 lactase 乳糖酶			
 lactose 乳糖			
 fermenter 发酵罐			
 penicillin 青霉素			
 mycoprotein 真菌蛋白			
 genetic modification 基因改造			
 protein 蛋白质			
 restriction enzymes 限制酶			
 sticky ends 黏性末端			
 ligase 连接酶			
 recombinant plasmid 重组质粒			
 express 表达			
 resistance 抗性			

Mathematics

Topics 4–9 · Geometry, Statistics

 pie chart 饼图			
 pictogram 象形图			
 stem-and-leaf diagram 茎叶图			
 frequency distribution 频数分布			
 scatter diagram 散点图			

 correlation 相关性			
 positive correlation 正相关			
 negative correlation 负相关			
 zero correlation 零相关			
 line of best fit 最佳拟合线			
 cumulative frequency 累积频数			
 percentile 百分位数			
 histogram 直方图			
 frequency density 频数密度			
 class width 组距			
 decagon 十边形			

Computer Science

Topics 3–6 · Hardware, Software, Automated and emerging technologies

fetch-execute cycle 取指 执行周期			
Cloud storage 云存储			
static 静态			
dynamic 动态			
firmware 固件			
bootloader 引导程序			
providing a user interface 用户界面			

managing peripherals 外围设备

managing multitasking 多任务处理

providing a platform 平台

assembler 汇编器

sensor types 传感器类型

accelerometer 加速度计

humidity 湿度

proximity 接近

knowledge base 知识库

rule base 规则库

inference engine 推理引擎

Machine learning 机器学习

Economics

Topics 4-6 · Government and the macroeconomy, International trade and globalisation

↘ **depreciation** 贬值

📁 **current account** 经常账户

📦 **trade in goods** 货物贸易

🏠 **trade in services** 服务贸易

💰 **primary income** 初次收入

📁 **secondary income** 二次收入

↘ current account deficit 逆差			
↗ current account surplus 顺差			
⚔ competitiveness 竞争力			
% interest rates 利率			
primary sector 第一产业			
secondary sector 第二产业			
tertiary sector 第三产业			
deindustrialisation 去工业化			

English

Topics 7-11 · Writing a review, Speaking skills, Vocabulary and text types

✨ breathtaking 惊人			
😊 politely 礼貌			
📖 revise 复习			
👋 interrupts 打断			
🕒 spaced review 间隔复习			
blog 博客			