
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

Topic 1 · Motion, forces and energy

↻ **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			
 displacement method 排水法			
floats 漂浮			
shape 形状			

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

② 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
