
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			