
Morning Reading 晨读

Grade 11 · AS · 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。

A steel ship weighs thousands of tonnes. Why does it float when a steel coin sinks? A body in water feels an upward force, the **upthrust**, equal to the weight of the water it has **displaced**. This is **Archimedes' principle**. The ship's hull is shaped to push aside an enormous volume of water, so the upthrust can match its huge weight. The coin displaces almost nothing, so it sinks. Even the air pushes on us: **atmospheric pressure** at sea level is about 100,000 pascals, though we never notice it.

Chemists this week met energy in reactions. An **exothermic** reaction releases heat, like the hand warmers 暖手宝 sold in winter; an **endothermic** one absorbs it, like the instant cold packs used for sports injuries. Every reaction must first climb over its **activation energy**.

In the market diagram, the crossing point of demand and supply gives the **equilibrium price**. Below it there is **excess demand**: a **shortage**, queues, and pressure for the price to rise.

Talk about it 说一说:

1. A ship floats but a coin sinks. Explain the difference in one sentence.
2. Ice-cream sellers cut prices every evening. What does this say about equilibrium?

Physics

Topics 5–7 · Work, energy and power, Deformation of solids, Waves

 voltage 电压			
 spring 弹簧			
 compression 压缩			
 spring constant 劲度系数			
 tensile 拉伸			
 extension 伸长量			
 load 负载			
 Hooke's law 胡克定律			
 limit of proportionality 比例极限			
 elastic 弹性			
 plastic 塑性			
 Series 串联			
 Parallel 并联			
 Strain 应变			
 Young modulus 杨氏模量			
 pulley 滑轮			
 micrometer 螺旋测微器			
 elastic limit 弹性极限			
 trapezia 梯形			
 wave 波			

Chemistry

Topics 4–5 · States of matter, Chemical energetics

 covalent bonds 共价键

 silicon(IV) oxide 二氧化硅

 graphite 石墨

 diamond 金刚石

 giant metallic 金属晶体

 melting point 熔点

 electrical conductivity
导电性

 solubility 溶解度

 enthalpy change 焓变

 exothermic 放热

 endothermic 吸热

 reaction pathway
diagram 反应路径图

 activation energy 活化能

 standard conditions 标准
条件

 enthalpy change of
reaction 反应焓变

 enthalpy change of
formation 生成焓变

 enthalpy change of
combustion 燃烧焓变

 enthalpy change of
neutralisation 中和焓变

Biology

Topics 3-4 · Enzymes, Cell membranes and transport

 temperature 温度			
 colorimeter 比色计			
 rate of reaction 反应速率			
 kinetic energy 动能			
 collide 碰撞			
 optimum temperature 最适温度			
 denature 变性			
 buffer solution 缓冲液			
 inhibitor 抑制剂			
 Michaelis-Menten constant 米氏常数			
 affinity 亲和力			
 reversible 可逆			
 competitive inhibitor 竞争性抑制剂			
 non-competitive inhibitor 非竞争性抑制剂			
 immobilised enzyme 固定化酶			
 alginate 海藻酸盐			
 fluid mosaic model 流动镶嵌模型			
 bilayer 双层			
 carrier protein 载体蛋白			

 channel protein 通道蛋白			
 cholesterol 胆固醇			
 fluidity 流动性			
 glycolipid 糖脂			

Mathematics

Topics 1–2 · Pure Mathematics 1, Pure Mathematics 2

 Integration 积分			
+ constant of integration 积分常数			
[] definite integral 定积分			
 region 区域			
 volume of revolution 旋转体体积			
 composition of functions 复合函数			
 logarithms 对数			
 exponential function 指数函数			
[] modulus 绝对值			
x² polynomial 多项式			

Further Mathematics

Topics 1–3 · Further Pure Mathematics 1, Further Mechanics

 stretch 拉伸			
 shear 切变			
 Further Mechanics 进阶力学			

↗ projectile 抛射体

↺ constant acceleration 匀加速

Computer Science

Topics 5–6 · System Software, Security, privacy and data integrity

▶ executable 可执行文件

▶ interpreter 解释器

📄 bytecode 字节码

💻 virtual machine 虚拟机

⚡ just-in-time compilation 即时编译

<> integrated development environment 集成开发环境

☺ syntax highlighting 语法高亮

✧ auto-complete 自动补全

🔍 debugger 调试器

⊙ breakpoints 断点

🔑 version control 版本控制

🔧 refactoring 重构

🧪 unit test 单元测试

🛡 security 安全

🚫 unauthorised 未授权

🔒 privacy 隐私

🛡 integrity 完整性

 virus 病毒			
 worm 蠕虫			
 networks 网络			
 Trojan horse 木马			
 spyware 间谍软件			
 ransomware 勒索软件			
 adware 广告软件			
 phishing 网络钓鱼			
 hacking 黑客入侵			
 denial of service 拒绝服务			
 eavesdropping 窃听			

Economics

Topic 2 · The price system and the microeconomy

 cross elasticity of demand 需求交叉弹性			
 price elasticity of supply 供给价格弹性			
 spare capacity 闲置产能			
 stocks 库存			
 momentary 瞬时			
 short run 短期			
 long run 长期			
 equilibrium 均衡			
 equilibrium price 均衡价格			

# equilibrium quantity 均衡数量			
⚖️ disequilibrium 非均衡			
↗️ excess demand 超额需求			
📦 shortage 短缺			
↘️ excess supply 超额供给			
🏠 product market 产品市场			