
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 4-5 · Forces, density and pressure, Work, energy and power

↓ **depth** 深度

☁ **atmospheric pressure** 大气压强

👁 **submerged** 浸没

↑ upthrust 浮力			
→ displaced 排开			
⚖ Archimedes' principle 阿基米德原理			
⚖ floating 漂浮			
↕ tension 张力			
⌒ newton meter 弹簧测力计			
🔒 incompressible 不可压缩			
🔒 closed system 封闭系统			
🔒 conservation of energy 能量守恒			
🔒 elastic potential energy 弹性势能			
🔒 electrical energy 电能			
🔒 chemical energy 化学能			
✖ frictionless 无摩擦			
△ ramp 斜坡			
% efficiency 效率			

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

Σ Integration 积分			
+ constant of integration 积分常数			
[] definite integral 定积分			
$\square$ region 区域			
$\square$ volume of revolution 旋 转体体积			
$\circlearrowright$ composition of functions 复合函数			
f logarithms 对数			
$\wedge$ exponential function 指 数函数			
[] modulus 绝对值			
x^2 polynomial 多项式			

Further Mathematics

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

$\leftrightarrow$ stretch 拉伸			
$\nearrow$ shear 切变			
$\circlearrowright$ Further Mechanics 进阶 力学			
$\nearrow$ projectile 抛射体			
$\square$ constant acceleration 匀 加速			

Computer Science

Topics 4–5 · Processor Fundamentals, System Software

$\hookrightarrow$ assembler 汇编器			
---------------------------------	--	--	--

 symbol table 符号表			
 label 标签			
 forward references 前向引用			
 addressing mode 寻址方式			
 immediate addressing 立即寻址			
 direct addressing 直接寻址			
 indirect addressing 间接寻址			
 indexed addressing 变址寻址			
 relative addressing 相对寻址			
 logical shift 逻辑移位			
 mask 掩码			
 cache memory 高速缓存			
 Immediate Access Store 立即存取存储器			
 special purpose registers 专用寄存器			
 register transfer 寄存器传送			
 cyclic shift 循环移位			
 operating system 操作系统			
 process management 进程管理			

 process 进程			
 memory management 内存管理			
 virtual memory 虚拟内存			
 paging 分页			
 device driver 设备驱动			
 utility program 实用程序			

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
