
Morning Reading 晨读

Grade 11 · AS · 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。

Physics begins with careful language. A **physical quantity** has two parts: a number, its **magnitude**, and a **unit**. Saying "the mass is 5" means nothing until you add "kilograms". Scientists across the world share the same **SI units**, so a result measured in Shanghai can be checked in London. Before an experiment, a good physicist will **estimate** the answer first, at least to the right **order of magnitude**, so a silly result is spotted at once.

Chemistry looks inside matter. Every **atom** has a tiny, dense **nucleus** of **protons** and **neutrons**, with **electrons** arranged in shells around it. The **proton number** defines the element: change it, and you have a different substance entirely.

Economics begins from one hard fact: **scarcity**. Our **wants** are unlimited, but **resources** are not. Every choice therefore has an **opportunity cost**, the next best thing you gave up. Choosing two hours of gaming costs you the two hours of revision you did not do.

Talk about it 说一说:

1. Estimate the mass of this worksheet, with a unit. How could you check?
2. What was the opportunity cost of coming to school today?

Physics

Topic 1 · Physical quantities and units

 **physical quantity** 物理量

 **magnitude** 大小

 **unit** 单位

 **estimate** 估算

 **mass** 质量

 weight 重力			
 vacuum 真空			
 acceleration 加速度			
 free fall 自由落体			
 order of magnitude 数量级			
 SI units 国际单位制			
 base quantity 基本量			
 length 长度			
 current 电流			
 ampere 安培			
 temperature 温度			
 kelvin 开尔文			
 derived unit 导出单位			

Chemistry

Topic 1 · Atomic structure

 atom 原子			
 nucleus 原子核			
 proton 质子			
 neutron 中子			
 electron 电子			
 shell 壳层			
 relative charge 相对电荷			
 relative mass 相对质量			

— neutral 中性			
# proton number 质子数			
$_{\text{Z}}$ atomic number 原子序数			
Σ nucleon number 核子数			
A mass number 质量数			
$\odot$ nucleon 核子			
$\pm$ ion 离子			
$\hookrightarrow$ electric field 电场			
$\curvearrowright$ deflection 偏转			
$\odot$ atomic radius 原子半径			
$\bigcirc$ ionic radius 离子半径			

Biology

Topic 1 · Cell structure

$\hexagon$ cell 细胞			
microscope 显微镜			
light microscope 光学显微镜			
specimen 标本			
$\text{temporary preparation}$ 临时装片			
slide 载玻片			
stain 染色剂			
cover slip 盖玻片			
magnification 放大倍数			

 micrometre 微米			
 nanometre 纳米			
 chloroplast 叶绿体			
 photomicrograph 显微照片			
 electron micrograph 电子显微照片			
 eyepiece graticule 目镜测微尺			
 calibrate 校准			
 stage micrometer 载物台测微尺			
 resolution 分辨率			
 wavelength 波长			
 electron microscope 电子显微镜			
 electron 电子			
 scanning 扫描			
 transmission 透射			

Mathematics

Topic 1 · Pure Mathematics 1

 Pure Mathematics 纯数学			
 algebra 代数			
 calculus 微积分			
 quadratic 二次式			

×	coefficient	系数			
□	complete the square	配方			
△	vertex	顶点			
√	discriminant	判别式			
•	real roots	实根			
±	distinct	相异			

Further Mathematics

Topic 1 · Further Pure Mathematics 1

Σ	Further Pure Mathematics	进阶纯数学			
√	roots	根			
×	coefficients	系数			
↔	substitution	代换			
÷	rational function	有理函数			

Computer Science

Topic 1 · Information representation

田	number system	数制			
田	denary	十进制			
01	binary	二进制			
Ⓚ	byte	字节			
◎	bit	位			
⬡	hexadecimal	十六进制			
#	digit	数位			

 place value 位值			
 nibble 半字节			
 overflow 溢出			
 register 寄存器			
 two's complement 补码			
 most significant bit 最高有效位			
 sign bit 符号位			
 signed integer 有符号整数			
 unsigned 无符号			
 one's complement 反码			
 BCD 二进制十进数			
 7-segment display 七段显示器			
 memory address 内存地址			
 code point 码点			
 character set 字符集			
 encoding 编码			
 bitmap 位图			
 pixel 像素			

Economics

Topic 1 · Basic economic ideas and resource allocation

 scarcity 稀缺性			
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 resources 资源			
 finite 有限的			
 scarce 稀缺			
 goods 物品			
 services 服务			
 wants 欲望			
 economic problem 经济问题			
 opportunity cost 机会成本			
 alternative 替代选择			
 consumer 消费者			
 producer 生产者			
 firm 企业			
 government 政府			
 social science 社会科学			