
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			
 length 长度			
 current 电流			
 ampere 安培			
 temperature 温度			
 kelvin 开尔文			
 derived unit 导出单位			
 speed 速率			
 velocity 速度			
 force 力			

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			
 atomic number 原子序数			
 nucleon number 核子数			
 mass number 质量数			
 nucleon 核子			
± ion 离子			
 electric field 电场			
 deflection 偏转			
 atomic radius 原子半径			
 ionic radius 离子半径			

Biology

Topic 1 · Cell structure

 cell 细胞			
 microscope 显微镜			
 light microscope 光学显微镜			
 specimen 标本			
 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			
x^2 quadratic 二次式			
$\times$ coefficient 系数			
$\square$ complete the square 配方			
$\triangle$ vertex 顶点			
$\sqrt{}$ discriminant 判别式			
$\bullet$ real roots 实根			
$\pm$ distinct 相异			

Further Mathematics

Topic 1 · Further Pure Mathematics 1

Σ Further Pure Mathematics 进阶纯数学			
$\sqrt{}$ roots 根			
$\times$ coefficients 系数			
$\Rightarrow$ substitution 代换			
$\div$ rational function 有理函数			

Computer Science

Topics 1–4 · Information representation, Processor Fundamentals

$\square$ denary 十进制			
$\square$ binary 二进制			
$\square$ byte 字节			
$\odot$ bit 位			
$\square$ hexadecimal 十六进制			

# digit 数位			
▢ place value 位值			
⚠ 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			
# code point 码点			
T character set 字符集			
🗄 bitmap 位图			
□ pixel 像素			
🗄 file header 文件头			
🗄 image resolution 图像分辨率			
🖥 screen resolution 屏幕分辨率			
🎨 colour depth 颜色深度			
🗄 bit depth 位深度			

 vector graphic 矢量图形			
 drawing list 绘图列表			

Economics

Topic 1 · Basic economic ideas and resource allocation

 scarcity 稀缺性			
 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			