
Morning Reading 晨读

Grade 11 · AS · Week 12

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 student asks an image generator for a painting "in the style of a famous artist", and in seconds it appears. **Artificial intelligence** systems learn patterns from millions of examples; this is **machine learning**, and the deepest versions use **neural networks** loosely inspired by the brain. But who owns the picture? The artists whose work trained the model were never asked. **Copyright** law protects creative work, and **intellectual property** in general, yet it was written long before **deep learning** existed. Some programmers choose **open-source** licences that invite sharing; others sell **proprietary** software and guard the code.

In physics, two waves meeting on a string add together: this is **superposition**. Send waves down a rope tied at one end and the reflections combine into a **stationary wave**, with still points called **nodes** and wildly moving points called **antinodes**, the physics behind every guitar note.

Economists picture money moving in a **circular flow of income** between households and firms. **Injections** such as **investment** enlarge the flow; **leakages** such as **saving** shrink it.

Talk about it 说一说:

1. Should an AI image trained on an artist's work need the artist's permission?
2. Press a guitar string at its middle. Predict what happens to the note.

Physics

Topic 9 · Electricity

💧 electrolyte 电解质

🔌 semiconductor 半导体

→ conventional current 常规电流

📊 quantised 量子化

⊕ elementary charge 基本电荷

⊕ coulomb 库仑

⋮ number density 数密度

→ drift velocity 漂移速度

⚡ potential difference 电势差

⚡ volt 伏特

🔌 electromotive force 电动势

🛡 resistance 电阻

Ω ohm 欧姆

⚡ Ohm's law 欧姆定律

💡 filament lamp 灯丝灯泡

⚡ diode 二极管

⚡ resistivity 电阻率

🛡 insulator 绝缘体

📊 lattice vibration 晶格振动

↻ scatters 散射

Chemistry

Topics 10–12 · Group 2, Group 17, Nitrogen and sulfur

△ carbonate 碳酸盐

↗ thermal decomposition
热分解

⊗ nitrate 硝酸盐

☑ thermal stability 热稳定性

△ halogen 卤素

⇌ volatility 挥发性

⌋ hydrogen halide 卤化氢

⬡ halide ion 卤离子

△ ammonia 氨

☼ precipitate 沉淀

⌋ water purification 水净化

🦠 bacteria 细菌

= triple bond 三键

🪸 basicity 碱性

⊕ ammonium ion 铵离子

→ displacement 置换

⚙ internal combustion
engine 内燃机

⌋ catalytic converter 催化
转化器

Biology

Topics 6–7 · Nucleic acids and protein synthesis, Transport in plants

 base pair 碱基对			
 antiparallel 反平行			
 semi-conservative replication 半保留复制			
 polymerase 聚合酶			
 leading strand 前导链			
 lagging strand 后随链			
 ligase 连接酶			
 triplet 三联体			
 codon 密码子			
 transcription 转录			
 template strand 模板链			
 non-transcribed strand 非转录链			
 primary transcript 初级 转录本			
 exon 外显子			
 intron 内含子			
 translation 翻译			
 anticodon 反密码子			
 mutation 突变			
 substitution 替换			
 deletion 缺失			

+ insertion 插入

↑ xylem 木质部

💎 mineral ion 矿物离子

Mathematics

Topic 4 · Mechanics

↗ resultant 合力

⚖ equilibrium 平衡

↑ contact force 接触力

↑ normal reaction 法向反作用力

🔥 friction 摩擦力

⚠ limiting friction 最大静摩擦力

× coefficient of friction 摩擦系数

↔ Newton's third law 牛顿第三定律

📏 distance 距离

🏎 speed 速率

Further Mathematics

Topic 3 · Further Mechanics

📈 differential equation 微分方程

⚙ variable force 变力

↔ conservation of momentum 动量守恒

 **Newton's experimental law** 牛顿实验定律

 **coefficient of restitution** 恢复系数

Computer Science

Topics 8–9 · Databases, Algorithm Design and Problem-solving

 **attribute** 属性

 **secondary key** 次键

 **indexing** 索引

 **data management** 数据管理

 **data modelling** 数据建模

 **logical schema** 逻辑模式

 **data integrity** 数据完整性

 **data security** 数据安全

 **query processor** 查询处理器

 **developer interface** 开发者接口

 **Computational thinking** 计算思维

 **Abstraction** 抽象

 **Decomposition** 分解

 **algorithm** 算法

 **unambiguous** 无歧义

 **deterministic** 确定性

 identifier table 标识符表			
(x) variable 变量			
 data type 数据类型			
 Pseudocode 伪代码			
 sequence 顺序			
 selection 选择			
 iteration 迭代			
 loop 循环			
= assignment 赋值			
 concatenation 拼接			
 structured English 结构化英语			
 flowchart 流程图			

Economics

Topic 4 · The macroeconomy

 distribution 分配			
 informal economy 非正规经济			
 circular flow of income 收入循环流			
 household 家庭			
 leakages 漏出			
 saving 储蓄			
 taxation 税收			
 imports 进口			

 injections 注入			
 investment 投资			
 government spending 政府支出			
 exports 出口			
 closed economy 封闭经济			
 open economy 开放经济			
 aggregate demand 总需求			