

REVISION CARDS - THE MATERIALS ECONOMY (A LINEAR SYSTEM)

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On behalf of The World Association of Technology Teachers

W.A.T.T.



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THE MATERIALS ECONOMY (A LINEAR SYSTEM)

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THE MATERIALS ECONOMY (A LINEAR SYSTEM)

EXTRACTION → PRODUCTION → DISTRIBUTION
→ CONSUMPTION → DISPOSAL

It is a system that starts with the **extraction** of raw materials from the ground and their processing into usable materials. This is followed by the materials being used to manufacture products in factories (called **production**). The next two stages are the **distribution** of products to retail outlets or direct to the consumer (**consumption**). The last stage, at the end of the products useful life, is **disposal**. This elementary way of describing the Materials Economy, reveals a simple but important flaw with the system. It is unsustainable.

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The system affects everyone. Billions of people are employed in the Materials Economy (see below).

**REMOVING RAW MATERIALS FROM
THE GROUND**

PROCESSING MATERIALS

IN FACTORIES MAKING PRODUCTS

DISTRIBUTING THE PRODUCTS

CONSUMERS - WE BUY PRODUCTS

PRODUCTS DISPOSED / DUMPED

THE MATERIALS ECONOMY - CONSEQUENCES

Damage to the environment.
Pollution.
Climate change.
Working conditions - Health and Safety.

CAN THE SYSTEM BE CHANGED?

Use only recycled and sustainable materials (close loop system), when manufacturing.
Use environmentally friendly fuels such as biofuels, hydrogen cells, wind power, solar power - electricity to power our transport system and homes.
Consume fewer products and demand long lasting sustainable products, not ones that end up being disposed of / dumped.

1. What is the Materials Economy? 5 marks

2. How could the Materials Economy be changed to benefit people and the environment? 4 marks
