(a) Grass

(b) Blackbird

(c) Solar energy to chemical energy

(d) Heat

(e) Energy is lost at each trophic level

(a)

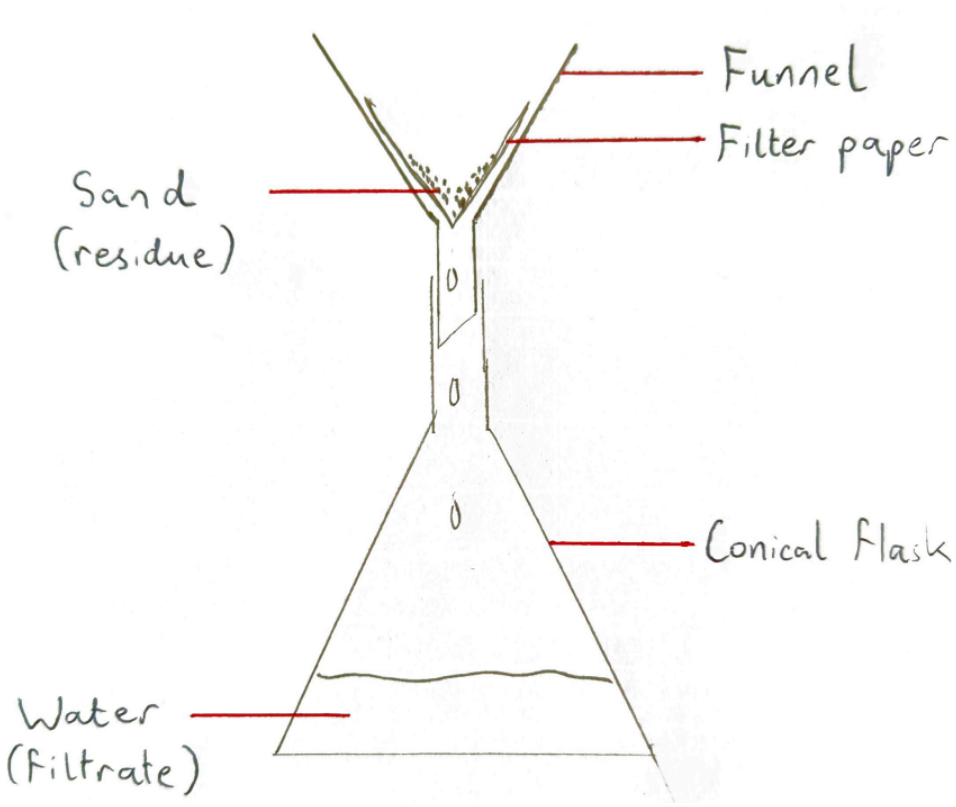
Source	Renewable	Non-renewable
Water	✓	
Coal		✓
Oil		✓
Wind	✓	
Sun	✓	

(b) Yes – even renewable energy sources such as wind farms often require land clearing and loss of habitats as a result.

(a) Sand – It sinks beneath the water

(b) It forms a layer on top of the water rather than mixing with it

(c)



Graph	Statement
A	The object moved with constant speed
B	The object did not move
C	The object accelerated
D	The object moved with constant speed

(a) Bulbs 2 and 3 would go out

(b) Bulbs 2 and 3 would shine with the same brightness as before

(c) 4 volts

(d) 12 volts

(a) 3:1

(b) T or t

(c) Tt

(d) T

(e) Sexual

Property	**Comet** or **asteroid** or **both**
Usually contains ice	Comet
Mostly located in a belt between Mars and Jupiter	Asteroid
Forms a tail when it passes through the inner solar system	Comet
Often found in orbit around the Sun	Both
Usually located in the outer solar system	Comet

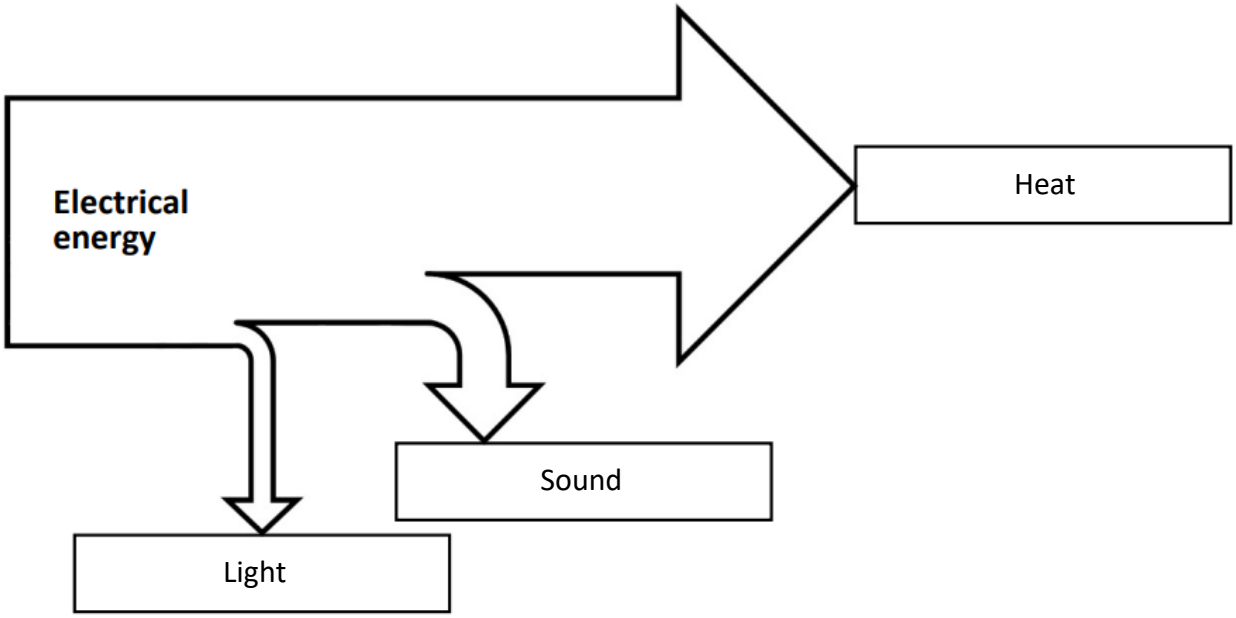
Letter	Part of reproductive system
A	Ovary
B	Fallopian tube
C	Uterus
D	Testis
E	Sperm duct

(a) The rate at which electrical energy is used in an electric circuit

(b) $2300 \div 230 = 10\ A$

(c) $230 \div 10 = 23\Omega$

(d)



(a) Europe and North America

(b) 22.8%

(c) Establish recognisable drop off points for broken devices

(d) Yes – it is published by a trustworthy organisation, the United Nations.

(a) $2.5 \div 10 = 0.25 m/s^2$

(b)

Arrow	1	2	3
Force	Tension	Friction	Weight

(c) C – this is the highest point on the track.

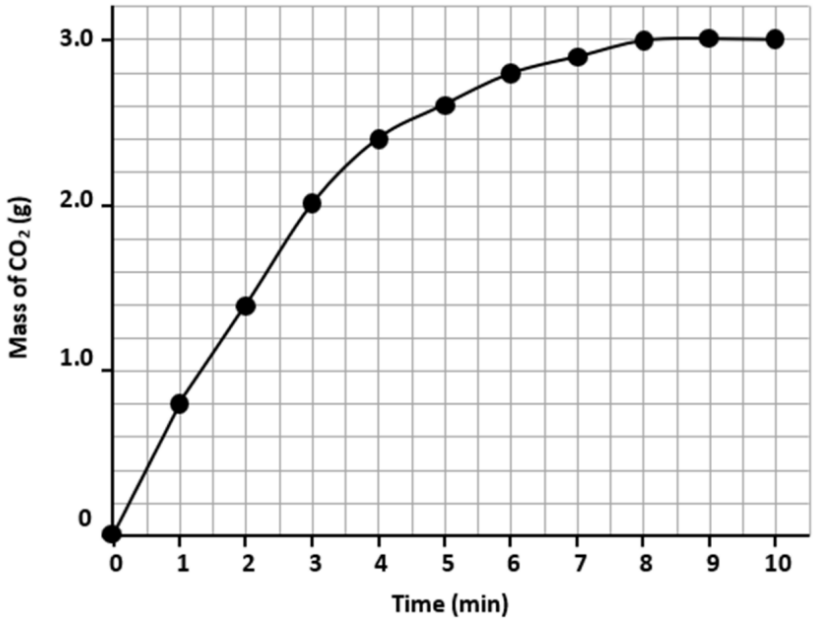
(d) The car will not make it past the hills if they increase in height.

(a) Student 3

(b) Student 1

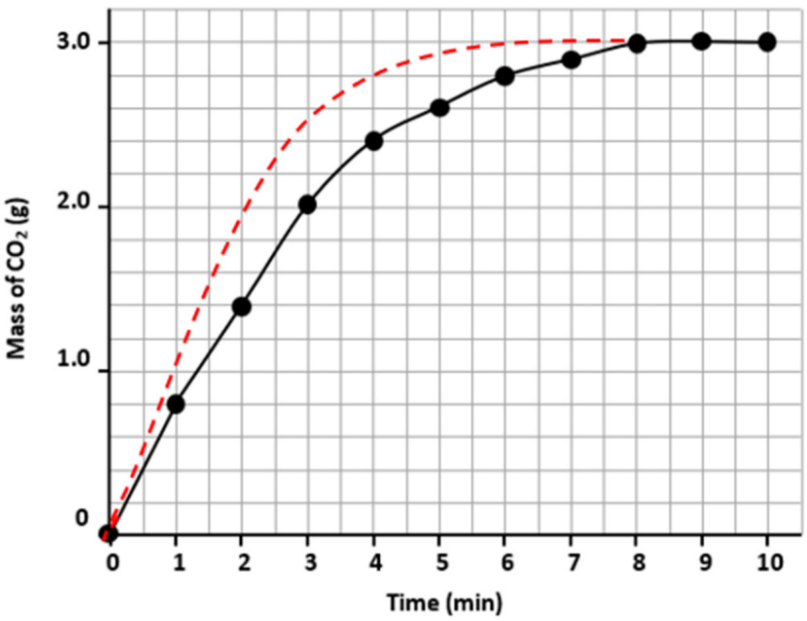
(c) Student 2

(d)



(e) 8 minutes

(f)



(a) Cress seeds grow faster in Earth soil than in lunar soil.

(b) The type of soil used

(c) The number of seeds

(d) 5 cress seeds are used so that the results are more reliable.

(e) Yes – the leaves are larger and more numerous, and the roots are longer.

(f) i) Interdependence

ii) Photosynthesis

iii) Light intensity and carbon dioxide concentration.

(a) Red

(b) 

(c) Phase 1

(d) In a solar eclipse, the moon blocks light to the Earth from the Sun i.e. it comes between the Earth and Sun

(e) 20th

(f) 24th – on this date the Moon was closest to the Earth.

(g) No – since the Moon's distance from the Earth changes, it does not follow a circular orbit. It instead follows an elliptical orbit.

(a) Using a key

(b) B – they collected more data.

(c) $\frac{2}{5} \times 100 = 40\%$

(d) Quantitative data – it is based on numbers

(e) $0.5 \times 0.5 = 0.25m^2$

(f) $3500 \div 0.25 = 14000$ quadrats in the field

2 plants in each quadrat: 14000 x 2 = 28000 ragwort plants.

(a) Gas

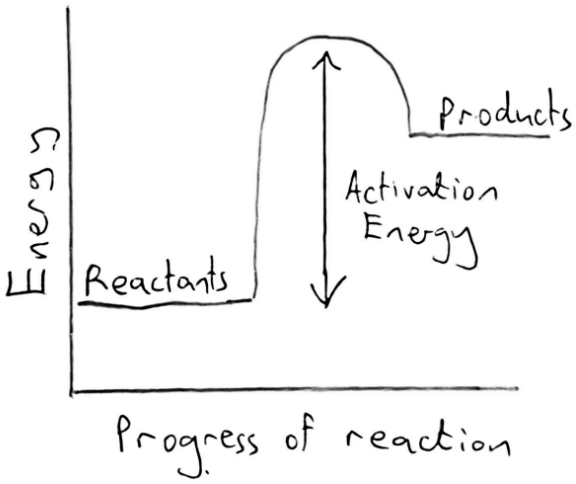
(b) Solid

(c) Liquid

(d) 50°C

(e) 6 minutes

(f)



(g) The energy of the particles increases and they move further apart.

(h) Cool it down

(a) i) We are made of carbon, we eat carbon, our economies, homes and means of transport are built on carbon.

ii) Rocks

(b) i)

Reservoir A	Reservoir B	Carbon transfer process
Atmosphere	Ocean water	Dissolving
Fossil fuel	Atmosphere	Combustion
Land plants	Soil	Decomposition
Limestone	Ocean or fresh water	Weathering

ii) Respiration

(c) i) Similar diameters, similar densities.

ii) No liquid water to dissolve carbon dioxide