

Video P14 found at www.science-cover.com

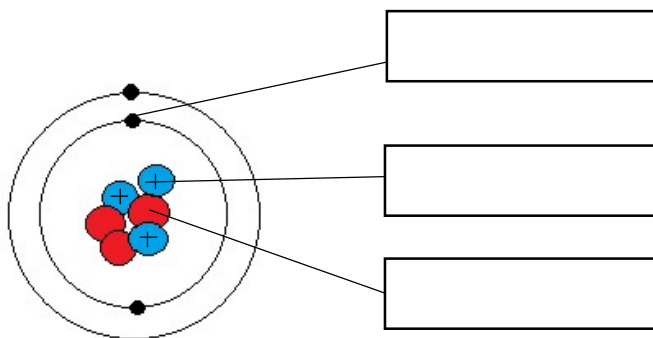
Do now task: Keyword-search

J T P V E T I X H C R C E E T
 I A D W O N N C I W K H C A H
 Y G A P P L O E W Z E A N U E
 A M P S Q U T L R A L R A W R
 E G A T L O V S A R S G T F M
 H X M O E V I L O R U E S F I
 T H M H B I D T Y Y T C I J S
 O B Z T G B S D T R B U S K T
 E N S R P I L E D B C V E P O
 P K Q A S E S W B K Y O R N R
 X M E E E L X F A M N G E U O
 C L R K Z F U K Y U L T Q X P
 W P B V J S G V B E D O I D P
 C V F Y E N X C Q K S Z O J I
 M H J D J A U P J Z T H O E X

amps
 current
 fuse
 neutral
 resistor
 volts
 charge
 diode
 LED
 ohm
 thermistor
 coulomb
 earth
 live
 resistance
 Voltage

Task 1: The atom

a) Label the particles of the atom



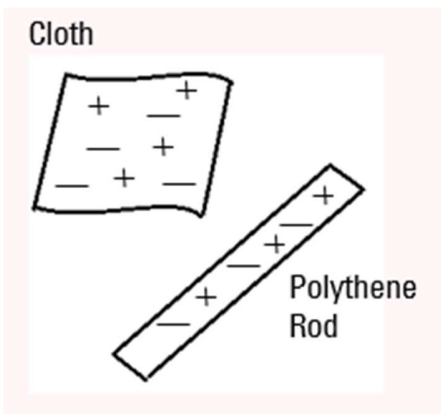
Particle	Charge
Proton	
Neutron	
Electron	

b) How is a negative ion created?

c) How is a positive ion created?

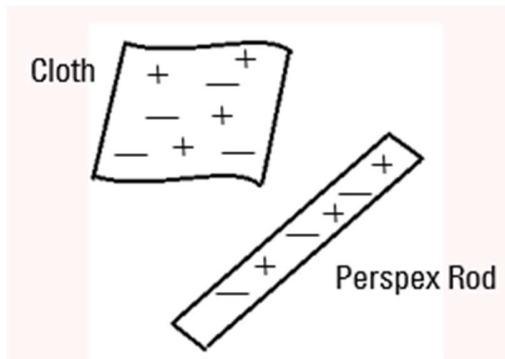
Task 2: Charging by friction

- 1/ i) For each diagram sketch what they will look like after being rubbed together.
 ii) State if the rod and cloth will become positive or negatively charged.



Charge on the rod:

 Charge on the cloth:



Charge on the rod:

 Charge on the cloth:

2/ When a plane lands on the ground a cable is used to connect the plane to the ground (Earthed), explain why this is necessary?

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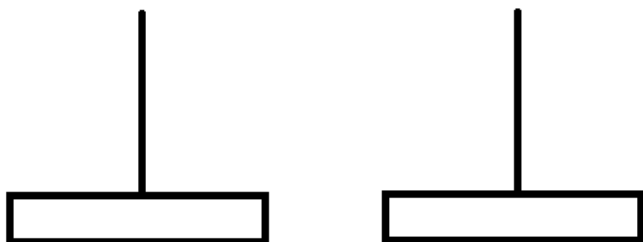
Task 3: Interactions between charges

a) Complete the table:

Charge on rod 1	Charge on rod 2	Attract or repel
Positive	Positive	
Positive	Negative	
Negative		Repel

Two polythene rods are rubbed with a cloth so that they gain a charge. Each is then suspended on a string and brought close together.

b) Use your answer to task 2 to label the charge gained by the rods:



charge: Charge:

c) What will happen to the rods?

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One of the rods is replaced with a Perspex rod which is also rubbed with a cloth. The rods are again suspended by the strings and brought together.

d) What will happen to the rods and why?

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Task 4: Drawing Charges

Draw field lines around the charged particle and add arrows to show the direction of the field.

a) Positive Charge



b) Negative Charge

