



Junior Cert Science Quiz 2015  
Tuesday 12<sup>th</sup> May





SILENT mobiles NOW please!



# Round 1



## Question 1

P

The density of lead is  $11.3 \text{ g/cm}^3$ . If a lead bar has a volume of  $50 \text{ cm}^3$ , what is the mass of the lead bar?



## Question 2

Name the  
element with  
the symbol **Ag**



## Question 3



P

A car accelerates from rest to a speed of 40 m/s in 5 seconds.

What is its acceleration?

## Question 4

If the eyepiece of a microscope magnifies by 10, and the objective lens magnifies by 4, then what is the total magnification of the microscope?

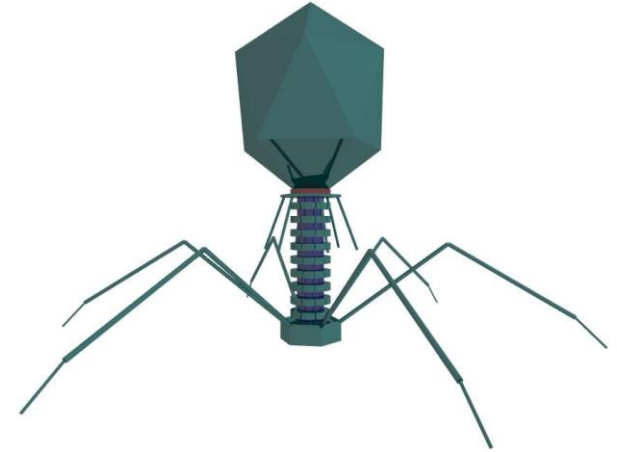


B



Question 5

Name the  
scientist who  
discovered  
vaccines

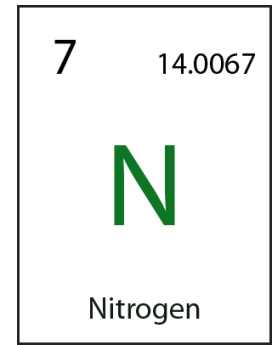


B





## Question 6



B

What percentage  
of Air is usually  
made up of  
Nitrogen ?



## Question 7



Ciara Judge, Emer Hickey and Sophie Healy-Thow from Kinsale Community School were named the overall winners of what competition in 2014 ?



## Question 8

B

Name the  
compound whose  
chemical formula  
is **FeS** ?



# End of the Round



# Round 2





## Question 1

P

A tennis ball is dropped to the ground. What downward force is acting on the ball as it is falling?



## Question 2

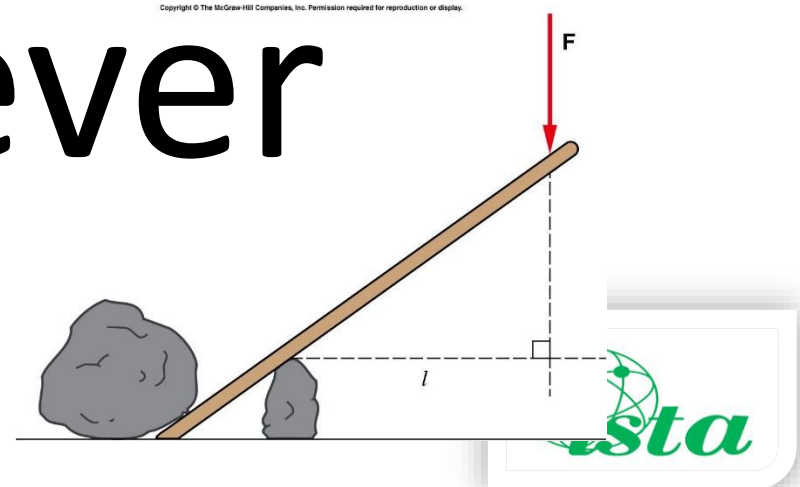
Name an **allotrope** of the element which is found in pencils and is commonly referred to as lead



## Question 3

P

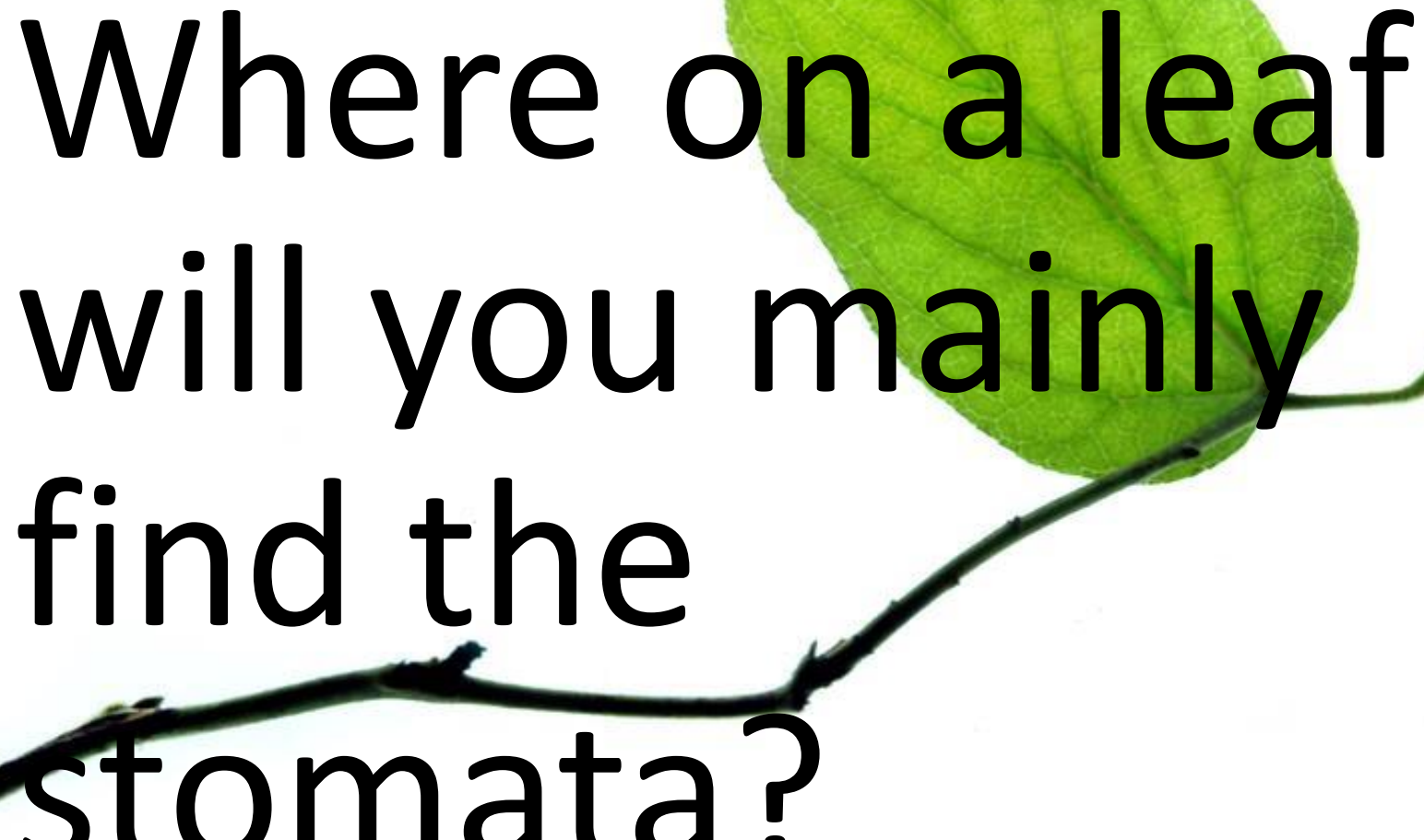
Name the fixed point about which a lever rotates ?





## Question 4

B

A photograph of a single green leaf attached to a dark stem. The leaf is bright green with visible veins and is positioned in the upper right quadrant of the image. The stem is dark and runs diagonally across the lower half of the image.

Where on a leaf  
will you mainly  
find the  
stomata?

## Question 5



B

Which stage of  
water treatment  
kills Bacteria in  
water ?

## Question 6

B

This insect can lift  
an object 30 times  
its own weight.

What insect is this?



## Question 7

B

The recent  
earthquake in Nepal  
was measured at 7.4  
but on what scale ?



# Question 8

In the periodic table of the elements which element is the only one that does not have a Neutron ?



# End of the Round



**TIME FOR**

**ANSWERS**



# Answers Round 1

1. 565g
2. Silver
3. 8 m/s/s or 8ms<sup>2</sup>
4. 40
5. Edward Jenner
6. 78
7. Google Science Fair
8. Iron Sulfide





# Round 3



Question 1

Name the instrument that measures atmospheric pressure?



## Question 2



Name the Irish scientist born in Lismore, Waterford, who defined the term Element in his book “The Sceptical Chemist”



## Question 3

P

Which method of heat transfer occurs in the heating of the Earth by the Sun ?



## Question 4

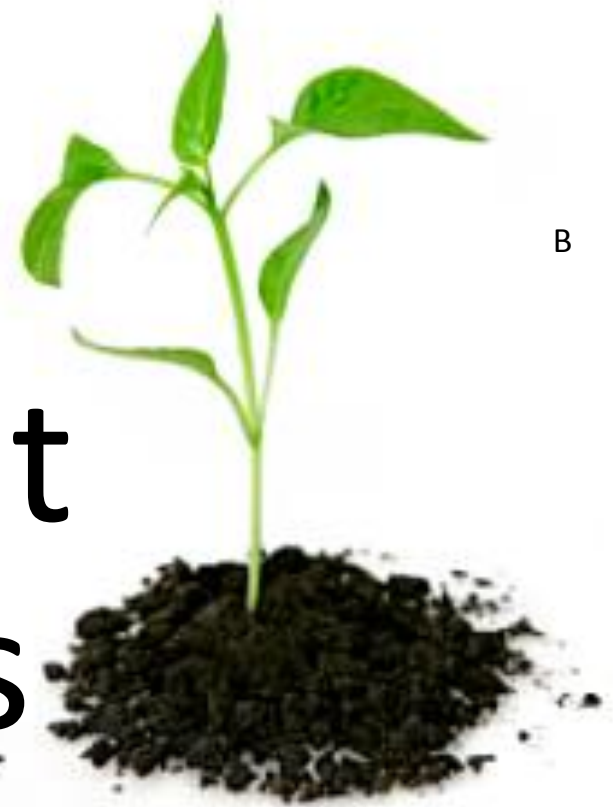
B

This nutrient acts as an energy store and also acts as an insulator. What is it?



## Question 5

In Ecology what word describes Green plants that make their own food ?



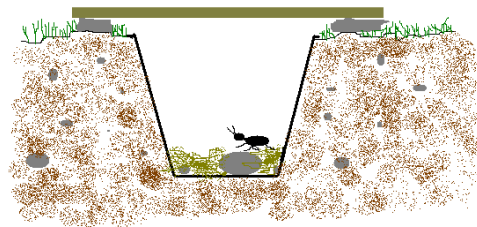
B



## Question 6

B

A jam jar in the ground with alcohol in it and covered with a stone is known as what type of trap ?





B

## Question 7

Ireland has had one Nobel Prize winner in science. His name is Ernest Walton but which discipline did he win it in , Physics, Chemistry or Biology ?





## Question 8

B

Iron, Nickel, Steel or  
Cobalt can be  
magnetised but which  
of these is an Alloy ?



# End of the Round



**TIME FOR**

**ANSWERS**



# Answers Round 2

1. Gravity
2. Graphite or Diamond
3. Fulcrum
4. On the underside
5. Chlorination
6. Ant
7. Richter
8. Hydrogen



# Round 4



# Question 1

P

Light travels at approximately 300,000,000 metres per second. The sun is 150 million Km from the Earth. How long does it take light to travel from the Sun to the Earth?



## Question 2

Name the inert gas,  
named after the Greek  
god of the sun,  
discovered by James  
Jenson whilst observing  
a solar eclipse



Question 3

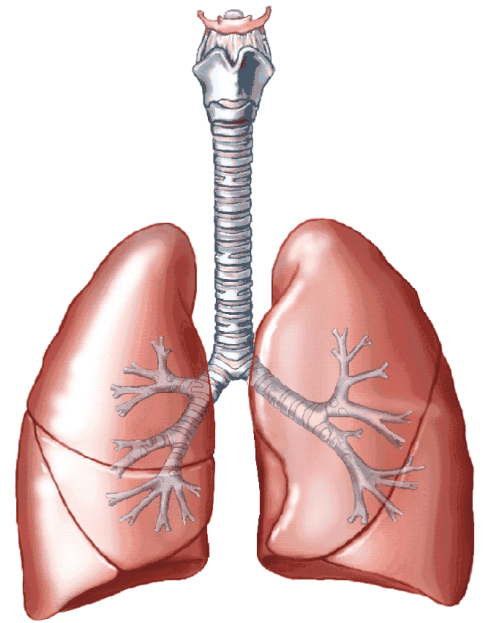


What is the  
unit of sound  
level called ?



## Question 4

Where in the respiratory system would you find rings of cartilage?



B

## Question 5

B

Materials from the soil and air can be converted into food by plants. This food is known by what name ?



## Question 6

B

At what temperature  
do human digestive  
enzymes work best ?

## Question 7

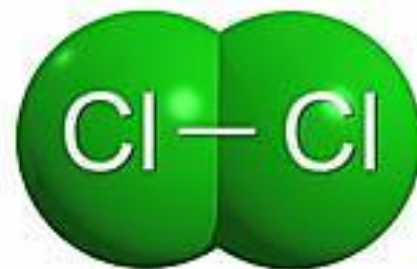


What is the Scientific Name of the Northern Lights seen in the night sky over Iceland ?

## Question 8

B

The bond formed in the Chlorine molecule ( $\text{Cl}_2$ ) is Covalent



TRUE or FALSE ?



# End of the Round



**TIME FOR**

**ANSWERS**



# Answers Round 3

1. Barometer
2. Robert Boyle
3. Radiation
4. Fat
5. Producers
6. Pit Fall
7. Physics
8. Steel

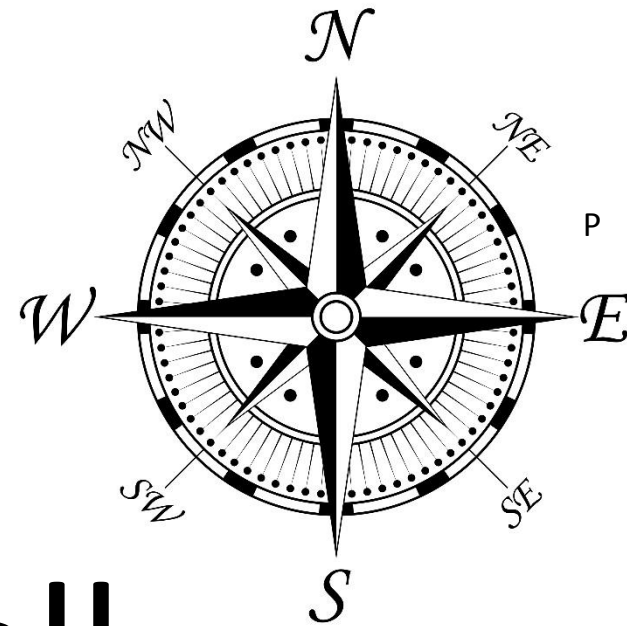




# Round 5



Question 1



What device,  
contains a small  
magnet and helps us  
find our way ?

Question 2



What is the  
chemical formula  
for Sulphuric Acid ?



## Question 3

P

An insulator prevents charge from flowing

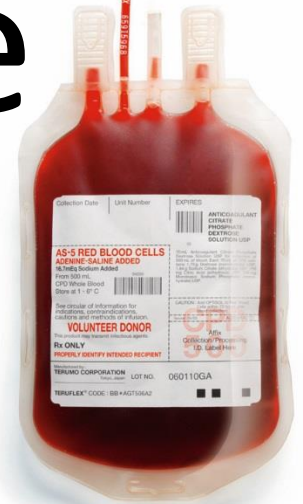
True or False



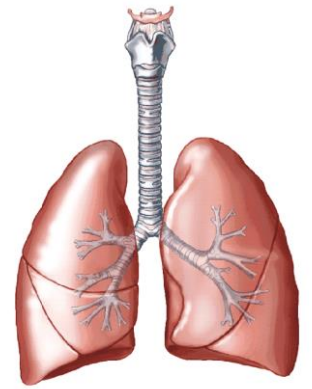
## Question 4

B

How much blood  
in litres does the  
average adult  
have?



## Question 5



What is the average breathing rate of a healthy adult at rest ?

## Question 6

B

What is the end  
product of  
protein  
digestion ?



## Question 7

B

New research by the World Health Organisation (WHO) predicts Ireland will be the No. 1 country in Europe for what food related disease by 2030 ?





## Question 8



B

Bromine is liquid at room temperature.

Name another element that is liquid at room temperature

# End of the Round



**TIME FOR**

**ANSWERS**



# Answers Round 4

1. 8 minutes and 20 seconds
2. Helium (He)
3. The Decibel
4. Trachea
5. Glucose
6. 37 degrees Centigrade
7. Aurora Boreallis
8. TRUE



# Round 6



Question 1



Name the female  
polish scientist who  
discovered Radium  
and Polonium



## Question 2

How many electrons  
in a chloride ion



## Question 3

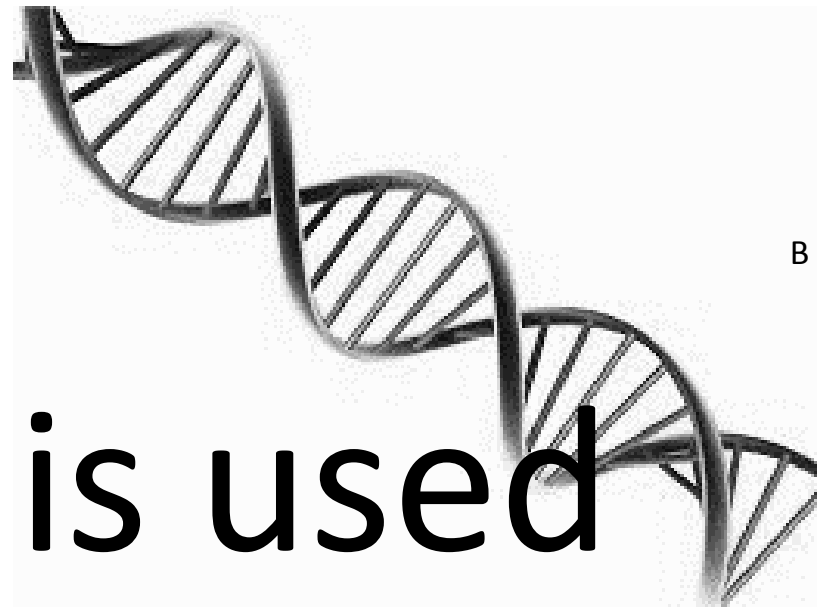
P

Name the Scottish  
inventor who  
invented the  
Steam Engine





## Question 4



What term is used to describe the shape of a DNA molecule ?

## Question 5

B

Apart from glucose,  
what other  
substance is  
produced during  
photosynthesis?



Question 6

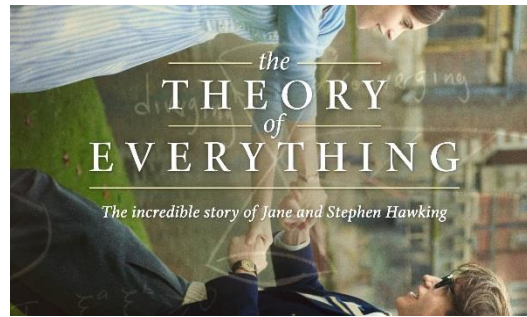


B

What part of the  
eye changes the  
shape of the  
Lens ?



## Question 7



B

Which famous Physicist is portrayed in this years Oscar winning movie “The Theory of Everything” ?



## Question 8



When anhydrous Copper Sulphate is added to water what will happen to the temperature of the water ?

# End of the Round



**TIME FOR**

**ANSWERS**



# Answers Round 5

1. Compass
2.  $\text{H}_2\text{SO}_4$
3. TRUE
4. 5 litres
5. 12 to 15 breaths per minute
6. Amino Acids
7. Obesity
8. Mercury





# Answers Round 6

1. Marie Curie
2. **18**
3. Thomas Savery
4. Double Helix
5. CO<sub>2</sub>
6. Cilary Muscle
7. Stephen Hawking
8. It Rises







**Míle Buíochas!**



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