

STEMM Student Challenge

QUESTIONS



ROUND 1



Junior Secondary Section



Years 9-10



Q1

What metal was used in early flash photography because it burns with a brilliant light?



Q2

The coloured part of the human eye that controls how much light passes through the pupil is called the?



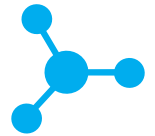
Q3

The shape of DNA is known as?



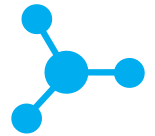
Q4

What gas gives scuba divers the bends when it is rapidly released from the blood and tissues?



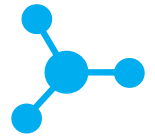
Q5

What's the next year that will read the same upside down as right side up?



Q6

What is the hottest planet in our solar system?



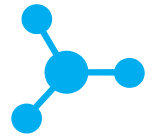
Q7

At room temperature, what is the only metal that is in liquid form?



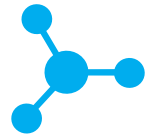
Q8

Which famous scientist introduced the idea of natural selection?



Q9

What animals produce cashmere?



Q10

IBM is a well known computer and information technology company, what does IBM stand for?



ANSWERS



ROUND 1



Junior Secondary Section

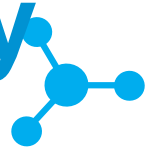


Years 9-10



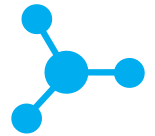
Q1: What metal was used in early flash photography?

Answer: Magnesium



Q2: The coloured part of the human eye?

Answer: The iris



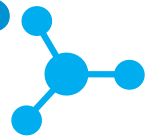
Q3: The shape of DNA is known as?



Answer: A double helix



**Q4: What gas gives scuba divers
the bends?**



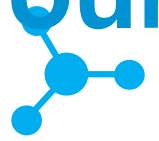
Answer: Nitrogen

Q5: What's the next year that will read the same upside down as right side up?

Answer: 6009



Q6: What is the hottest planet in our solar system?



Answer: Venus



Q7: At room temperature, what is the only metal that is in liquid form?

Answer: Mercury



Q8: Which famous scientist introduced the idea of natural selection?

Answer: Charles Darwin



Q9: What animals produce cashmere?

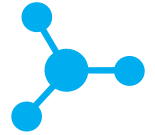
Answer: Goats



Q10: What does IBM stand for?



**Answer: International Business
Machines**



QUESTIONS



ROUND 2



Junior Secondary Section

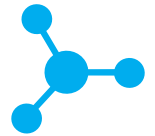


Years 9-10



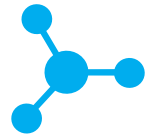
Q1

What planet would you visit to see Cebrenia, Arcadia and Amazonis?



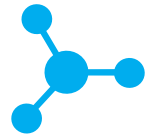
Q2

What's the change in state from gas to liquid called?



Q3

A train 1km long is travelling at 120km/hr. How long will it take to cross a bridge 1km long?



Q4

What is the closest planet to the sun?



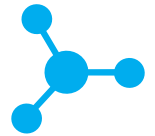
Q5

Name the 3 types or classes of rock?



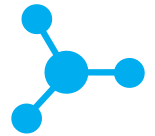
Q6

What vitamin is produced in the skin by exposure to the sun?



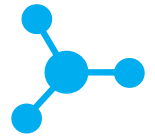
Q7

What decelerates faster, a badminton shuttlecock or a baseball?



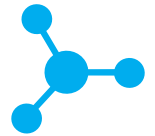
Q8

How many triangles are needed to form a pyramid?



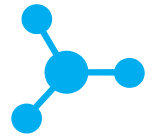
Q9

What is bigger, a chromosome or a gene?



Q10

What's the main food of the huge whale shark, the world's largest fish?



ANSWERS



ROUND 2



Junior Secondary Section



Years 9-10

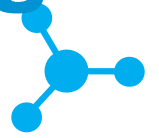


Q1: What planet would you visit to see Cebrenia, Arcadia and Amazonis?



Answer: Mars

What's the change in state from gas to liquid called?

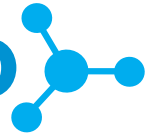


Answer: Condensation



A train 1km long is travelling at 120km/hr. How long will it take to cross a bridge 1km long?

Answer: 1 min



Q4: What is the closest planet to the sun?



Answer: Mercury



Q5: Name the 3 types of rock?



**Answer: Sedimentary,
metamorphic and igneous**



Q6: What vitamin is produced in the skin by exposure to the sun?

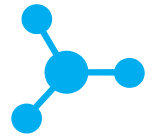


Answer: Vitamin D



Q7: What decelerates faster, a badminton shuttlecock or a baseball?

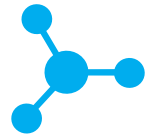
Answer: Shuttlecock



Q8: How many triangles are needed to form a pyramid?



Answer: Four



Q9: What is bigger, a chromosome or a gene?



Answer: A chromosome



Q10: What's the major food of the huge whale shark, the world's largest fish?



Answer: Plankton



PRACTICAL TASK



ROUND 3



Junior Secondary Section

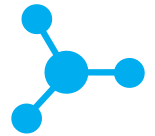


Years 9-10



ESTIMATION TASKS

1. Length: Cut a piece of crepe to a length of 120cm
2. Volume: Pour 120ml into the container
3. Mass: Place 120g of sugar into the container
4. Time: Time 1min 20 sec on the stopwatch
5. Temperature: Estimate water temperature to 40 degrees Celsius and place in the cup



ESTIMATION SCORING

1. **Length:** 115-125cm -2 pts, 110-130cm- 1pt
2. **Volume:** 115-125ml- 2pts, 110-130ml- 1pt
3. **Mass:** 115-125g -2pts, 110-130g -1pt
4. **Time:** 1min 17-23sec -2pts, 1min 14-26sec- 1pt
5. **Temperature:** 35-45 C -2pts, 32-48 C -1pt



QUESTIONS



ROUND 4



Junior Secondary Section

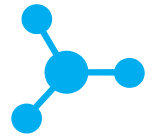


Years 9-10



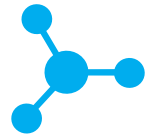
Q1

How many canines are there in a normal set of human teeth?



Q2

What famous scientist was awarded the 1921 Nobel Prize in Physics for his work on theoretical physics?



Q3

Is the wavelength of infrared light too long or too short to be seen by humans?



Q4

What is the name of the long pipe that shifts food from the back of your throat down to your stomach?



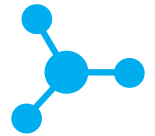
Q5

In the Winter Olympic sport of curling, what type of rock are the curling stones made from?



Q6

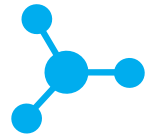
List two halogen elements from the periodic table?



Q7

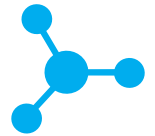
What name is given to the study of materials at very low temperatures?

- a) fridgogenics, b) iceogenics
- c) cryogenics



Q8

If you write all the numbers from 300 to 400 how many times will you write the digit 3?



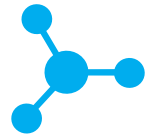
Q9

What form of childbirth was named after a Roman leader?



Q10

What term for a collapsed star was coined by Professor J. A. Wheeler in 1967?



ANSWERS



ROUND 4



Junior Secondary Section



Years 9-10



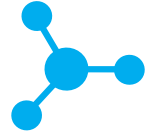
Q1: How many canines are there in a normal set of human teeth?



Answer: Four



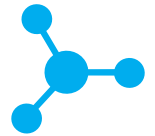
Q2: What famous scientist was awarded the 1921 Nobel Prize in Physics?



Answer: Albert Einstein



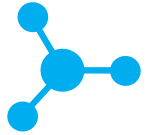
Q3: Is the wavelength of infrared light too long or too short to be seen by humans?



Answer: Too long

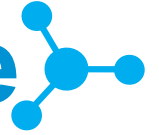
Q4: What is the name of the long pipe that shifts food from the back of your throat down to your stomach?

Answer: The oesophagus



Q5: In the Winter Olympic sport of curling, what type of rock are the curling stones made from?

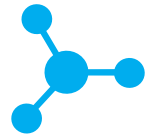
Answer: Granite



Q6: List two halogen elements from the periodic table?



Answer: fluorine, chlorine, bromine, iodine, astatine, ununseptium

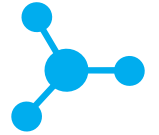


Q7: What name is given to the study of materials at very low temperatures?



Answer: c) cryogenics

Q8: If you write all the numbers from 300 to 400 how many times will you write the digit 3?

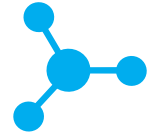


Answer: 120

Q9: What form of childbirth was named after a Roman leader?



Answer: Caesarean section



What term for a collapsed star was coined by Professor J.A.Wheeler in 1967?

Answer: Black hole



QUESTIONS



ROUND 5



Junior Secondary Section



Years 9-10



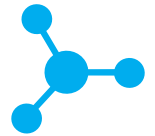
Q1

What is the 7th element on the periodic table of elements?



Q2

In terms of computing, what does ROM stand for?



Q3

What disease did Edward Jenner develop a vaccine for in 1798?



Q4

What is the 10th item in this sequence?

AZ, BY, CX



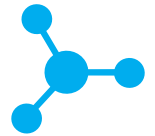
Q5

What is the odd pair: a) tiger-mammal, b) sea snake-reptile, c) salamander-insect, d) oriole-bird?



Q6

What gas filled the ill-fated zeppelin the Hindenburg?



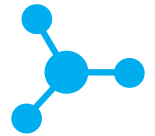
Q7

A change in the DNA in an organism that results in a new trait is known as a?



Q8

Do stalactites rise from the floor or hang from the ceiling of limestone caves?



Q9

True or false? Bases have a pH level below 7?



Q10

Over a long period of time while under extreme heat and pressure, graphite turns into which precious mineral?



ANSWERS



ROUND 5



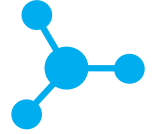
Junior Secondary Section



Years 9-10



Q1: What is the 7th element on the periodic table of elements?



Answer: Nitrogen



Q2: In terms of computing, what does ROM stand for?



Answer: Read Only Memory



Q3: What disease did Edward Jenner develop a vaccine for in 1798?



Answer: Smallpox



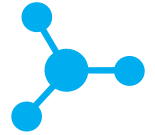
**Q4: What is the 10th item in this sequence?
AZ, BY, CX**

Answer: JQ



Q5: What is the odd pair?

Answer: c) salamander-insect



Q6: What gas filled the ill-fated zeppelin the Hindenburg?



Answer: Hydrogen

Q7: A change in the DNA in an organism that results in a new trait is known as a?

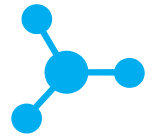
Answer: Mutation



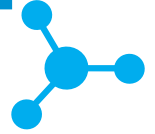
Q8: Do stalactites rise from the floor or hang from the ceiling of limestone caves?



Answer: Hang from the ceiling



Q9: True or false? Bases have a pH level below 7?



Answer: False



Q10: Over a long period of time, while under extreme heat and pressure, graphite turns into which precious mineral?

Answer: Diamond



Well done to all teams participating in STEMM Student Challenge 2015



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