



Science Table Quiz 2010



Chemistry – Nobel Laureates

RS•C
ROYAL SOCIETY OF CHEMISTRY



Identify these Nobel Prize winners from date, first letter of surname, nationality & topic:

- | | | | | |
|-----|------|-----|-------------|-----------------------------------|
| 1. | 1901 | vH | Holland | Osmotic pressure |
| 2. | 1903 | A | Sweden | Dissociation |
| 3. | 1908 | R | New Zealand | Radioactive substances |
| 4. | 1912 | G | France | The G... reagent |
| 5. | 1918 | H | Germany | Synthesis of ammonia |
| 6. | 1932 | L | USA | Surface chemistry |
| 7. | 1950 | D&A | Germany | Diene synthesis |
| 8. | 1963 | N | Italy | Making polyethylene |
| 9. | 1964 | H | UK | X-rays/structures of biomolecules |
| 10. | 1996 | K | UK | Fullerenes |



Zoology – Fish



1



2



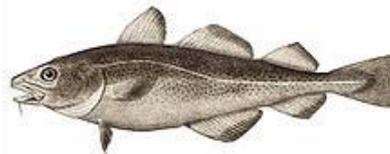
3



4



5



6



7

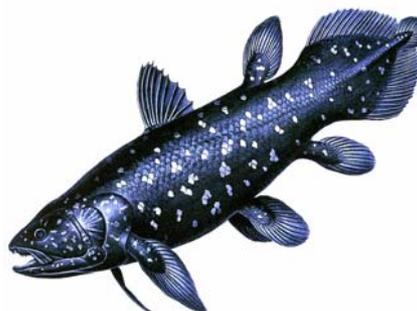


8



9

10



1-9 from: basking shark, cod, great white shark, herring, mackerel, plaice, sole, turbot, whale shark. 10: no clue

Earth Sciences



1. What is the most common element by weight in the Earth's crust?
2. What is the region of the North Atlantic called that is surrounded by ocean currents, and where a great deal of seaweed floats at the surface?
3. What do the letters IPCC stand for in the UN body studying global warming.?
4. The name of which type of cloud means 'heap'?
5. What are the regions of the Earth's crust called where one tectonic plate slides under another one?
6. What are the rings of charged particles around the Earth at several Earth radii called?
7. What chemical substance is the main ingredient of limestone, chalk and marble?
8. What is the name given to the single supercontinent that existed 250 million years ago?
9. What is 'Lignite' often called?
10. What are the over-exploited fisheries off Newfoundland called?



Mathematics - geometry



1. Which Platonic solid (regular polyhedron) is shaped like a trigonal pyramid?
2. And which one has six vertices?
3. And which one has eight vertices?
4. How many faces are there on a dodecahedron?
5. And how many on an icosahedron?
6. Which British mathematician discovered an aperiodic way to tile a surface, largely with pentagons, in 1974.
7. You can also tile a plane periodically with octagons plus which other regular polygon?
8. If the side of an equilateral triangle is 1 unit long, what is the height of the triangle in the same units?
9. What is the internal angle of a regular hexagon in degrees?
10. How many sides were there around the edge of an old 50p coin?



Medicine: Cancer & cancer treatment



1. Which important precious metal-containing anti-cancer drug was approved by the FDA in 1978?
2. Which potent carcinogens are produced by the *Aspergillus* fungus?
3. Who developed a now widely used mutagenicity assay test in the 1970's?
4. The name of which cancer means literally 'white blood'?
5. What are the poly 'somethings' found in red wine, walnuts etc that may help prevent cancer?
6. What is a tumour of the cells that give skin its colour called?
7. TCDD was a carcinogenic contaminant in Agent Orange and was released at Seveso in 1976. What does the last 'D' stand for?
8. Paclitaxel is sold by Bristol Meyers Squibb under what name?
9. Which radioactive element killed Alexander Litvinenko?
10. The word 'cancer' derives from the Latin for which type of animal?

Physics – big & small



1. What is the anti-particle of the electron?
2. How are 'quasi-stellar radio sources' better known as?
3. Hadrons (eg protons & neutrons) are themselves formed from 3 smaller particles known as what?
4. One of the world's most important observatories is located at the summit of which mountain in Hawaii?
5. Some radioactive elements emit *helium nuclei*, otherwise known as what?
6. The speed of light is approx. 3×10^n m/s. What is n?
7. Which elementary particle (a lepton) is electrically neutral and has a tiny (but non-zero) mass?
8. To the nearest Kelvin what is the cosmic background temperature?
9. What is believed to have happened 13.7 billion years ago?
10. The latest high-energy colliders are trying to find whose boson?



History of Science



1. Imhotep was an architect and physician in which ancient kingdom?
2. The binomial Latin way of labelling species was developed by which Swedish zoologist?
3. Which French chemist (and tax collector) was guillotined during the French Revolution?
4. The sixteenth century Swiss physician and botanist styled himself what, to imply that he was superior to an ancient Roman counterpart?
5. What was Dava Sobel's prizewinning 1997 book about John Harrison and the marine chronometer called?
6. Who famously devised a theorem about right angled triangles?
7. Which Greek mathematician working in Alexandria ca 300 BC is known as 'The Father of Geometry'?
8. Who in 1796 showed that vaccination with cowpox gave immunity to smallpox?
9. Which French chemist & biologist showed that heat-treating milk could extend its shelf-life?
10. Which 19th century French military engineer laid the foundations for the 2nd Law of Thermodynamics?

Science & Technology in 2010



1. Eyjafjallajökull caused international havoc earlier this year. What is it?
2. February: An 8.8 magnitude earthquake in which country caused a tsunami?
3. What is the oil rig called that leaked huge volumes of oil into the Gulf of Mexico?
4. May: The genome of which species suggests it may have interbred with modern humans?
5. July: Which flu pandemic was declared officially over?
6. The 2010 UN Climate Change Conference will be held in which country?
7. The International Space Station has recently taken a record for human occupancy from which Soviet/Russian satellite?
8. Robert Edwards won the Nobel Prize for Medicine for the development of what?
9. Which Polish-born mathematician ('the father of fractal geometry') died last month?
10. March: Where was a new record for high energy proton collisions set?



Botany - grasses



1



2



3



4



5



6



7



8



9



10

Options: Bamboo, Barley, Common reed, Couch grass, Foxtail, Millet, Oats, Pampas grass, Rice, Rye, Sugar cane, Wheat

Science Fiction – 'Star' Questions (Wars, Trek, Gate etc)



1. Who was the Klingon serving on the *Enterprise* in *ST: The Next Generation*?
2. What was the name of Harrison Ford's character in *Star Wars*?
3. In the original *Stargate* film where was the Star Gate discovered?
4. In 2009 Chris Pine played which *Star Trek* character?
5. In *SW* Episodes 1-3 Padme Amidala is queen of which planet?
6. Which *Stargate* spin-off series premiered in 2009?
7. In 2001 *A Space Odyssey* David Bowman was reborn as who?
8. What was the 1974 black comedy film about a ship whose mission is to destroy unstable planets?
9. The second *ST* film was subtitled 'The Wrath of..who?'
10. Who is the smaller of the two friendly robots in all six *Star Wars* episodes?