

Science Table Quiz 2013

Science in 2013

1. Over which Russian city did a meteor explode in February?
2. Name one of this year's Science Nobel laureates (physics, chemistry, medicine/physiology).
3. Now name another one.
4. What is C/2012 S1?
5. The remains of which English monarch were identified from DNA in Feb?
6. In July microbes were discovered in water from which subglacial Antarctic lake?
7. At the latest count, how many moons does Pluto have?
8. What man-made object left the solar system on 12th September?
9. The removal of toxins from the brain was suggested as a purpose of which activity by the University of Rochester last month?
10. On 20th November the European space Agency will launch a space telescope. What will it be called?

Zoology: Irish Native fauna



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All require two word answers

Earth Sciences

- 1. What line runs around the Earth at 23° 26' 15" south of the Equator?**
- 2. What is the circumference of the Earth at the Equator to the nearest 1000 miles?**
- 3. Which oceanic current runs north from the Cape of Good Hope past the coast of Namibia?**
- 4. What is a Pacific cyclone with wind speeds in excess of 64 knots called?**
- 5. What was the magnitude of the 2011 Fukushima earthquake (to the nearest whole number)?**
- 6. What is the concentration of ozone in the ozone layer: a) about 95%, b) about 1%, c) less than 10 parts per million?**
- 7. Which British physicist's name is given to a unit of ozone concentration?**
- 8. What is the concentration of carbon dioxide in the atmosphere to the nearest 50 parts per million?**
- 9. What is the approximate average annual rainfall in Ireland: a) 1 metre, b) 2 metres, c) 3 metres?**
- 10. Is granite a sedimentary, igneous or metamorphic rock?**

Mathematics (no calculators!)

1. If a triangle has sides 4, 5 and 6.403, what is its largest angle?
2. What is $d(\sin x)/dx$?
3. What is the value of $9!$ (9 factorial)
4. What type of progression is the series $a + ar + ar^2 + ar^3 + ar^4 \dots$?
5. Who gave his name to the sequence 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377?
6. What is the internal angle of a regular octagon?
7. Four of the Platonic Solids are the tetrahedron, the octahedron, the dodecahedron and the icosahedron. What is the fifth?
8. The four types of conic sections are the circle, the ellipse, the parabola and the
9. Who devised the concept of “the set of all sets that do not contain themselves”?
10. Who invented calculus independently of Newton at around the same time, but didn't publish it until later?

Medicine & Physiology

- 1. What is the largest bone in the human body?**
- 2. And the smallest?**
- 3. Name the coumarin-based anti-coagulant discovered in the 1920's.**
- 4. And the beta-lactam antibiotic also discovered in the 1920's.**
- 5. According to the World Health Organisation, six infectious diseases cause more than half of all premature deaths. Five of them are pneumonia, HIV/AIDS, malaria, diarrhoea and tuberculosis. What is the 6th?**
- 6. What is the transparent part of the eye that covers the iris & pupil?**
- 7. What disease, an infection of the lymphatic system, is caused by Yersinia Pestis?**
- 8. How many muscles are there in a human finger?**
- 9. Rickets is caused by a deficiency of which vitamin?**
- 10. In obesity studies , what does BMI stand for?**

Physics

1. What constant is approximately 6.7×10^{-11} Newtons x metres squared per kilogram squared?
2. What particle was recently shown to have a mass of about 125 GeV/c²?
3. What unit of distance is about 3.26 light years?
4. Which has the longest wavelength: visible light, infra-red or microwaves?
5. What is the cosmic background radiation temperature to the nearest Kelvin?
6. In what city was Lord Kelvin born?
7. According to Hooke's Law, the force needed to extend a spring by a certain distance is directly proportional to what?
8. To raise a note by an octave, by what factor do you need to increase the frequency?
9. What property of a substance is given by the speed of light in vacuum divided by the speed of light in a substance?
10. In temperature studies what do the letters CTE stand for?

Chemistry

1. What is the atomic number of potassium?
2. Which politician got a degree in chemistry from Oxford in 1947?
3. And which Russian musician (composer of “*Prince Igor*”) was a professional chemist and had a reaction named after him?
4. What is the formula of potassium permanganate?
5. And what is the oxidation state of manganese in potassium permanganate?
6. What is the systematic name for acetic acid?
7. What is the most common isotope of Uranium?
8. In 1938 which now common word did DuPont decline to register as a trademark for an important class of polymers?
9. What is the main use of Alizarin?
10. Alloys of which lanthanide make the strongest permanent magnets known?

Miscellaneous Acronyms

What do the following stand for:

- 1. The pesticide DDT?**
- 2. The plastic PET?**
- 3. In medical imaging, a CAT scan?**
- 4. In archaeology, dates BCE?**
- 5. In microscopy, the company JEOL?**
- 6. In water quality, the BOD?**
- 7. On the internet, the HTTP?**
- 8. LASER?**
- 9. Connected with global warming, the IPCC?**
- 10. In science fiction on TV recently, the agency SHIELD?**

Botany - Trees



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Alder, Black Poplar, Douglas Fir, Holly, Larch, London Plane, May Tree, Rowan, Scots Pine, Sycamore

Science Fiction

1. Which comic book company launched Superman, Batman and Green Lantern?
2. In Dr Who, what does the acronym TARDIS stand for?
3. Who will play Dr Who from this Christmas onwards?
4. Who directed the films “*Iron Man*” and “*Iron Man 2*” in 2008 & 2010?
5. Who wrote the novel “*Jurassic Park*” on which the film was based?
6. Who played James Kirk in the 2009 “*Star Trek*” film and its sequel?
7. What was the 1996-2000 comedy SF series starring John Lithgow and Kristen Johnston?
8. In “*Futurama*”, what sort of creature does Dr Zoidberg resemble?
9. Which Scottish SF writer (author of “*Consider Phlebas*” died this year?
10. Which Orson Scott Card novel appears as a film this month?