# The grand end of term quiz: answers

***Education in Chemistry***January 2021  
[rsc.li/3pRcEmd](https://rsc.li/3pRcEmd)

## Round 1: science fiction

### None of these chemicals are real, but who cares?

**Q1.** What colourful device would you power with a kyber crystal? *A lightsaber*

**Q2.** Captain America’s shield is made from which element? *Vibranium*

**Q3.** What can you make with lacewing flies, leeches, bicorn horn, knotweed, fluxgrass, boomslang skin and a strand of hair? *Polyjuice potion from Harry Potter*

**Q4.** What famous starship is powered by dilithium? *USS Enterprise and many of the spaceships from Star Trek*

**Q5.** Which upcoming movie starring Timothée Chalamet is about a battle over the spice Melange? *Dune*

## Round 2: what’s happening?

### Test your knowledge with these GCSE questions.

**Q1.** A hydrogen and a chlorine atom bond together, each contributing one electron to a shared pair. What type of bonding has occurred? *Covalent*

**Q2.** One atom of one isotope of calcium has an atomic number of 20 and a mass number of 42. How many protons does it have? 20

**Q3.** Chlorine has a boiling point of −35°C and a melting point of −101.5°C. What state would it be in if I cooled it to −20°C? *Gas*

**Q4.** How many times smaller is 1nm relative to 1cm? *10 million*

**Q5.** Why do metals conduct electricity? *They have delocalised electrons.*

*(In case you have covered different areas of the syllabus so far…)*

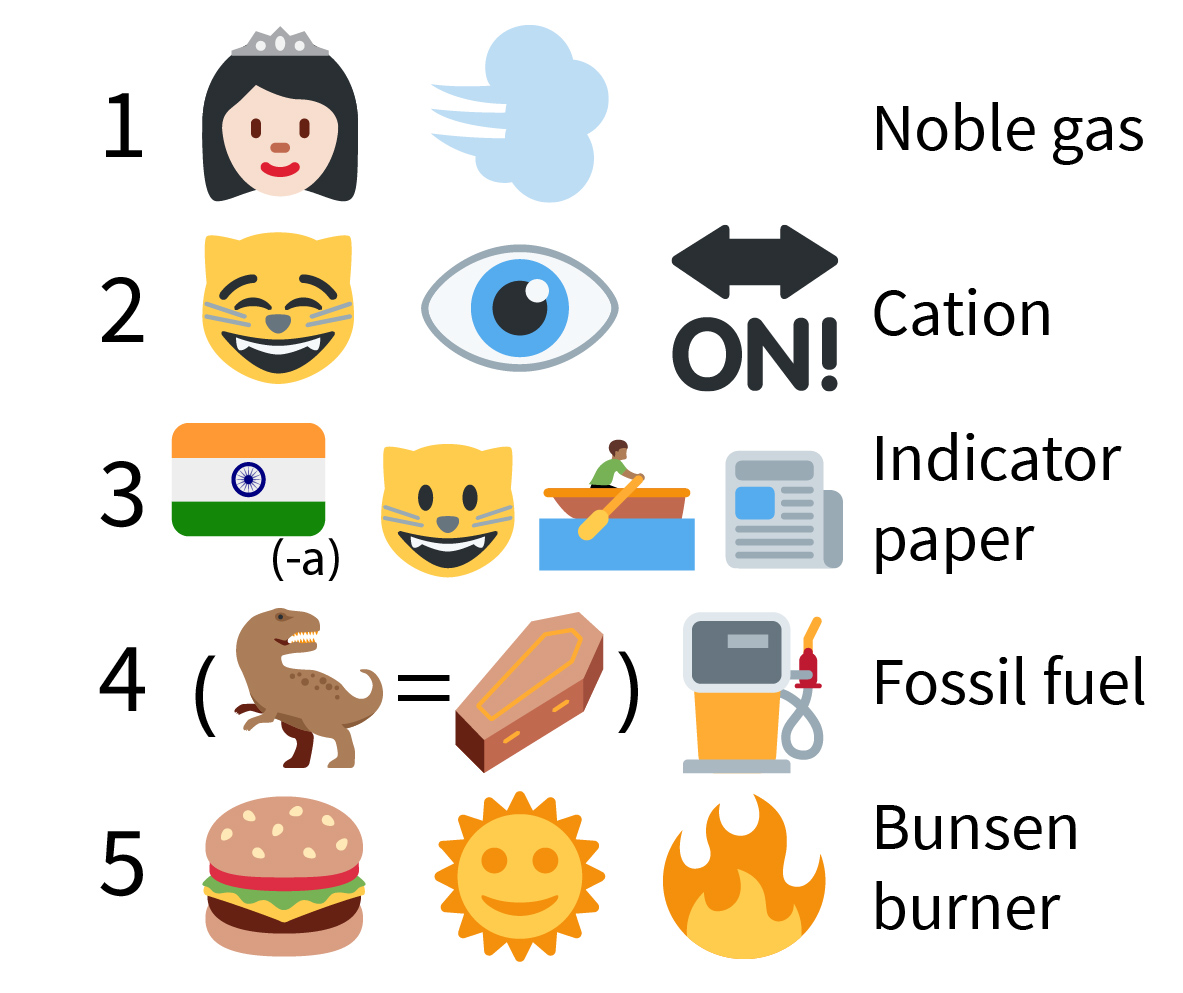
**Bonus questions**

**Q6.** I need to separate two different coloured substances from each other. What technique should I use? *Chromatography*

**Q7.** I pour a solution through filter paper. What is the term for the particles left on the filter paper? *Residue*

## Round 3: chememojis

### Can you work out what term is lurking behind these symbols?



## Round 4: name that element

### Name the element being described in the question.

**Q1.** When combined with iron, I make mild steel. *Carbon*

**Q2.** I’m the most abundant element in the universe. *Hydrogen*

**Q3.** When two of me bond to oxygen, I make you laugh. *Nitrogen*

**Q4.** My chemical symbol is K, although the letter isn’t in my name! *Potassium*

**Q5.** When exposed to oxygen, I turn green. *Copper*

## Round 5: current science

### Have you been paying attention to science news?

**Q1.** In September, scientists found phosphine in a planet’s atmosphere, which could be evidence of alien life. On what planet did they make the discovery? *Venus*

**Q2.** What disease is caused by SARS-CoV-2? *Covid-19 or coronavirus*

**Q3.** Two letters of the alphabet aren’t in the name of any element on the periodic table. Name either of them. *J and Q*

**Q4.** What brand of washing powder shares its name with the European Space Agency's new space telescope? Ariel

**Q5.** 2019’s Nobel prize for chemistry was won for batteries typically used in laptops and smartphones. What chemical element do these batteries use? *Lithium*

## Bonus round: musical elements

### For advanced students only! Can you work out the artists sounded out by these elements’ symbols?

**Q1.** Lanthanum – Dysprosium – Gallium – Gallium *LaDy GaGa – Lady Gaga*

**Q2.** Tantalum – Yttrium – Lawrencium – Sulfur – Tungsten – Hafnium – Tellurium TaYLr SWHfTe – Taylor Swift

**Q3.** Sulfur – Americium – Samarium – Iodine –Thorium Sam SmITh – Sam Smith

**Q4.** Carbon – Argon – Dysprosium – Boron CArDyB – Cardi B

**Q5.** Boron – Tennessine *BTs – BTS*