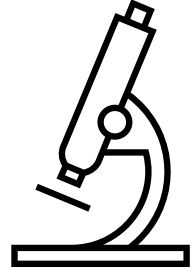




THE *ULTIMATE* **QUIZ!!!**



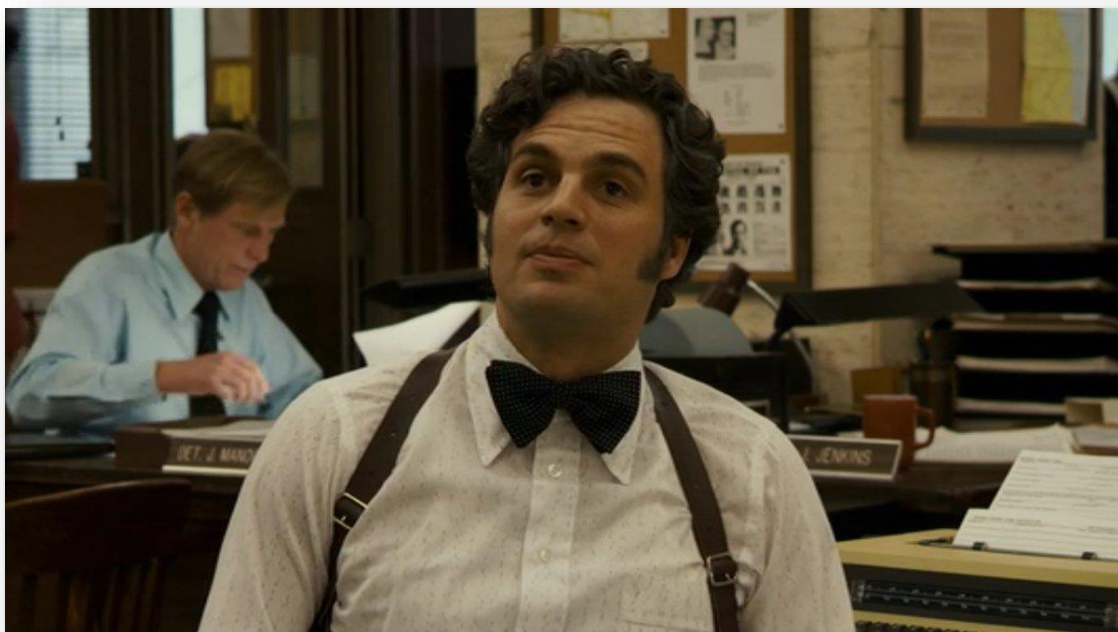
(*suspense intensifies*)

Welcome to the DCU Forensic Science 2020 Ultimate Quiz!—Part 1

I'm your host, detective extraordinaire Mark Ruffalo! You might recognise me from the Marvel Universe as the Incredible Hulk



When I'm not busy being the Hulk, I like doing some detective work. Although I'm not a forensic scientist, I was in a detective movie one time, so hopefully that's close enough...



San Francisco Police Department, 1972

Anyways, I hope you've enjoyed Forensic Science class this year. At least we don't have to watch Michael trying to write on the blackboard anymore...lol

I've also heard you have been contacted by Detective Sherlock Holmes. I know how much you enjoy your quizzes (lol)—don't worry, I've consulted expert quizmasters Tim and Moby, they're on standby



ANYWAYS... onwards! See you on the other side...

Gee, thanks Mark...

Hope you enjoy guys, do as much as you'd like! If you want to send me any answers you have you could write them on a sheet of paper and then take a picture and email them to me, or you could write them on a word document, whatever works for you. You're welcome to ask any other questions on the webpage too.

Email: michael.glynn1.staff@ctyi.org

Webpage: <https://centrefortalentedyouthireland.wordpress.com>

Also, Kahoot #1!:

https://kahoot.it/challenge/05692242?challenge-id=8ddeec49-ca20-4850-806d-699a1174af6f_1587639492840



Round 1

1. I seem to have lost my cool-dude sunglasses, have you seen them anywhere? I think I might have left them on one of the slides...do you think one of the scientists stole them??

Who has my sunglasses!?

2.

I've been trying to build my Lego Death Star from Star Wars during quarantine, but I can't find the instruction manual anywhere...

Don't worry, it won't be operational or anything...well, not until I add the unstoppable lasers 0.o

What genetic material acts like an 'instruction manual' and is very important in forensics? (psst, hint! – its short name has 3 letters!)

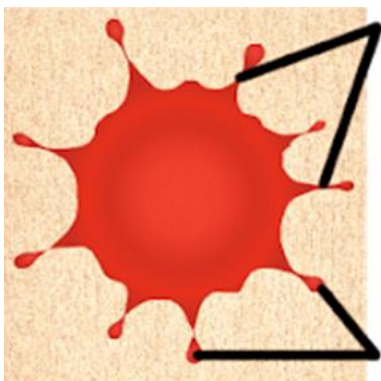
3.

On the phylogenetic tree of life, which of the three 'domains' of life does E. coli belong to?

Which one do humans belong to?

4.

This is a blood spatter pattern I found at a crime scene. Can you identify each feature?



5.

Did you hear Matt Damon was in Dublin?! OMG I'm such a fan, hope I get to see him. I heard Michael talking about him in his class...

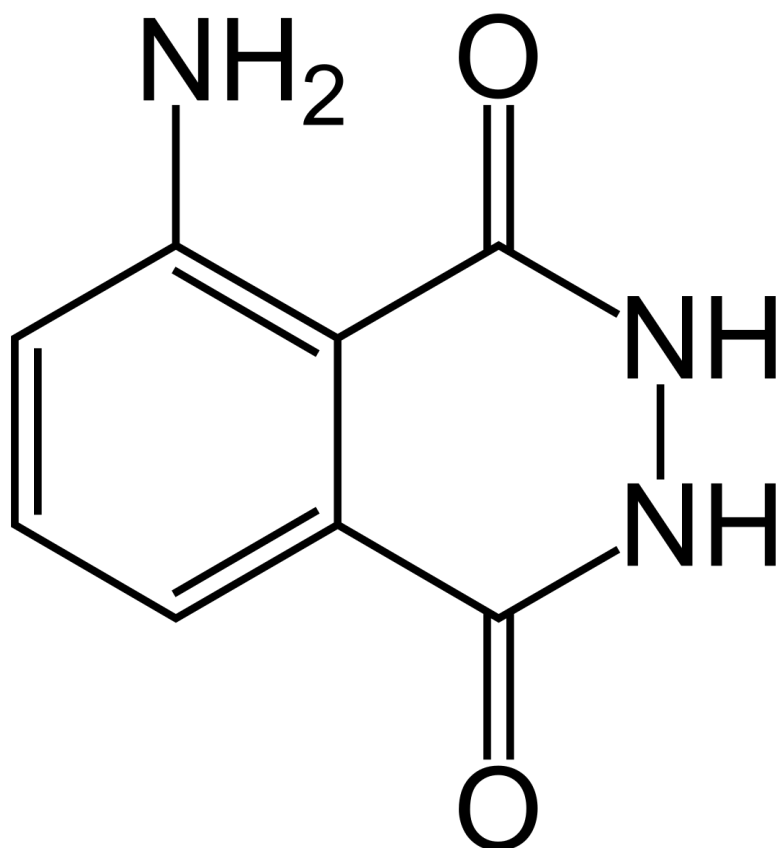
What important molecule from the rocket fuel did Matt use in his recipe for water?

If you were to put water into a glass vessel like a test tube,

- what would you notice about the top surface of the water?
- What is this area called?
- What is different about Mercury (Hg)?

6.

What is this? And why does Michael keep putting weird letters and lines in his slides, ew...



What is the name of this chemical?

What does it do in forensic science?

7.

Ugh, Iron Man is so annoying sometimes...always getting in the way of my investigations.



He said my forensic scientists would have to wear the correct PPE before they could analyse a suspected botched robbery crime scene downtown.

It's a homicide with:

- a firearm with a high muzzle velocity
- missing suspect
- a shoe print on a muddy section of the sidewalk
- possible fingerprints in the vehicle where the victim was shot
- blood stains in the vehicle near the victim

What is PPE? What does it stand for?

What pieces of PPE kit would you recommend for this crime scene?

What other forensic kit might you bring to the crime scene?

8.

This scientist made great breakthroughs using gene mapping. She studied Huntington's Disease. **What is her name?**



9.

Oh darn, I can't seem to find my lunch anywhere...
You won't like me when I'm hungry...or angry!



Nah jk, it's cool.

What plant cell organelle is specialised for food storage?

What is an example of a food that can be used to observe plant cells under a microscope?

What plant did the Silesian friar Gregor Mendel examine, and makes a lovely green soup?

10.

The circulatory system consists of the heart, blood and blood vessels (also the lymphatic system, and a fluid called 'lymph'). There are three major types of blood vessel:

- Arteries have a strong flow of oxygenated (bright red) blood away from the heart,
- Veins flow deoxygenated (dark red) towards the heart with a reduced blood pressure
- **What is the third major blood vessel type?**

11. (*May require some research!)



These people used lead sheets in their PPE in order to protect themselves from nuclear radiation.

Why does lead protect from radiation?

(Hint: we mentioned the term *density* earlier...)