

My class (4/5St) have had a live chat with some scientists. we have used i'm a scientist get me out of here.
I have attached a transcript of the chat.

Mr Steele

Good morning scientists

hello!

my 8-10 year olds will send you a few questions

hello @steelem16

Hello Pete

fantastic

Hello

Hi

hi everyone!

What was your first ever experiment?

Hi guys

Have you ever come across a rare blood type

@522putk32 my first experiment was growing salt crystals in my bedroom when I was about 7 :)

@Pete what is your favourite sum

@764putk32 I don't work with blood but I have a rare-ish blood type so I make sure I donate as often as I can

@764putk32 i'm o-negative, which is quite rare i think. it's the only one that you can give to everyone.

@Pete me too!

@522putk32 As a mathematician I don't really do experiments(!) Most of my job just involves thinking really hard about things

What blood do you DNA

@383putk32 do you mean can you get DNA from blood?

@Senga what was the worst blood type you have come across

@Senga senga if bacteria wasn't in plants would they grow?

@Senga How do you take out DNA

@Pete have you ever travelled to a different planet

@489putk32 i don't like maths enough to have a favourite sum!

@Senga what is DNA

@522putk32 I don't really work with blood so I haven't found any I think are bad

Senga what bacteria do you work with

@students, great questions! be sure to read all of the scientists answers :)

@Senga wot cind of blood do you DNA with

Simone wen did dinosaurs die out.

What are you worriedg

James what type of bones have you dug up

What are you worriedg

Simone how long have you been a scientist

@269putk32 i have not :(it'd be cool though.

@599putk32 bacteria help plants to get nutrients from soil because they break them up to be small enough for plants to use. so plants would probably still grow but nowehre near as well

Simonne weeks Why do you work with uther scientists

Simonne and James aren't here at the moment guys :(

Senga what could happen if you didn't take out the bacteria

Okay

@Pete what is the coldest object you have ever touched

@Jake what kind of maths do you study

@972putk32 i use a special chemical to break open bacteria, then another one to make the bacteria DNA sticky, I then use a special filter that the DNA sticks to then I use other chemicals to sort of photocopy the DNA so I have lots.

Senga what is DNA

@Pete have you ever had a biology problem that you couldn't solve?

@Jake how do you solve scientific problems using maths?

Pete why are you worried about

James, what is your biggest find?

Simone when did dinosaurs die out

@972putk32 I'm an 'Applied mathematician' which means I help answer science questions with maths

Jake what is your favourite experiment

@489putk32 DNA stands for Deoxyribonucleic acid (DNA is much easier to say), if you'd like to see what it looks like I have a photo on my profile. DNA is the recipe book for everything in our body, it tells our cells what to do :)

@269putk32 good question! we use freezers that go to -80 degrees, so probably those! a normal freezer is normally about -20.

@Jake what is the coldest object in the world

Senga how do you take out DNA

@474putk32 I don't use blood in my work

@355putk32 hiya, I answered this just a bit further up :)

Jake what is the hardest maths question you have ever done

@students, be patient, while the scientists answer your questions and avoid repeating them. if they don't get to answering, you can post it on ASK

@Jake do you sometimes have to do matches and something else to solve a problem

@Senga Simone won't make you won't to be a scientist

@599putk32 Mainly what I do involves coding computer simulations that predict things like the behaviour of fluids

Jake what has been your hardest question to solve

@Jake what does Epsrc mean

the simulations run on big supercomputers!

Senga why do you like answering questions

@764putk32 well I try to add more bacteria to help plants to grow better :)

@Jake what is the hardest problem you have ever solved

@522putk32 i've had a few, but mostly if you think about something long enough you can come up with a way - i prefer to think that you haven't solved it yet, rather than it can't be solved

Wow I am swamped with questions now - if I don't answer it's just because I haven't got to it yet!

@269putk32 A Bose-Einstein condensate :D

@269putk32 it is complicated to explain what that is haha

Senga why do you want to make flowers grow more

@474putk32 i always wanted to help people but I am rubbish with blood and sick etc so I couldn't be a medical doctor. Being a scientist I can help people in a different way without the grossness...well sort of...some bacteria are pretty gross

Okay we will calm down so that you can keep up :-)

@489putk32 what do you mean 'matches'? :)_

@676putk32 I love answering questions, i look forward to the live chats and settling down with a cup of tea at night when my kids are in bed to answer the offline questions too..random fact - my kids are about your age :)

@933putk32 Well some of the equations I try to solve have no answers, so that is pretty hard. And some of them have infinitely many - which is also hard! (Do you know what infinity is?)

we will still ask questions to the scientists that aren't there yet

go class

@522putk32 EPSRC is a part of the government that gives money to scientists so that they can do their jobs, so that's why it's in my job title :)

I meant maths

@students, these are great questions! keep it up!

@727putk32 i want to make crops grow better, so barley corn and wheat mainly. Earth is going to have 3 billion more people in the next 30 years so we need to make sure we have enough food to feed everyone :)

Simonne how many white blood cells are there in the human body

@Pete what was you're first job

@572putk32 simone hasn't been able to make it today :(

@Jake thanks

Senga which plans do you put DNA in

@Pete what is your favourite type of sum

Senegal what did you teach in your school

Jakewhat was your hardest job

@489putk32 Yes, most of my research involves physics too and I do a lot of computer coding as well

@522putk32 You're welcome :)

@269putk32 my first ever job was working in a garden centre while i was at school...then i worked in a bar, and then i started doing the science job i do now

Â£765

#NAME?

Pete what is the hardest biological question you have ever done

@Senga what was the last plant you have ever grew

@383putk32 so I take dna out of plants and bacteria to find out if they can do special jobs to help plants to grow - DNA is sort of the instruction manual for everything so I look for special DNA codes that mean a bacteria can do a special job I

@Senga what is the first thing you ever touched in science

@Jake are some maths problems too hard

@572putk32 Hmmm, the hardest part of my job is usually getting complicated computer codes to work but sometimes I have maths questions that I just can't solve, so that might be the hardest

Senga what is your favourite plant to test on

Senegal Do you like working with other scientists

Senga which university do you go to

If bacteria isn't in plants would they grow

What was the last@Senga

@764putk32 oh good question. my last project was trying to work out whether we can make a laser kill germs, which was difficult. i worked on it for 3 years and couldn't make it work, but i think there's a way. i'd like to go back to it

@546putk32 i teach a lot of university students how to do experiments in a lab (200 at a time!), I also teach some science things in primary schools like how bacteria in your tummy keep you healthy - i teach this by making fake poo, it's so much fun!

James what was the biggest bone that you found

@Jake who long do yo run for?

@474putk32 Some are impossible! (And you can actually prove that they are.)

@Jake what was you're first job

@522putk32 On a good week I do about 100km :)

@522putk32 very slowly....actually humans evolved from bacteria if you go way way back. send me this question offline and I will send you an awesome youtube link

Senga what do you want to help with plans.

@269putk32 Scientist (I haven't had any others!)

What is your favorite fossil

@all do you like your own business and why?

@Senga What's the last plant you made grow better?

@Senga do u like being a scientist

@Senga

@Senga

@Senga

@522putk32 sort of. humans and apes both evolved from the same thing, which would have been something a bit like a human and an ape. but they evolved separately. it's like branches on a tree! we both came from the same trunk but we're different.

@727putk32 business? Do you mean our jobs? If so then yes, definitely.

@students, wow what great questions! be sure to read all of the scientists responses too! even if its not your question

@972putk32 the last plant I grew was barley in a massive water tank called a hydroponics system. I have a youtube video of a normal day in my lab and you can see the big tanks there.https://youtu.be/YoKX_1CIQ6o

Jake what do you do when you work

Pete why did you want to go to university

@jake how do you solve problems with maths

@Pete What's the hardest thing that you have researched?

@269putk32 the first thing I touched? probably my head as I rubbed it trying to understand all of the new information I was getting lol

@383putk32 i wanted to learn about biology. at first i wanted to be a doctor, but then i found out you can be a scientist for a job!

@546putk32 Well, most of the time I just sit and think - just like you have to do in maths class! But... quite a lot of the time I'm also writing computer code to solve difficult physics equations. You can see a picture of the code on my profile

@933putk32 I normally test on barley because its important to find a way to make barley produce more food - barley is the main food that cattle eat - no barley - no bigmacs lol

Have you ever been injured

@676putk32 i love working with other scientists, work gets done faster and we share ideas to get better ways to do our science experiments

@Jake do you always use maths to do science

@Senga did you like university

@383putk32 i work at Dundee university, it's one of the best in the UK. I'm really proud of that

There may be a little lull while the children log out and swap over user

@all, what an interesting chat! we are half way through! remember to read all of the questions and answers, if the scientists don't get to your you can post it on ASK

get readdy for more questions

@steelem16 okay! no problem :)

@489putk32 they would still grow but not as well, bacteria help plants to get important food from the soil. the plants would be pretty sick and wouldn't make much seeds for food

ready

@572putk32 Later on in school you will find out that lots things in science can be explained with maths. For instance maybe you have heard of Einstein's equation ' $E = mc^2$ '? That is an equation that tells us how two things in physics (energy and mass) are

@739putk32 what was the last what? I'm really interested in what you're going to ask now :)

@Pete has there ever been a problem you couldn't solve

@Senga What is DNA

@355putk32 i want to help plants to grow better because we will have 3 billion more people on the planet in the next 30 years and we need enough plants to feed them

@739putk32 Not always, often I write computer codes that run on big computers called 'supercomputers' (!). But there is always maths in the background somewhere

@739putk32 there's a problem i haven't solved yet, but i think we can do it. i think there's a way to do anything if you think about it enough!

Pete what has been your favourite experiment

@727putk32 i love the work I do. I learn new things, get to travel to different countries and meet new people all the time. I also get to do cool stuff like answer questions from you guys-this is the most fun i've had in ages :)

@all have you ever took a test on your self?

@242putk32 What sort of test?

@739putk32 ive made barley grow better with special super bacteria....which is brilliant because we need barley for animal feed - no barley - no big macs lol

@955putk32 i did a lot of experiments shooting lasers at germs to see if we could kill them. working with the lasers was fun!

@269putk32 I

@all DNA test

@Jake or some to easy

mod I have lost all questions

@Pete How long how u been a scientist for

ok they are back

@jake what was your hardest problem?

How did dinosaurs die

Jake what has been your hardest question to solve

Have you ever been hurt

@269putk32 i love being a scientist, I get to learn new thinsg every day and visit different countries. I also get to do awesome stuff like speak to people like all of you about what I do

@Jake where does DNA come from

@Senga have you ever detected a disease on an animal

@269putk32 i love animals...I have 2 dogs :)

@995putk32 i started university 10 years ago now, when i was 18. i was doing GCSEs and A levels in science before that though, so maybe 14 years?

@students great questions, be sure to read the scientists answers, even if its not your question, they are really interesting :)

@Jake what made you want to study physics

Please excuse us if some questions don't make sense...

@Jake How many edible plants are there

@474putk32 i loved university, it's hard work sometimes but it's also brilliant, id definitely recomend it to anyone that was thinking about going

Hardest question to solve: Actually probably some of the questions in my maths degree - they were really hard! But sometimes in research I have problems that I have to give up on because it would take too long to solve them, haha

@Senga Senga

@345putk32 that's quite an interesting question - DNA only really comes from itself. when things grow, they copy their own DNA. i don't think anybody knows where the very first DNA came from!

In maths it is quite easy to think of questions that are easy to say, but really really hard to do!

Simone have you ever used the wrong medicine

@Pete what is your favourite part of your job

What's the best thing you've ever done as a scientist

@Jake have you ever had to use maths and something else io solve a problem?

@365putk32 DNA stands for deoxyribose nucleic acid (easier to say DNA though) and its basically the instruction manual fpor everything that happens in our bodies and how we look. send me this question offline on my profile for a full answer :)

@845pkh8435 i like solving problems and fixing things. you have to come up with new experiments every day, depending on what you need to do, which is fun! it means every day is different.

Why do you go to high school

@877putk32 Physics is the most fundamental science - it's our attempt to study the building blocks of the whole universe and that really inspired me

@Jake how do you solve mathematic problems

@546putk32 because you have to!

@jake how hard is it to solve the problems?

@242putk32 i once tested myself to see what bacteria was on my hands....the answer was A LOT!

@Senga when wise the last wine you did

@Jake if u were

@242putk32 I haven't done a DNA test onmyself though.

@all If you were not a scientist what would you be?

@639putk32 scientists think a giant meteor hit the eartyh causing a massive dust cloud that blocked out the sun...plants couldn't grow without the sun so the dinosars starved to death :(

@345putk32 Ultimately it must have evolved somehow, but I'm not sure if we know that - it's quite a hard question because DNA is very complex

@pete what was your hardest job

@all, what an awesome chat! we have 5 minutes left

@Pete if u were not

Simonne have you ever come across a rare blood type

@365putk32 i'd like to be a sports journalist

@Senga do you enjoy being a scientist

@995putk32 Wow I have know idea - I'm not an expert in everything :) But lots, haha

@844putk32 i ride a motorbike...one time a van driver moved on the road and didn't see me-he knocked me off my motor bike. my leg was broken in lots of places (including a broken knee) and I had really bad concussion...i'm all better now though

@242putk32 Yes - the 'something else' is a very powerful computer!

Jake hav u very found gold gold

@Senga what has been your most difficult challenge in your science

Jake where does DNA come from

@639putk32 Mainly it invovles sitting down and thinking and concentrating, but also studying carefully what other mathematicians have done is important

@339putk32 my last project was trying to invent a laser that would kill germs - i worked on it for three years but we couldn't get it to work. i think there's a way though, i'd like to go back to it!

@739putk32 unfortunatelly I haven't detected disease in an animal because I work with plants and bacteria. although my dog got sick once and I had to take her to the vet so I guess I recognised her disease lol

@Senga what was your first experience you have done?

@Pete if u were not a scientist who would u be

@865putk32 Nope!

@865putk32 (Unfortunately)

@995putk32 i'd like to be a sports journalist! i'd like to watch cricket all day basically.

@senga what is very rarest disease that you have found in DNA

@345putk32 Hiya I tried to answer before (and so did Senga and Pete) and I think the answer is we don't really know

@865putk32 i have done lots of things i'm proud of as a scientists but i'm getting really excited because I might have found a new bacteria that no one has discovered before...i need to do more tests to check though

there are lots of questions in science like that

A why do you think like.

@Pe

Jake what do DNA do

@546putk32 to learn more and to help decide what you want to do when you are a grown up I guess...i often wondered why I had to go to high school

@845p

@345putk32 It's kind of like a 'code' that tells the cells in your body how to replicate (basically, how your body should grow)

Senga what type of bacteria do you gat DNA from

The chat's about to come to a close! Thanks for all the questions! If the scientists haven't had a chance to answer your question, you can leave questions using the 'ASK' button at the top and the scientists will reply later, and in more detail.

How can you get a disease

@296putk32 when did I last drink wine? last night actually, I had a glass after dinner whilst answering lots of awesome questions as part of this competition

@students remember to VOTE for your favourite scientist!

Thank you moderator Georgina and scientists,

@955putk32 all types of bacteria :)

@Pete Have u ever Discover another planet

This has been fab

@345putk32 and it's a long complicated molecule that you get in every cell - DNA is really cool, look up more information if you can!

Hav u erver found gold

Everyone What's inspired yo

Thanks everyone, this has been really fun :D

@

@students there's a link to the Future Transport Zone on your log in cards - a zone you can use with your family! Tell your parents they can ask questions too. You can log in together over the weekend and have a look at all the engineers there. All you ne

please send us questions through the website if we didn't get to you = we love answering your questions :)

@995putk32 yes! there's one just past pluto

Bye guys!

speak to you later guys

hi, I'm the moderator for this chat, here to make sure everything goes smoothly

Good morning everyone

morning team

morning! looks like there might be a student online, we'll just wait a few minutes for more :)

morning! :)