**SKYPE SET-UP PROCEDURE**

Welcome to this Introduction on how to do a Science Q&A Session via Skype with Dr Karl. The vast majority of these Q&A Sessions are with Schools in Australia – but they have involved schools in the UK, USA, Sweden, Cambodia, Japan, Taiwan, etc.

1) **TIMING**. These sessions run for about 45 minutes. They are usually scheduled for Wednesday afternoons, from 1.00-1.45 pm or 2.00-2.45 pm (**Sydney Time)**. It is possible to have a Q&A Session outside these times, but a compelling reason is needed (eg, your school is in a very different time zone).

2) **INTERNET REQUIREMENTS.** You need a reasonable Internet connection, capable of at least 2 Mb/sec. (Check the speed of your connection by logging into Ookla at <http://beta.speedtest.net/run> ). (Just to make you jealous, we get 1,000 Mb/sec download and upload at the University of Sydney).

Overwhelmingly, a wired connection (via RJ45) will better than a WiFi connection (which can be disturbed by microwave oven, because the Frequencies are similar). However, a good solid WiFi connection will usually be good enough.

We have had Science Q&A Sessions where the Internet connection has been so slow that the Session has had to be re-started half-a-dozen times during the 45 -minutes.

3) **SKYPE.** We have tried other software/protocols – but Skype is simple, free and robust. Skype is The Way – but there are pros and cons.

The advantage is that most people have used Skype. At the very least, even if you have never used Skype, somebody around you has.

The disadvantage is that some State/Private Education Systems block Skype (without any discernable rhyme, reason or consistency). In this distressing situation, please ask your IT Officer to make it work. (IT = Information Technology). In the past, the final ‘work-around’ has sometimes been to simply use a Smartphone (with a big data allowance) as a WiFi hotspot. Alternatively, you can use a Telstra/Optus/Vodaphone dongle.

Sadly, for Australia, all overseas Science Q&A Sessions have a much better Internet Speed than most schools in Australia.

4) **DRESS REHEARSAL.**

The first Rehearsal might be easy or difficult. You need to ensure that Skype works at your school. In that past, we have taught people how to download and use Skype. But as of 2017, that’s now your obligation. (Ask your friends).

You have to carry out a Video-and-Audio Skype conversation FROM the computer that you will use in your school, TO a contact/friend/relative. This person has to be physically and electronically OUTSIDE your school. (This is to check if your local IT System blocks you from having a Skype conversation).

As part of this Dress Rehearsal, your outside contact/friend/relative has to be able to hear your voice clearly. They also have to be able to see your image clearly. (HINT – Before each Skype Session, we always run a Skype Test Call to check if the audio is fine.)

For your part, you have to be able to run their voice through the Big Speakers in your classroom. (The tiny speakers in a laptop simply will not fill the classroom). Also, you have to be able to run their image onto the Big Screen in your classroom.

As part of the Audio Test, get your contact/friend/relative to count from one to twenty fairly quickly. You should be able to hear each number clearly. Occasionally, you cannot. Instead, you can’t hear a few of the numbers – they “drop out”.

In most cases, this is due a so-called “Ducking Circuit”. Let me give you the most probable cause. In your classroom, the sound from the loudspeaker enters the microphone, and activates the “Ducking Circuit”. (The Ducking Circuit is widely used in Talk Back radio, and blanks out the caller when the Radio Announcer wants to speak. Think of a duck paddling in a pond, and suddenly “vanishing” when it ‘ducks” under the surface to eat something.)

In this uncommon case, the solution is easy.

Simply switch off the microphone in your classroom when the other person is speaking. (In the current version of Skype, if you hover your mouse around the bottom centre of the screen, you will see some Blue Buttons and a Red Button. The Blue Buttons let you switch off/on your outgoing Video and Audio. Switch off the Microphone and see if this lets you hear all the numbers that your contact/friend/relative is counting.)

One last point – in the top right-hand corner of the Skype Screen is a “thought bubble” that allows to do an on-line typing chat. You need to activate this. Then get your contact/friend/relative to drag a file (text or picture) into the Typing Screen. You should then be able to download this file – and then open it. The reason for this is that Dr Karl often has written a very comprehensive answer to the Student’s Question. He will drag this file into the Typing Screen, you then download this file and open it, and the student can read the comprehensive answer at their leisure.

4) **FULL DRESS REHEARSAL.**

This will mimic, as closely as possible, the situation on the day of the Science Q&A Session. We are trying to avoid the situation (which has happened) where the School and Dr Karl are unable to make contact on the day – and so, the students miss out.

In general, the School’s computer should be at the front of the room, near the Big Screen. Ideally, it should be positioned so that Dr Karl can see the both the student and their fellow students. A chair is useful, so that the student can be comfortable.

First, please add ‘Isabelle.physics’ as a part of Request for Contact on Skype. (This is part of the Skype Protocol, to avoid nuisance calls.) In the request, can you give the name of the school, and the date for which the Science Q&A Session is scheduled?

Once your Request has been accepted, you need to do a 5-minute test Skype with Isabelle Benton (Skype User Name is Isabelle.physics). This usually happens at 10 am or 10.30 am, Sydney Time, about a week beforehand. The purpose is test that all the equipment is working correctly, and that the Internet link functions properly. This test needs to be done with the computer you will use on the day, and in the same classroom that the students will be in. However, if you have done the Dress Rehearsal properly, this will all be very straightforward.

Second, please add Dr Karl Kruszelnicki ‘drkarlk’ as a part of Request for Contact on Skype. In the request, can you give the name of the school, and the date for which the Science Q&A Session is scheduled? He will accept your request – and everything should go swimmingly and seamlessly on the Science Q&A Session

ANOTHER SKYPE SESSION OF INTEREST?

Now you have Skype up and running why not get a scientist to speak directly to your students? The Australian Academy of Science ([https://www.science.org.au/)](https://www.science.org.au/%29) offers free skype sessions to schools from their pool of scientists. For more information contact Melanie Bagg: 0439 037 773

ANOTHER FREE INTERNET SESSION FOR STUDENTS.­­­

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