**ACTIVITY: Communicating with scientists – interview techniques and protocols**

**Activity idea**

In this activity, students work through a framework to develop and organise questions and interview protocols prior to interviewing or communicating with a science expert.

By the end of this activity, students should be able to:

* identify some of the science concepts and questions they want to discuss with an expert
* prioritise and group interview questions
* identify the difference between open-ended and closed questions
* discuss how working through an interview framework helps to develop their questioning skills
* establish shared etiquette protocols to make the best use of the expert’s time/interview.

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**Background information for teachers**

Research suggests there is value in involving scientists with classrooms, as detailed in the article [Scientists talking to students through videos](https://www.sciencelearn.org.nz/resources/2317-scientists-talking-to-students-through-videos). While some scientists are willing to make local school visits, Skype and other online communication tools make it possible to connect with scientists, removing the barriers associated with time and travel. Online tools also allow experts to connect from remote locations and from areas students may not be able to access due to stringent health and safety regulations.

This activity helps students and teachers refine their thinking before a face-to-face or online visit. By preparing beforehand, students have an opportunity (and purpose) to develop their science knowledge. Preparation also helps students to organise their questions to make optimal use of the scientist’s time.

The activity also encourages students to consider and establish interview etiquette protocols.

The student instructions are in Word. Modify them to suit classroom pedagogical needs and student abilities.

**Teacher instructions**

1. Discuss the purpose and the value of connecting with the science expert. Discussion points include:

* the name of the science expert you plan to interview
* where the expert is employed and the type of work/research that happens there
* the reasons you have for connecting with the science expert.

1. Be explicit about the topic you will be discussing with the expert. Discussion points can include:

* some of the underlying science concepts
* some of the resources you can use to find out more about the topic and the science concepts
* how and why research often helps students ask better/more informed questions.

1. Discuss aspects of the nature of science that students might like to discuss with the expert. Discussion points can include:

* investigations, unusual equipment and interesting field sites
* science-related activities that interest or excite the expert
* how the expert came to work in the field they do.

1. Use the first page of the student instructions to record the initial questions students have about the topic or about the science expert.
2. Use the second page of the student instructions to refine the questions:

* Check that questions are appropriate to the topic and, if the questions are about the scientist, they are not too personal.
* Check that the questions are open-ended – that they require more than a yes or no answer – to keep things interesting for both the speaker and the audience.
* Consider whether the questions are priority questions – the type of questions that can only be answered by the expert or would require a good deal of classroom research to answer.
* Consider whether the questions are non-priority questions – the nice-to-know questions or questions students might be able to answer with a little research.

1. Use the third page of the student instructions to further refine the questions:

* Encourage students to organise the questions into subtopics/groups.
* Refine or remove questions that overlap.
* Negotiate and list the priority questions in the order of importance.
* Negotiate and list the non-priority questions in the order of importance.

1. Assign questions to individual students.
2. Discuss interview etiquette. Some suggestions include:

* standing up while asking a question so the expert can identify who is speaking
* introducing yourself before asking the question
* speaking loudly and clearly
* maintaining eye contact and using non-verbal language such as nodding to encourage the interviewee and show that you’re listening and interested
* sending a list of questions to the expert prior to the interview
* considering how to acknowledge/thank the expert for their time.

1. Conduct a practice session before the real interview.
2. After interviewing the expert, conduct a class discussion about their preparation before the experience. Questions could include:

* How did this process help you to develop and ask useful questions?
* How did this process help with your understanding of the science topic?
* If we interview a scientist in the future, what parts of this plan should we use again?
* Are there any parts we need to change?

**Student instructions**

Exciting news! We have the opportunity to interview a science expert. This framework will help us create interesting and appropriate interview questions.

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| **Our first thoughts** | | | | | | |
| Our science topic is: | | | | | | |
| Our science expert is: | | | | | | |
| What we know about our science expert: | | | | | | |
| Questions we would like to ask our science expert about our science topic: | | | | | | |
| Questions we would like to ask our science expert about their work as a scientist: | | | | | | |
| **Refining our questions** – **part 1** | | | | | | |
| Our questions | Is this an appropriate question?\*  (Tick) | | Is this an open-ended question?\*\*  (Tick) | | Is this a priority question?\*\*\*  (Tick) | |
| Yes | No | Yes | No | Yes | No |
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\* Appropriate questions relate to the topic and are not too personal.

\*\* Open-ended questions require more than a yes or no answer.

\*\*\* Priority questions are those we cannot answer with simple research.

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| **Refining our questions** – **part 2** |
| After looking at all of the questions, we think the questions fit into these subtopics or groups: |
| We think that these are the priority questions. The questions are listed in the order we want to ask them. |
| We think these are the non-priority (but still really interesting) questions. The questions are listed in the order we want to ask them. |
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