**ACTIVITY: What might we miss?**

**Activity idea**

Continually, there are right and wrong messages about the nature of science in our classroom teaching and in popular media. In this activity, students view two video clips that highlight how easily we can miss what we are not looking out for.

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

* use the video clips to explain how easy it is to miss what we are not consciously looking out for
* explain that, in popular media, there will be ‘hidden’ messages about the nature of science and that these may not be accurate.

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**Introduction/background notes**

Continually there are right and wrong messages about the nature of science in our classroom teaching and in popular media. These two video clips are a fun way to introduce the idea that we can easily miss what we are not looking out for. The analogy from the videos is that we can pick up wrong messages about the nature of science because we are not looking out for them.

We need to teach our students how to pick up and evaluate these messages. Research shows that, for our students to develop an understanding of the nature of science, it must be taught explicitly. Our students may miss our implicit correct messages about the nature of science, in exactly the same way that we miss what we are not actually looking for in these videos.

Theminute-long [Awareness test](https://www.youtube.com/watch?v=xNSgmm9FX2s) video clip on YouTube opens by asking the viewer to count the number of passes the team in white make. Since the viewers are focusing on the ball moving quickly between the players, they generally completely miss a man dressed in a bear suit who moonwalks across the screen. It seems unbelievable that we can miss something so obvious and so large. Similarly, in the [Whodunnit?](https://www.youtube.com/watch?v=Yr992INPK8k) video clip on YouTube, most students will not notice any of the 21 changes.

These videos were produced for Transport for London as part of the ‘Look out for cyclists’ campaign in 2008. They were played in theatres for a week and then released to YouTube to go viral and reach more people with the safety message. Both videos are great for showing students how easy it is to miss what we are not looking for.

Please note that the [Whodunnit?](https://www.youtube.com/watch?v=Yr992INPK8k) video clip is focused around a mock murder scene (Cluedo style). Please check the content is appropriate for your students.

They also remind us, as teachers, how explicit we need to be in our teaching. Teaching approaches to improve understanding about the nature of science fall broadly into two groups: implicit and explicit. The implicit approach suggests that an understanding of the nature of science can be gained just through participating in science inquiry activities and process skills instruction, but research with students does not generally support this claim. In contrast, an explicit approach holds that the nature of science needs to be overtly addressed and specifically taught if students are to gain understanding. Research has shown that the explicit approach is more effective than the implicit approach in improving learners’ conceptions of the nature of science. Our video clips provide a nice demonstration of this.

**What you need**

* Access to the video clip [[Awareness test](https://www.youtube.com/watch?v=xNSgmm9FX2s)](http://www.youtube.com/watch?v=oSQJP40PcGI) on YouTube.
* Access to the video clip [Whodunnit?](https://www.youtube.com/watch?v=Yr992INPK8k) on YouTube.
* Data projector.

**What to do**

1. Watch the [Awareness test](https://www.youtube.com/watch?v=xNSgmm9FX2s) video clip on YouTube with your students with very little introduction. Save the surprise.
2. After viewing, lead a class discussion to cover key points:
   * It’s easy to miss what we are not looking for – in class, in popular media, in advertising and so on.
   * Students can miss learning aspects of the nature of science because they are not looking for it – and teachers are not making it explicit.
   * In media reports, we can miss false representations of the nature of science because we are not looking out for it. We can be hoodwinked.
3. Watch the[Whodunnit?](https://www.youtube.com/watch?v=Yr992INPK8k) video clip on YouTube to reinforce these ideas and discuss.

**Extension ideas**

Further explore the misrepresentation of the nature of science in the media, which we miss because we are not looking for it. You could do this by giving each group of students one of the myths in the article [Myths of the nature of science](https://www.sciencelearn.org.nz/resources/415-myths-of-the-nature-of-science) and asking them to list examples of occasions when they have seen or heard something through the media that could have reinforced this myth in their minds.