Lesson plan

Bad Vibes
Peer Review

Timetable

Teacher:	.....	**Lesson:**	.....
Group:	.....	**SEN students:**	.....
Date:	.....	**Support Staff:**	.....
Room:	.....		

Focus

Students will act as reviewers for a scientific paper and look at the ways that scientists communicate their ideas to the public and other scientists.

Objectives

Students will learn about:

- The different ways scientists communicate their research to the public and to other scientists.
- The process of peer review for scientific papers.

N.B. This activity is targeted at very able students.

Outcomes

All students will be able to:

- Give examples of ways that scientists communicate their research to the public and to other scientists.

Most students will also be able to:

- Explain why peer review is important.

Some students will also be able to:

- Competently peer review a scientific paper.

Resources

- 'Bad Vibes' programme
- 'Bad Vibes in the classroom' programme
- worksheet *Peer Review* (one per student)
- Professor Cox's paper for the Madrid Conference (one per student)
- *Peer Review* assessment sheet (one per student)

Starter (25 mins)

1. Show students part of the 'Bad Vibes' programme to introduce Professor Cox's enquiry.
2. Ask the students to identify in their groups (of two or three) the ways in which Professor Cox communicates his research to the public.
3. Ask different groups to give you one form of communication from their list.
4. Record the list until you have a complete list, i.e. newspaper articles, radio news, radio shows, television news, television shows, internet.
5. Show the clip of Professor Cox talking about communicating his work to other scientists from the 'Bad Vibes in the classroom' programme.
6. Ask the students to identify the ways scientists communicate their research with other scientists and why they think peer review is considered so important.
7. Get feedback from different groups. Emphasise the point that peer review is a way in which the research findings are validated by the scientific community.

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Main (35 mins)

1. Give the students a copy of Professor Cox's Madrid Conference Paper (this has been simplified and shortened for use with the students) and a copy of the Assessment form (this is a slightly simplified version of that used for the journal Professor Cox edits).
2. Ask the students to individually read the paper
3. In their groups they should then go through each criterion on the assessment form one at a time and agree a score and/or comment where appropriate. They should record these on one of their sheets.
4. When all groups have completed the task go through the assessment form asking different groups to give feedback on different criteria, i.e., what score/comment did they give or make and why.

Plenary (5 mins)

For homework ask students to use appropriate criteria from the assessment form to assess a scientific enquiry report the have recently written.

Answers to questions

1. Newspaper articles, radio news, radio shows, television news, television shows, internet journal papers, conference presentations and posters.
2. To check that the method produces valid and reliable data and comment on how the data has been interpreted.