GCSE
SCIENCE

Virtual communities

Facilitation pack

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Contents

About this resource

We know that your time is limited, so we've designed this resource to make it easy for you to share what you've learned from our *Virtual communities* event.

This resource will enable you to deliver your own CPD session for your colleagues and it includes activities and resources linked to the virtual community topics to:

- remind you of the topics covered during the event so you can brief colleagues or run a similar session with your team
- provide follow on activities and discussion areas for you and your team so the content can be taken further and applied or embedded in your school or college.

Resources available

- A copy of the PowerPoint from the meeting with notes for the presenter
- Follow on pathways showing the topics covered during the meeting and ways to develop them
- A pre and post meeting confidence check questionnaire to benchmark confidence of colleagues around the topic of your session.

We hope this gives you the opportunity to make the most of the time you invested in attending the event.

Follow-on pathways

This section takes topics, discussion or activities from the *Virtual communities* meeting and provides suggestions of areas for development and follow-on activities you can do with your colleagues.

Activity 1

The table lists the questions assessing **only** AO1 (knowledge and understanding) in the 2019 Trilogy papers.

As a group, or in subject teams discuss:

- which of these questions assess AO1 understanding and which assesses knowledge in isolation
- what about the question has influenced your choice.

Look at the mark scheme for one of the papers listed:

- identify other questions that assess AO1 as well as other AOs
- are any of the AO1 marks in these questions knowledge in isolation or AO1 understanding?

Paper	Questions assessing only AO1
Trilogy Biology 1F	1.1, 1.2, 1.6, 2.1, 2.3, 2.5, 3.2, 3.3, 3.4, 4.1, 4.2, 4.9, 5.4, 5.6, 6.2, 6.3, 7.1, 7.3
Trilogy Biology 1H	1.2, 1.3, 2.1, 2.3, 4.1, 4.2, 4.3, 5.2, 5.5
Trilogy Biology 2F	1.1, 1.2, 1.3, 2.2, 2.6, 3.3, 3.4, 3.5, 3.6, 3.7, 4.1, 4.5, 6.1, 7.1, 7.2, 7.3
Trilogy Biology 2H	1.1, 2.1, 2.2, 2.3, 4.1, 4.3, 6.1, 6.2
Trilogy Chemistry 1F	1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.3, 2.6, 3.1, 3.2, 3.3, 3.5, 3.7, 4.3, 4.4, 5.1, 5.4, 5.5, .7.1, 7.2, 7.3
Trilogy Chemistry 1H	2.1, 2.2, 2.3, 3.1, 3.3, 4.1, 4.2, 4.5, 5.1, 5.2, 6.2, 6.3
Trilogy Chemistry 2F	1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 3.6, 4.1, 4.4, 4.5, 5.4, 5.5, 5.6, 6.1, 6.3, 7.1
Trilogy Chemistry 2H	1.1, 1.3, 2.1, 3.1, 3.2, 4.1, 4.5, 6.1, 7.1, 7.4
Trilogy Physics 1F	1.1, 1.2, 1.6, 1.7, 2.6, 3.1, 3.3, 4.1, 4.5, 4.6, 5.1, 5.2, 5.4, 5.5, 6.1, 6.2, 6.3, 6.4, 6.5, 7.4
Trilogy Physics 1H	1.1, 1.2, 1.3, 1.4, 1.5, 2.4, 3.1, 3.3, 3.4, 4.3, 5.1, 6.1, 6.2, 6.3, 6.4, 6.6
Trilogy Physics 2F	1.1, 1.3, 1.4, 2.2, 2.5, 3.1, 4.2, 4.6, 5.4, 6.4, 7.1
Trilogy Physics 2H	1.4, 2.1, 3.1, 3.2, 3.3, 4.1, 4.2, 4.4, 5.1, 7.1, 7.2

Activity 2

Look in detail at one or more of the questions listed in the table.

- What misconceptions would you expect to see?
- What information about misconceptions is the *Report on the exam* stating?
- What misconceptions are your own students exhibiting?

Activity 3a

As a group, consider Example 8 or 9 (*Resources* booklet pages 29 and 31).

- Identify the common misconceptions that were seen (*Report on the exam*), or could be seen with these questions.
- Design short questions that could be used to probe these misconceptions.
- Discuss how you could address these misconceptions in revision lessons.

Activity 3b

As a group, consider Example 8 or 9 (*Resources* booklet pages 29 and 31)

- Discuss what students need to understand to answer the question.
- Identify the key ideas.
- Devise short questions you could give students to embed each key idea.
- Consider how you could change the demand of these probes to suit the ability of your students.
- You could build up a bank of summative questions from different topic areas, with key ideas and probe questions to use to enhance future students' learning.

Health checks

Rate the area of development statements according to your confidence where 0 is not confident at all and 5 is very confident.

Before the meeting

Objective	Rating	Reasons/notes
Objective 1: I know how to identify AO1 questions using command words and specification content.		
Objective 2: I understand the difference between 'knowledge in isolation' and 'AO1 understanding'.		
Objective 3: I understand how AO1 type questions and examiner reports can be used to diagnose student misconceptions.		
Objective 4: I understand how AO1 type questions and examiner reports can be used to devise formative questions for use in teaching.		

After the meeting

Objective	Rating	Reasons/notes
Objective 1: I know how to identify AO1 questions using command words and specification content.		
Objective 2: I understand the difference between 'knowledge in isolation' and 'AO1 understanding'.		
Objective 3: I understand how AO1 type questions and examiner reports can be used to diagnose student misconceptions.		
Objective 4: I understand how AO1 type questions and examiner reports can be used to devise formative questions for use in teaching.		

Planning for the future

Questions for consideration

- What areas have you identified as strengths using the confidence check?

- How might you develop these further?

- What areas have you identified as areas for development?

- How might you build confidence in these areas?

- How might some of the learning from the *Virtual communities*/CPD session impact your department?

- What changes could you make based on outcomes of the CPD session?

Comments on examples for Activity 1

Example 1

This is a clear test of knowledge in isolation.This question requires no understanding of the specification content. Students simply have to recall the standard circuit symbol for an LED, which is given in the specification (Trilogy section 6.2.1.1).

Example 2

The specification states methods of preventing the spread of malaria in section 4.3.1.5. However, there are no specific details of how methods mentioned will prevent the spread of malaria. Students need to use their understanding of how methods of prevention work to give their reasons for each method. So it is the first mark for each method that is the knowledge in isolation mark.

Example 3

Although ‘what’ as the question might hint towards it, this is not knowledge in isolation. There are no specification points in the possible answers (Trilogy section 5.1.1.5).

Students use their understanding of representation of atoms to see that the only difference between the two atoms of argon is the different mass numbers, which means that they are isotopes of the element.

Contact us

Our friendly team will be happy to support you between 8am and 5pm, Monday to Friday.

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