Curriculum for Excellence

Professional Development
Support Materials

Active Learning

Primary and Secondary Schools
## Contents

<table>
<thead>
<tr>
<th>Activity</th>
<th>Activity Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Welcome and introduction</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Discussion about active learning</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Video - Active Learning</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Illustrative videos - active learning in schools</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Active learning - some approaches</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>Key questions - self reflection</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Group work - opportunities</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>Group work - action planning</td>
<td>13</td>
</tr>
<tr>
<td>9</td>
<td>Plenary</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Proforma for recording responses</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Priorities for development</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Improvement planning proforma</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Background reading on active learning</td>
<td>19</td>
</tr>
</tbody>
</table>
Facilitator’s Guide

Introduction

This Guide supports the continuing professional development of staff in schools and education centres. It focuses on Active Learning – one of the underpinning principles of Curriculum for Excellence - and this Facilitator’s Guide offers a suggested format for delivering a two-hour CPD session.

The activities and approaches contained within the Guide are designed to support a whole school, departmental or team approach to CPD. They provide opportunities for discussion, reflection and collaboration amongst colleagues.

Facilitators should be aware, however, that the following session can be customised easily in order to focus on particular aspects of active learning.

Audience

This programme is relevant for all who work within schools and education centres and the activities are designed to facilitate a whole school, departmental or team CPD session. This programme has particular relevance for members of staff with responsibility for leading Curriculum for Excellence developments and also for classroom practitioners.

Background reading and preparation

Facilitators should be familiar with the relevant sections from key publications including

- Building the Curriculum 3
- Principles and Practice (ie, general sections relating to the 8 curricular areas)
- Curriculum for Excellence website – section on Active Learning (Learning and Teaching Scotland)

Video materials

The disk accompanying this Guide contains a range of video clips to support professional development in the area of active learning. These short films help to increase knowledge of key concepts, principles and practices associated with Curriculum for Excellence, and some videos illustrate how Scottish schools are putting these ideas into practice. It is recommended that facilitators be familiar with these video clips in advance of the CPD session.
Structure of CPD session

The structure of this CPD session assumes that participants will have access to the video clips described in each activity. The videos are an integral part of the session and facilitators can present them in two ways:

1. By playing the videos from the accompanying Disk;
2. By downloading the videos as MP4 files from Learning Curve’s *Curriculum for Excellence* web site and saving them on a computer, ready for playback.

www.curriculum-for-excellence.co.uk

PowerPoint Presentation

A specially prepared PowerPoint presentation is contained on this CD ROM. This presentation helps facilitators to:

- promote group discussion;
- present and summarise key points and issues;
- support self-evaluation and action planning.

The PowerPoint presentation can be easily customised to reflect, more specifically, the focus of the CPD session.

Acknowledgements

Learning Curve Education gratefully acknowledges the permission given by West Dunbartonshire Council to use the work of their schools as the basis for some of the illustrative case studies. We are also grateful to the wide range of educationists, writers, researchers, practitioners and young people who have contributed to this resource.
Active Learning - CPD Session

Time: 90 minutes - 2 hours

Resources

- Video clips contained on the accompanying Disk
- PowerPoint presentation “Active Learning.ppt”
- Computer, speakers, data projector and screen
- Flipchart and pens

Aims

1. To recognise the nature of active learning and its key features.
2. To recognise potential benefits of active learning.
3. To consider how active learning might be developed in the school.
4. To agree action that would result in increased active learning.

Time Allocation

The following activities provide a suggested pathway through this CPD session. The time allocated to each activity may vary depending on the time available and the particular focus of the session, but the following suggested time allocations provides a framework for achieving the main aims of the session within 2 hours.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Activity Description</th>
<th>Time Allocation</th>
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</thead>
<tbody>
<tr>
<td>Activity 1</td>
<td>Introduction</td>
<td>5 minutes</td>
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<tr>
<td>Activity 2</td>
<td>Group discussion</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Activity 3</td>
<td>Video and discussion</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Activity 4</td>
<td>Video and discussion</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Activity 5</td>
<td>Active learning approaches</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Activity 6</td>
<td>Self-reflection</td>
<td>25 minutes</td>
</tr>
<tr>
<td>Activity 7</td>
<td>Opportunities</td>
<td>25 minutes</td>
</tr>
<tr>
<td>Activity 8</td>
<td>Action planning</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Activity 9</td>
<td>Plenary</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>
Activity 1  Welcome and introduction

Facilitators should share the aims of the session (these are also contained within the PowerPoint presentation).

1  To recognise the nature of active learning and its key features.
2  To recognise potential benefits of active learning.
3  To consider how active learning might be developed in the school.
4  To agree action that would result in increased active learning.

At this stage the facilitator might also wish to share the context for the CPD session – ie, that active learning is one of the key principles within Curriculum for Excellence. There is a clear expectation that children and young people will be active and fully engaged in their learning.
Activity 2  Group discussion

Facilitators should invite participants to discuss the following questions (either with a partner or in a small group): (see also PowerPoint Slides)

1  What do you understand by the term ‘active learning’?

2  What are some of the features of active learning?

3  Is there a project or piece of work in the school (or in your own teaching) that illustrates active learning? What kinds of activities did pupils experience? Why do you consider this work to exemplify active learning?

Participants should be allowed some time to reflect upon and discuss these questions. Responses can then be shared with the group.
**Activity 3  Play the video clip – ‘Active Learning’**

This short film presents a range of views about *active learning*. Various contributors including teachers, educationalists, school managers and young people, explore the meaning of active learning within schools. Facilitators should invite the group to discuss this video and clarify any points arising (See also PowerPoint Slides)

Possible Questions:

1. *Do you agree with the view that learning in our schools has traditionally been a more passive than active experience?*

2. *According to speakers in this film, active learning leads to deeper and longer lasting learning. To what extent do you agree or disagree with these views?*

### Summary of key points from introductory film

- Active learning is at the heart of Curriculum for Excellence.
- Historically, learning in our schools has been a more passive than active experience – ie, teachers transmitting material to learners.
- Curriculum for Excellence places emphasis on making learning more active and engaging for the children and young people.
- Children learn more effectively when they are active and engaged in their learning.
- Active learning covers a wide range of learning and teaching approaches.
- Children and young people generally find active learning approaches more motivating, engaging and meaningful.
Activity 4 Play illustrative videos

The group should be able to view one or more ‘illustrative videos’. These short films portray ways in which Scottish schools are embedding some of the principles and practices covered within this CPD session – ie, putting theory into practice.

Because time is limited, it may not be advisable to show more than one or two at this stage, so the facilitator should pre-select relevant videos in advance of the session. More illustrative videos may be shown during the plenary session if time allows.

<table>
<thead>
<tr>
<th>St Kessog’s Primary – A Whole School Theme</th>
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</thead>
<tbody>
<tr>
<td>Sports provides the context for active learning within this primary school’s emerging Curriculum for Excellence. In this illustrative film, school staff discuss how a sporting theme can cover a broad range of experiences and outcomes and promote a number of active learning methods.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dumbarton Academy – Citizenship</th>
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<tbody>
<tr>
<td>The Holocaust provides the context for inter-departmental planning and active learning in this secondary school. Teachers, students and school leaders discuss how this educational experience forms part of the school’s emerging Curriculum for Excellence.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Kilbowie Primary – Joining the Learning</th>
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<tbody>
<tr>
<td>The Very Important Bear topic illustrates how this primary school has used cross-curricular planning as part of the school’s emerging Curriculum for Excellence and the way in which children are active in their learning. Teachers, children and school leaders discuss the experiences and outcomes of this motivating theme.</td>
</tr>
</tbody>
</table>

Facilitators should invite the group to discuss the illustrative video/s and clarify any points arising. It might be helpful to ask the following questions after playing an illustrative video.

1. **What features of active learning are portrayed in this school or project?**

2. **One common perception of active learning is that it is based upon ‘physical’ activity – ie, that the learners are up and moving around, making things or doing things. A broader view is that children are active if they are engaged in their learning, eg thinking, imagining, discussing, evaluating. To what extent are these 2 different perceptions reflected in this film?**

3. **Interdisciplinary learning is also a feature of these school exemplars. In what ways might interdisciplinary (or cross-curricular) approaches promote active learning?**

4. **What might our school learn from this example of active learning?**
Activity 5  

Active learning approaches

(a) Compile a list of active learning approaches

In groups, participants should compile a list of approaches to learning and teaching that exemplify active learning.

(b) Collate active learning approaches

On a flip chart or whiteboard, the Facilitator should compile a list of active learning approaches suggested by each group.

(c) Present 20 examples

The Facilitator should present the following 20 approaches that exemplify active learning. These are displayed on the accompanying PowerPoint presentation. (These headings will be used in the next activity). To what extent does this list mirror that created by the groups? Participants might be encouraged to discuss some approaches in more detail (eg, Using Technology), and perhaps consider the extent to which each promotes active learning.

- Working in pairs
- Group work and discussion
- Role-play activity
- Practical activities
- Activities to promote thinking
- Peers teaching peers
- Creating visual organizers and mind maps
- Creating visual images
- Building or working with models
- Carrying out research
- Using technology
- Tasks that require imagination
- Tasks that evoke feelings and emotions
- Problem solving exercises
- Excursions, visits, field trips
- Creating an exhibition or display
- Making a video
- Doing a demonstration for others
- Making a presentation
- Using tools and equipment

Active learning
Activity 6   Key Questions – Self reflection

These questions allow staff to reflect on how, and to what extent, the school, department or individuals already demonstrate these features of active learning.

This can be done as a whole group or participants can form smaller groups to promote wider discussion and reflection. (These questions are displayed on the PowerPoint Slides). These questions are also displayed on a single page of A4 with space for comments and observations (Page 15). This proforma may be printed and distributed to participants during the session or workshop discussions.

To what extent do I/we provide the following learning experiences?

1) Working in pairs
2) Group work and discussion
3) Role-play activity
4) Practical activities (note a)
5) Activities to promote thinking (note b)
6) Peers teaching peers
7) Creating visual organizers and mind maps
8) Creating visual images (note c)
9) Building or working with models
10) Carrying out research
11) Using technology (note d)
12) Tasks that require imagination
13) Tasks that evoke feelings and emotions
14) Problem solving exercises
15) Excursions, visits, field trips
16) Creating an exhibition or display
17) Making a video
18) Doing a demonstration for others
19) Making a presentation (note e)
20) Using tools and equipment

Note (a)   eg, hands-on tasks, experimenting, manipulating and working with resources, using tools and equipment
Note (b)   eg, evaluating, reasoning, critical thinking, problem solving, creative thinking
Note (c)   eg, photos, posters, graphs, charts, leaflets, drawings
Note (d)   eg, websites, animations, simulations, using video, smart boards
Note (e)   eg, explanation to a class or using PowerPoint to present work
Activity 7  Identify possible opportunities for active learning

Participants should be encouraged to identify possible ways of increasing active learning experiences. This can be done as a whole group discussion or in smaller group sessions. The aim of this activity is to get participants thinking about how to increase the level of active learning.

There are two suggested approaches for this activity. Participants can consider their own teaching practices by reflecting on a recent topic or lesson and evaluating the extent to which learners were active. Alternatively, participants might consider how to increase the level of active learning associated with a topic on World War II.

Approach 1  Evaluating a recent topic or lesson

Think about some work that you have carried out recently with a class. This might for example be a topic, project or lesson from a specific area of the curriculum. For the purposes of this exercise, it might be useful to identify a topic/theme where pupils were not particularly active in their learning.

Possible Questions

1. What was the subject of this curricular experience?

2. Summarise briefly the experience of this topic from a learner’s point of view.

3. How would you assess the extent of active learning in this topic or lesson?

4. In what ways might you change or adapt this topic to increase opportunities for active learning?

5. How might these changes affect your role as a teacher?

6. How might these changes alter the nature of resources used or classroom organisation?

7. What might be some of the barriers or constraints?

8. What might be some of the potential benefits?
Approach 2  Scenario – Anne Frank Topic

For the last 3 or 4 years, a teacher has delivered a topic on Anne Frank as part of a World War II theme. Each year the teacher has relied on the same approaches, and the learning experience for pupils has not been particularly active.

Typically:

• The teacher sets the scene and explains what the class will be doing during lessons.
• The teacher conveys a lot of information about Anne Frank verbally, while children listen.
• Pupils copy down information and key points from the board into their jotters.
• Pupils are provided with handouts containing facts and information about Anne.
• On the last pages of the information sheets are questions for the pupils to complete.
• Pupils finishing worksheets early are given word searches to complete.
• Pupils watch a television documentary about Anne Frank.
• At the end of the topic, pupils receive a written test of their knowledge and understanding.

Possible Questions

1  In this scenario, why is the pupil experience largely ‘passive’?

2  Suggest a range of ways in which this Anne Frank topic could be developed or changed to make pupils more active in their learning. Try to come up with 10 possible active learning strategies or activities.

3  How might these changes affect the role of the teacher?

4  How might these changes alter the nature of resources used or classroom organisation?

5  What might be some of the barriers or constraints?

6  What might be some of the potential benefits?

Note: The Dumbarton Academy film on Citizenship (the Holocaust) illustrates active learning experiences for students.
Activity 8  Action planning

Participants should identify future actions that the school/department should consider in order to develop active learning. This can be done as a whole staff exercise or in smaller group sessions.

Step 1

The first task is to identify up to 5 priorities for developing active learning within the school. A proforma for identifying and listing priorities is provided on page 17 of this Guide.

Step 2

The second task is to produce a simple action plan for developing this aspect of Curriculum for Excellence. This would include, for example:

- The aim associated with this priority
- The planned or desired outcomes
- Key tasks, processes and resources
- The personnel involved
- The timescale for each outcome

A proforma to record planning for implementation follows on page 18 (also available as an MS Word file Improvement proforma.doc contained on accompanying CD ROM.)

The Facilitator can collate and present these responses as part of a plenary session.
Activity 9  Plenary

The aims of the plenary session are:

(a) to summarise key points and actions arising from the CPD session. Participants can be encouraged to ask questions, clarify their understanding and make additional observations and comments;

(b) to prioritise key areas for development as part of the school’s future improvement planning process;

(c) to view additional video materials (if time allows)

Follow up activities

As part of follow up work, participants should consider CPD sessions on the following related Curriculum for Excellence themes in this series.

(a) EXCELLENT LEARNING ENVIRONMENTS

(b) EMPOWERING LEARNERS

It should be agreed that such follow up activities form part of the school’s collegiate time.
Active Learning

Some Key Questions

To what extent do I (teacher) or we (school) provide the following?

<table>
<thead>
<tr>
<th>ACTIVITY OR EXPERIENCE</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Working in pairs</td>
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<td></td>
<td></td>
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<tr>
<td>2 Group work and discussion</td>
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<td>3 Role-play activity</td>
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<tr>
<td>4 Practical activities (note a)</td>
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<td></td>
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<tr>
<td>5 Promoting thinking skills (note b)</td>
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<td>6 Peers teaching peers</td>
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<td>7 Visual organizers &amp; mind maps</td>
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<td>8 Creating visual images (note c)</td>
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<td>9 Building or working with models</td>
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<td>10 Carrying out research</td>
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<td>11 Using technology (note d)</td>
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<td>12 Tasks that require imagination</td>
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<td>13 Tasks evoking feelings and emotions</td>
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<td>14 Problem solving exercises</td>
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<td>15 Excursions, visits, field trips</td>
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<td>16 Creating an exhibition or display</td>
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<td>17 Making a video</td>
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<td>18 Doing a demonstration for others</td>
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<td>19 Making a presentation (note e)</td>
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<tr>
<td>20 Using tools and equipment</td>
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</table>
Note (a) *Practical activities* might include hands-on tasks, experimenting, manipulating and working with resources, using tools and equipment.

Note (b) *Activities to promote thinking* include evaluating, reasoning, critical thinking, problem solving, creative thinking.

Note (c) *Creating visual images* might include photos, posters, graphs, charts, leaflets, drawings.

Note (d) *Using technology* might include websites, animations, computer simulations, using video equipment.

Note (e) *Making a presentation* could range from giving an explanation to a class or using PowerPoint to present some aspect of work.
## Active Learning

### Key priorities or areas for development

<table>
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<th>PRIORITY 1</th>
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<th>PRIORITY 2</th>
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<th>PRIORITY 4</th>
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<th>PRIORITY 5</th>
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Curriculum for Excellence: Planning

<table>
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<tr>
<th>Priority or development aspect</th>
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<tbody>
<tr>
<td>Aim</td>
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<table>
<thead>
<tr>
<th>Intended outcomes</th>
<th>Key Tasks/Processes/Resources</th>
<th>Personnel</th>
<th>Time-scale</th>
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Active Learning

Background

Active Learning is one of the key principles of Curriculum for Excellence. It is seen as a very effective way for children to develop vital skills and knowledge, and a positive attitude to learning.

In traditional education systems, material to be learned is usually transmitted by teachers to pupils. Learners frequently receive information by listening or reading and, therefore, tend to be passive in their learning.

Active learning is the opposite of passive learning. In active learning, students are much more actively engaged in their own learning, while teachers take a more guiding role. Students are engaged in learning activities such as researching and gathering information, discussing with others, solving problems, coming up with ideas, learning through experience, and teaching others. Students also tend to have more ownership of their learning.

Active learning shifts the focus of classroom activity from teaching to learning and research shows that active learning approaches lead to a much deeper level of skill development, knowledge and understanding.

Children learn best by doing, thinking and exploring. Being active in their learning requires children to 'make their own meaning', rather than have concepts presented by their teachers. As Dylan Wiliam observes – nobody ever learned to play guitar by watching someone else play. Learners need to be actively engaged in the learning process.

When learners are engaged actively, they make neural connections in their brains - the process we call learning. Passive methods such as listening do not require learners to make these neural connections.

Research shows that the more students become active and challenged in their learning, their ability to recall and apply that learning increases.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Recall</th>
</tr>
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<tbody>
<tr>
<td>Listening</td>
<td>5%</td>
</tr>
<tr>
<td>Reading</td>
<td>10%</td>
</tr>
<tr>
<td>Audio-visual</td>
<td>20%</td>
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<tr>
<td>Watching a demonstration</td>
<td>30%</td>
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<tr>
<td>Discussion</td>
<td>50%</td>
</tr>
<tr>
<td>Practising by doing</td>
<td>75%</td>
</tr>
<tr>
<td>Teaching others</td>
<td>90%</td>
</tr>
<tr>
<td>Immediate application of learning</td>
<td>90%</td>
</tr>
</tbody>
</table>

This data also shows that ability to recall information increases as the learning activity becomes more practical and multi-sensory.

In summary, learning is more effective when children and young people are actively engaged in that learning, rather than being passive recipients.
Of course, this does not mean that the teacher should avoid presenting information, knowledge and ideas. These methods are important within the learning process and learners need to be able to take in information by reading and listening, since this is an important life skill.

For teachers and schools who wish to increase active learning experiences, however, there is a range of approaches that might be considered.

**ACTIVITIES AND EXPERIENCES**

1. Working in pairs
2. Group work and discussion
3. Role-play activity
4. Practical activities (note a)
5. Activities to promote thinking (note b)
6. Peers teaching peers
7. Creating visual organizers & mind maps
8. Creating visual images (note c)
9. Building or working with models
10. Carrying out research
11. Using technology (note d)
12. Tasks that require imagination
13. Tasks that evoke feelings and emotions
14. Problem solving exercises
15. Excursions, visits, field trips
16. Creating an exhibition or display
17. Making a video
18. Doing a demonstration for others
19. Making a presentation (note e)
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Note (e) *Making a presentation* could range from giving an explanation to a class or using PowerPoint to present some aspect of work