Getting Practical
Science transition project
Session 1
Session 1 Objectives

• Consider why we do practical work.
• Develop an awareness of the range of possible outcomes from a given practical activity.
• Reflect on progression between Key Stage 2 and 3 outcomes.
# The Icebreaker

<table>
<thead>
<tr>
<th>1. Why should we do practical work in science?</th>
<th>2. What is your most enjoyable practical?</th>
<th>3. What is your least enjoyable practical?</th>
<th>4. What is the most unexpected outcome you've had from a practical?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. What is the most unusual practical you've done?</td>
<td>6. What's the worst thing that's ever happened during a practical?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Why should we not do practical work in science?</td>
<td>12. Which practical do you do the most?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Gallery Gossip!

• Look at all of the quotes on the posters around the room.

• Stand by a poster that you agree with – discuss with the people also stood at the poster why you agree with it.

• Now stand by a poster that you don’t agree with – discuss why you don’t agree with it.
Activity 1: Practical Activities

- In cross-phase pairs look at the practical activities displayed around the room.
- Why might you do these particular practical activities?
- Use ‘post-it’ notes to identify units of work that the activity could fit in to.
- Hold a discussion to classify suggestions ???
- Was there any overlap where the activities are used in both key stages, what are the implications of this?
Why do we do practical work?

Feedback

• How did you classify your ‘post-its‘: what groups did you use?
• How does your classification compare with other people's?
• The literature suggests that the reasons for doing practical work can be classified into three groups:
  A. scientific knowledge and understanding
  B. practical skills
  C. scientific enquiry and process

How does your classification compare with this?

• Do you have any ‘post-its’ that don't fit into these three categories?
• Is there anything missing from these categories?
• Where is the key stage cross over and what are the implications?
Why do we do practical work? - the key learning outcomes

- Ask a question
- Plan an investigation
- Identify and evaluate risk
- Collect relevant data
- Present data effectively
- Process/interpret data
- State a conclusion
- Evaluate a conclusion

- Make observations
- Identify, group or classify
- Describe a link between variables
- Show understanding of scientific ideas

- Identify equipment
- Use equipment
- Carry out a practical activity

knowledge & understanding of science

scientific enquiry & process

practical skills
## Gap Task

### What are the intended learning outcomes of each activity?
(I plan that my pupils will be able to...)

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>Develop knowledge and understanding of science</th>
<th>Practical Skills</th>
<th>Develop understanding of scientific enquiry</th>
<th>Other intended learning outcome</th>
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<td>Make observations</td>
<td>Identify, group or classify</td>
<td>Describe a link between variables</td>
<td>Show understanding of scientific ideas</td>
<td>Identification equipment</td>
</tr>
<tr>
<td>Carry out practical activity</td>
<td>Use equipment</td>
<td>Ask a question</td>
<td>Plan an investigation</td>
<td>Identify risks</td>
</tr>
<tr>
<td>Identify equipment</td>
<td>Collect relevant data</td>
<td>Present data effectively</td>
<td>Process/Interpret data</td>
<td>State a conclusion</td>
</tr>
<tr>
<td>Ask a question</td>
<td>Identify a scientific idea</td>
<td>Evaluate a conclusion</td>
<td>Identify equipment</td>
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