Summary of Content

This school have put an effective and manageable assessment process in place where they closely track pupil progress and act on any anomalies it suggests, whether these are lack of progress or misconceptions.

This exemplar should be easy to transfer to “Working Scientifically” and new content strands in the 2014 Primary Science Curriculum.
What the school says

We needed to make our Science Assessment manageable for all teachers so that we could **track children’s progress** and **pick up on misconceptions** at an early stage.

By looking at a variety of assessment ideas, we were able to choose the most appropriate for us and adapt techniques to suit our school.

Our assessment is now clear and teachers know what is expected, when and how they will use it to enhance their provision and inform pupils of their targets and performance.
What we did

• Split assessment into 2 categories: “science skills” and “knowledge and understanding*”

• Assessment tasks were created to be undertaken at the end of each unit (Test or Investigation)

• Sublevel objective statements for each unit were given to support which sublevel to award

*K & U was further subdivided into the 3 areas of science
Assessment Tasks

Science end of unit assessment tasks

At the end of each unit of work we are going to either be doing a practical assessment task with the children or a test, depending on the nature of the unit. You can then use this to level the children.

For the last week of science for the unit both lessons will need to be used for assessment.

Please split the last two lessons into two parts, with half of the class adding to their mind map using a different coloured pen/pencil and doing an independent task (maybe on the laptops?) and the other half doing the practical assessment. This way you can observe 15 children at a time to level them, then swap over for the second lesson.

If you are doing the test then all children can do this at the same time.

Test

The test questions are taken from test base and have the mark scheme at the bottom of the test. There is also a table at the end of the test with the level to give depending on the amount of marks the child has scored.

Practical Assessment Task

The task is planned with key questions included and assessment indicators at the bottom of the sheet to help you to level the children.

Assessment task – test example

Guidance for staff

Assessment task – observation example
Assessment Grids

Assessment Grids
- When the tasks have been complete use this alongside the sublevel statements to decide on which sublevel to give each child.
- There are sublevel statements for 'Skills' and 'Knowledge and Understanding' for every unit.

1a I can recognise that plants are living and need water and light to grow
   I know that plants need water & light to survive and be healthy
   I know that seeds grow into flowering plants

2c I can observe and describe the differences between plants grown in light and the dark
   I know that plants (living things) grow & reproduce
   I know & explain the effect that light, air & water has on plant growth

2b I know that plants need food, water, air & light to survive & be healthy

2a I know where a plant makes its seed
   I know the basic life cycle of a flower
   I know that plants need food, water, air & light to survive & be healthy and how to investigate this

3c I know that different living things are suited to different environments
   I know the conditions for germination
   I know that the roots anchor the plant
   I know that the stem transports minerals & water

Grids and sub-level statements to help teacher make accurate judgments.
## Completed Assessment Grids

### Science assessment grid for knowledge and understanding

<table>
<thead>
<tr>
<th>A2 SC2 Life Processes and living things</th>
<th>A3 SC3 Materials and their properties</th>
<th>A4 SC4 Physical processes</th>
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<tr>
<td>Keeping Healthy</td>
<td>Changing State</td>
<td>Gases around us</td>
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<td>Life Cycles</td>
<td>More about dissolving</td>
<td>Reversible and irreversible changes</td>
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<td>Moon, sun and earth</td>
<td>Changing sounds</td>
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### Science assessment grid for skills

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A comprehensive picture of pupil achievement is built up.
Examples of assessment in Year 3

“Aiming High” self assessment.

Formative and summative mind-map.

Written tests to check teacher judgements.
The impact for our school was ..... 

• Staff are confident when completing assessment procedures and are therefore accurately assessing children half-termly.
• Misconceptions are addressed swiftly.
• Lack of progress is identified and acted on while there is still time.
• Children make progress and achieve good results.
I strongly feel that accurate and regular assessment is paramount to address misconceptions and to closely monitor progress in all areas of science.

Our results at the end of KS2 help us to believe that we are on the right lines.

100% level 4+ and 85% Level 5
What we will do next

Next we plan to update the assessment tasks in line with the Science Curriculum 2014 and to use points (linked to APS – average point score) in place of levels.