Assessment strategies with examples of pupil outcomes from Forres Primary School
This example shows how Assessment for Learning which is embedded in school practice from planning to evaluation helps children become independent learners, raising their own questions and applying their scientific skills.

It includes interesting contexts which motivate them to lead their own enquiries.

One specific example is followed here, from planning to children’s work.
What the school says

• This unit was undertaken during the Spring Term. At the time we were studying China as part of the Creative Learning Journey.
• 'Real life' scenarios were planned linking science with literacy, numeracy, art, history, geography and design and technology. The scenarios were largely based on a fictional Emperor of China. This made the lessons more relevant, fun and interesting for the pupils as they enjoyed carrying out investigations and solving problems to help him.
• The topic also provided us with numerous opportunities for assessment for learning.
• Evidence was often collected in the form of photographs and attractive classroom displays.
The example we would like to show you is our Rocks and Soils topic, linked to a “Creative Learning Journey” through China.

<table>
<thead>
<tr>
<th>What we know already</th>
<th>What we think we know</th>
<th>What we’d like to know</th>
</tr>
</thead>
</table>
| - They make staunchers out of rock.  
- Rocks aren’t alive.  
- A rock can smash a window.  
- Plants live in soil.  
- Rocks are very hard.  
- Soil is brown. | - the moon is made of rock.  
- Black is the Porcupine’s couloir. | - what’s the most striking fact?  
- The most porcupine size.  
- How do soil get older.  
- Where do rocks come from.  
- Excellent ideas. |

Each new topic is started in this way. This is to establish what the children already know and what they would like to find out. Teachers are able to build on existing knowledge and can make the topic better suited to the children’s needs. This also links to the teaching principles as children are able to ask questions and be inspired to know more.

[Medium Term Planning, link (click here)]
Children have worked independently on challenging problems.

Click here to see how we did it and how we were assessed

<table>
<thead>
<tr>
<th>Type of rock</th>
<th>Is it permeable?</th>
<th>Does it split?</th>
<th>Does it wear well?</th>
<th>Does it float?</th>
<th>What could this rock be used for?</th>
</tr>
</thead>
<tbody>
<tr>
<td>slate</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>To make a loaf as a house</td>
</tr>
<tr>
<td>marble</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>To make a statue</td>
</tr>
<tr>
<td>chalk</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>To make a game on a playground</td>
</tr>
<tr>
<td>granite</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>To make a kitchen work top</td>
</tr>
<tr>
<td>pumice</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>To rub oiled hands</td>
</tr>
</tbody>
</table>

Children have applied their scientific skills.
Can you help the Emperor to solve his problem?

My beautiful marble statues are beginning to crumble! It happens whenever it rains but they are far too heavy for me to take into my palace. I thought that marble was supposed to be hardwearing. Why is this happening? Could it be that they are not really made from marble?!

Child’s work:
It could either be chalk, clay or limestone because chalk would dissolve, clay would melt and limestone would probably crumble. I think it is limestone or clay because they would probably crumble when it rains.

What do you think? I think it’s chalk
because marble is impermeable but chalk is permeable. Marble does not wear away but chalk wears away easily.

Child’s work:
I think it’s chalk because marble is impermeable but chalk is permeable. Marble does not wear away but chalk wears away easily.
Examples of where work is cross-curricular:
In literacy we have been learning to write instruction texts. After our practical lesson making chocolate rocks, the children wrote their own instructions.

Photographic evidence was included on the work as the actual evidence was eaten!
We then set a new challenge to help with the palace renovations.
The children were challenged to renovate the Emperor’s Palace using suitable rocks for each area. They were given paper printed to represent the different kinds of rocks with a key.

Links with D&T
The impact for our school was ..... 

• APP for science is now embedded throughout the school enabling children to be continually assessed during lessons with clear objectives and success criteria to achieve.

• Targets are set, linked to the APPs.

• Assessment data is recorded on a termly basis.

• Tasks from the APP in science books are regularly incorporated into planning.

• Teachers mark against the success criteria and provide comments on how to move the children on.

• Teachers were able to see clearly how science can be made more enjoyable and relevant by linking it with other subjects.
Science Subject Leaders Comments

We have found that by using interesting contexts for science, lessons are more relevant, fun and interesting for the pupils.

They enjoy carrying out investigations and solving problems – in this case to help the Emperor.
What we will do next

• ensure the continuation of cross-curricular planning
• begin each new topic with a mind map
• encourage children to ask questions and devise their own Investigations
• continue with targets, clear objectives, success criteria and APP record data
• continue to find interesting ways to mark work effectively