

Ledbury Primary School



Assessment opportunities



Summary of Content

This exemplar contains some excellent examples of assessment opportunities from EYFS to Y6 often without writing.

Ideas include concept cartoons, observation, listening, drama, photographs, modelling, Forest School, mind mapping and annotations, to name but a few!

NB: It links to their other work on “Developing Pupil-led enquiry”.



What the school says...

We highlighted what we thought good science looked like...

- Enquiry led, practical and investigative
- Creative and cross curricular
- Linked to children's interests
- Formative assessment informing next steps
- Questioning and hypothesising

We highlighted what we needed to do to achieve it....

- A variety of methods of assessing children to inform next steps
- Build in differentiation and targets
- Make recording relevant and meaningful

Forest School is great for science!

We went to visit our new school pond and spent some time watching quietly. We saw Water Boatmen skimming and diving, spiders racing across the surface of the water and even a frog who sat very still while we watched him. Next step is to use the Stem library for further research into Science through ponds, put up some identification sheets (Spring 2014) and buy resources for pond dipping and looking beneath the surface of the water (marine viewer).



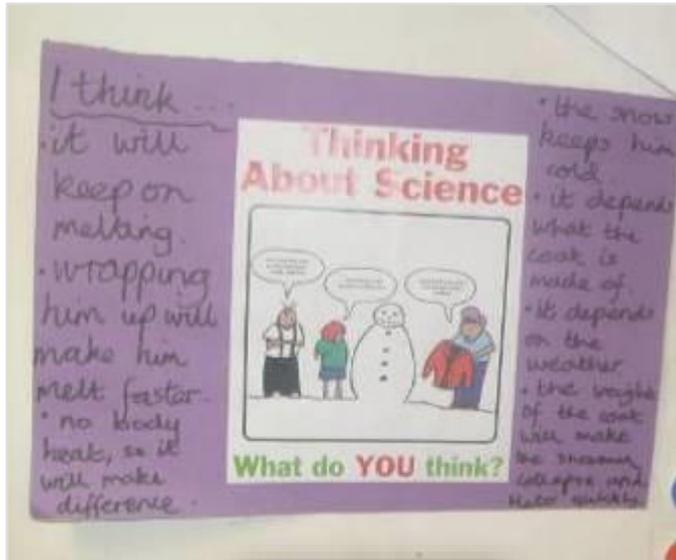
- **Extracts from an observation.....**The children are making lots of mud cakes and mud pies. They are mixing water with soil to make a mixture and stirring it with wooden spoons in old pans and containers. They are chatting to each other about what they are making and laying it all out on the unit.
- **Next steps**
- More opportunities to experiment with mud play and add different materials or change the consistency.
- **Characteristics of Learning**
- Playing and Exploring



EYFS

Concept Cartoons for Formative Assessment

We began to use Concept cartoons as starting points to stimulate discussion and investigation. We gathered children's ideas and encouraged them to think about how they could investigate to find a solution.



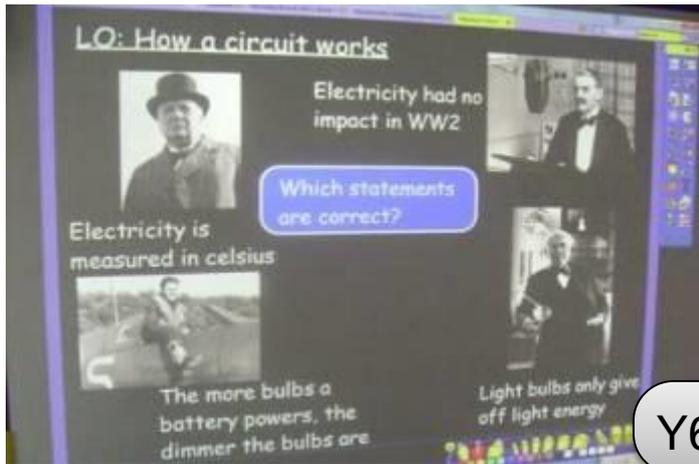
Y2

Y5

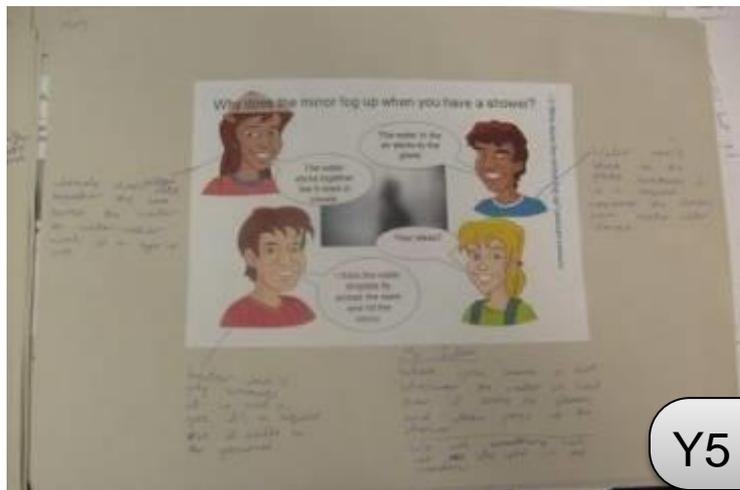


In Year 5 children used the concept cartoon about the snowman to help them think about how best to insulate their magic potions as part of their magical materials topic. In Y2 the children used a similar cartoon to help them solve the problem of how to stop the dinosaur eggs from melting.

Concept cartoons evolved as teachers began to use them in different ways:



- As a 'cold' task to find out what children already know about a topic
- As an assessment tool to find out what children have learnt
- By making their own to fit to a specific topic
- To generate questions about a topic



Feedback was very positive

Comments form teachers and children

Teachers

Concept cartoons are ace. As a teacher they give me a starting point to go from.

I think they can be used in different ways and not just for science, for other subjects too!

They are great for assessment and for using scientific language.

I love the concept cartoons as a tool for learning and a support for teaching.

Great for getting the children thinking about the subject and trying to formulate their own ideas.

Children can refer back to them as they refine their ideas.

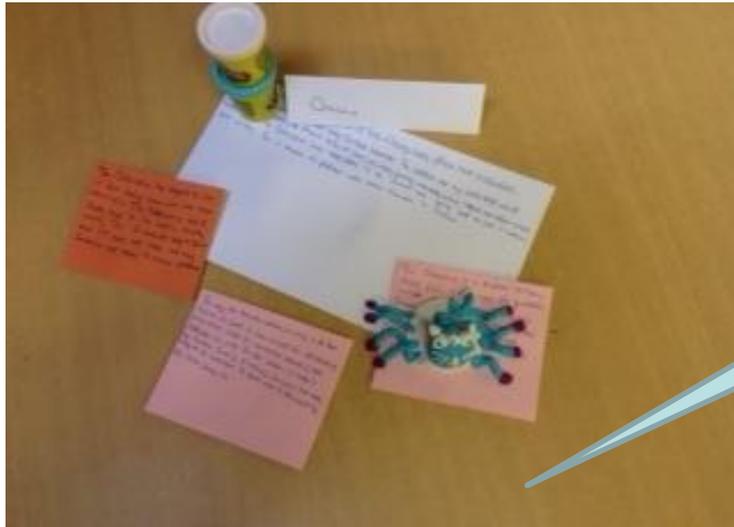
They open up the lesson making the children more in control of the direction of learning.

Whole school

Recording can be assessed too

As a result of feedback from children we explored different ways of recording to make it more manageable and less onerous.

Y6



Creating play dough animals and explaining their adaptations.



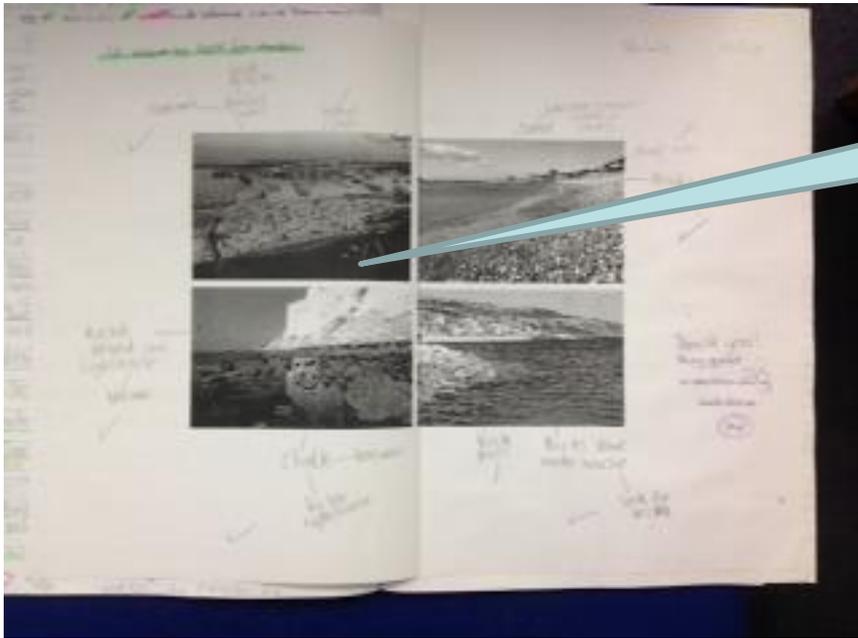
Marking the direction of forces.



Taking photos with the iPad



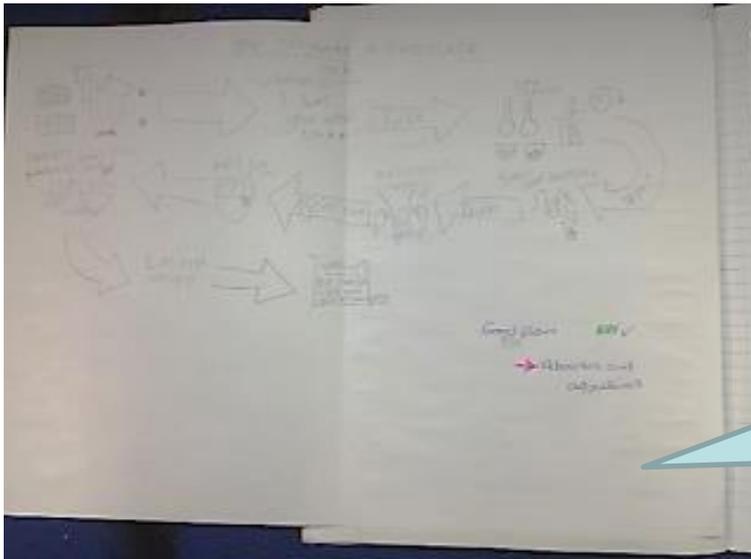
Y2



Annotating pictures to explain features



Edible recording!
Making chocolate rocks



Y3

Drawing a map to explain a process



Y3 demonstrated what they had been learning about during their assembly for parents. They performed a dance to explain how rocks are formed and talked about different types of rocks and their uses.

Y3

Assessment and differentiation

- We decided to build in challenges and up-levelled tasks to provide more differentiation. We modelled observations leading to next steps based on good practise in EYFS and used APP as a tool to become more familiar with the levels.

This observation sheet uses symbols to quickly record what is observed in a lesson, through discussion or in work to indicate if a child has achieved the level, partially achieved it or achieved above it. This information is then used to plan the next steps for the different groups of children.

We have also developed a formative way of marking that gives the children information (which is highlighted) about what they have done well - **green is good** - and what they need to do next - **pink to make you think**. Children then have 'Fix it' time to respond to the comments made.

The image shows a handwritten observation sheet for a lesson titled '6. DM Science' and '1.0 Identifying moral adaptations'. The sheet is organized into columns: 'Children's names', 'Adaptations to her environment', and 'Group'. The 'Children's names' column lists 20 children, with initials like 'A', 'L', 'C', 'P', and 'M'. The 'Adaptations to her environment' column contains various symbols: green circles (A), pink circles (A-), and yellow circles (A). Some rows have green highlights in the 'Adaptations' column, and others have pink highlights. The 'Group' column contains small drawings of children and some text like 'Too', 'Lighting of room', and 'Pink'. The sheet is used to record observations and plan next steps for different groups of children.

<p>Learning Objective</p>	<p>To know that air exists</p>	<p>To know what solids dissolve completely in water.</p>	<p>To be able to identify what makes a solid absorb liquids successfully.</p>
<p>Assessment</p>	<p>I can find a way to prove that air exists.</p>	<p>I can identify which solids completely dissolved.</p>	<p>I can say which solid was the best at absorbing.</p>
<p>Ready</p>	<p>I can also explain my reasoning.</p>	<p>I can also explain why.</p>	<p>I can predict with a reason which will be the best.</p>
<p>Steady</p>	<p>I can even find multiple ways to show air exists and give reasoning for each.</p>	<p>I can even use the terms transparent, translucent and opaque to explain my reasoning.</p>	<p>I can even explain my results using scientific reasoning.</p>
<p>Go</p>			

This planning extract shows how children can up level their work by working to the ready, steady, go criteria.

Group Activity - How can we prove that there are gases around us?

Show concept cartoon and explain Wizard Wow's problem.

Explain that Wizard Wow is very clumsy and spills his potions. He needs something that will absorb any spills quickly and effectively.

Challenges.....

an example of Year 6 challenges designed to find out what the children knew

Circuit Challenges

Can you draw a diagram of the following circuits? Don't forget to use a ruler clearly.

Ready = Make one bulb light up.

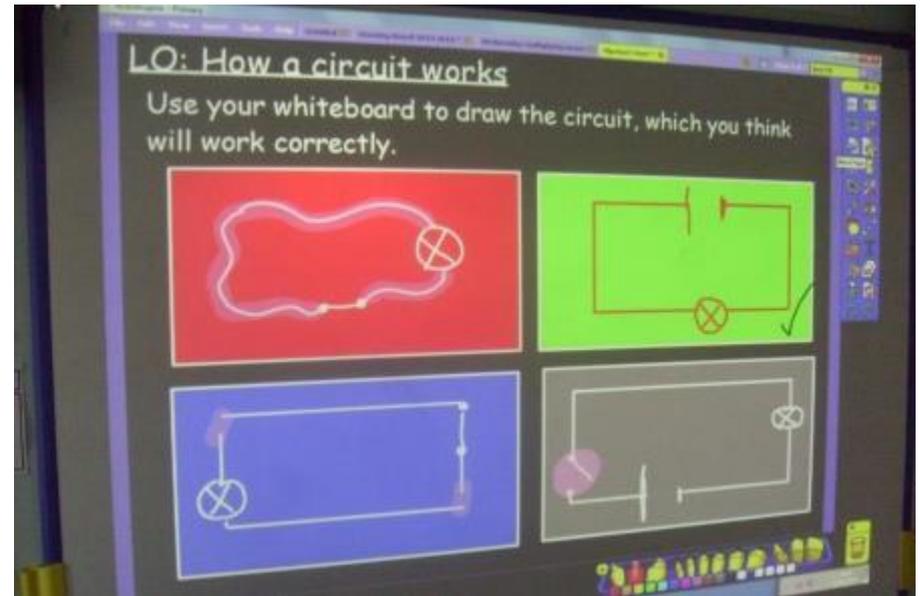
Steady = Make two buzzers work.

Go = Make 2 bulbs very bright.

Then, draw a circuit, which makes 2 bulbs very dim.

GoGo = Add a switch that turns off both bulbs. Is this a series or parallel circuit?

SuperSonic = Add a switch that turns off only one bulb. Is this a series or parallel circuit?



The impact for our school was

- The “ready, steady, go” criteria help children to upgrade their work by giving them clear targets.
- Feedback is given to children to give them clear indications of where they can improve their work
- “Fix it” time gives them an opportunity to respond.
- More able children are being challenged and less able are being supported.
- Overall it means more progress is being made and children and staff enjoy their science learning.

Science Subject Leaders Comments

It has been a journey for me personally to develop my leadership skills through working closely with teachers throughout each phase. The key has been everyone working as a team and embracing the Science Quality mark as a tool to improve the teaching of Science at our school. The Principles of Teaching and Learning Science that we all agreed upon gave us our direction.



What we will do next

- Use the RAG (Red, Amber, Green) rating assessment tool so that pupils and teachers are clear about who understands which concepts and this then informs the teacher about what needs to be taught next to each child.
- Red-a pupil has misunderstood the concept and needs to learn it again (but not using the same teaching strategy)
- Amber-a pupil has some misconceptions and needs further support to embed their understanding of the concept
- Green-a pupil has understood the concept and needs an extra challenge!