Carr Mill Primary School
Using our science principles
Summary of Content

This is a great example of where the science principles support both teaching and learning.

We particularly like it when the children reflect on the lesson by adding their comments on the classroom principles posters.
What the school says

• Creating and following the science principles has ensured that all staff plan and deliver science lessons that are at least good.

• The science principles have also been used with the Governing body to develop their understanding of where we currently are and where we aspire to be.
What we did

• Staff recorded their ideas of “Science is good when...” on post-its. These were ranked in order of popularity and discussed honestly.

• We then ranked our top ten in order of importance with the understanding that these ten principles

• Eight principles now underpin the teaching and learning of science in our school.
Our Science principles

1. Children are engaged
2. Children are actively learning
3. Children ask questions
4. It is inspiring (children want to do more in their own time)
5. Children challenge their own thinking
6. Children demonstrate their own learning (apply in different contexts/talk about it)
7. It is relevant to the child/their environment
8. It is practical, investigative and fun
We use the science principles ....

My plant needs soil to grow.
P1 - We are engaged ...
P5 - We reflect on our science

What’s under his shell?

Curiosity is encouraged

Sharing our achievements with everyone

Actively engaged
P2 - We are actively learning...

Visitors

Find something prickly...

This one must be heavier

Look closely

I know more about how many legs and antennae a bug has than I ever have! (Parent)

Talking boxes
P3 - We ask questions...

How do we get the Princess out of the ice?

Solving real problems

Taylor Bailey: Smash it!
Ronnie Wood: Put water on it.
Holly Hart: Put warm water on it.
Natalie Ford: Wait for the sun.
Skye McConnell: Wait for the summer.
Pippa Howard: Put grit on it.
Joshua Dunn: Crack it, then put it in hot water.

How did the worm climb over the side?
Why does the shell bug clean his arms so much?

Anything else you are interested to find out about the changes humans encounter as they develop to old age? How long can somebody live for?
High quality displays and high expectations

Present
What do pupils want to know/understand?
What are they interested in? What motivates them?

• What happens the sun? What is the difference between a planet and a star?
• How many astronauts have landed on the moon?
• Why do we not notice the sun as it spins?
• Is there any life out there?

My class have produced some excellent space homework and are keen to continue.

P3 – We ask and answer our own questions

Extending learning at home
P4 - We want to do more...

We are engaged in our own learning

Children have gone home and repeated experiments at home: we looked in forces at how to make a potato float by changing the density of the water by adding substances. The children then went home were adding different substances (salt, sugar) and cutting the potato and wrapping in different materials (tin foil, cling film).

I made this because I wanted to learn more about bones!

what do you like more history or science?
Category: School work
Started by: Layla Sant at Carr Mill Primary School

Taylor Thomas-Young at Carr Mill Primary School wrote:
science is better than history

Jessica Dunn at Carr Mill Primary School wrote:
I agree you definitely learn more in science than history plus you can find out about how your body works although I do like history as well

Miss Lloyd at Carr Mill Primary School wrote:
Good answer!

Mushikan Muralitharan at Carr Mill Primary School

I have found a video about how the heart pumps blood [5 likes] [9 comments]
P5 - We challenge our own thinking...

"Do you think that the shape of the wings affected it?"

"Yes, because the wings hold a lot of weight. Explain what streamlined us?"

A streamline is where something is straight like a car or somebody parachuting from the air on their belly.

Does the biggest hand have the biggest grab?

Objective achieved and self-assessed
P6 - We can tell you what we have learned and show you in other lessons …

Science supports and links with other curriculum areas

YouTube clip of Dem Bones (dancing skeletons).
Encourage children to dance and sing along pointing out relevant body parts. (Hook for learning)

Year 2 made me in the style of Arcimboldo when learning about plants

Making moon buggies

Can you select the correct materials to make a crown fit for a Queen?

Art
Design Technology
Music
ICT and Self-assessment

Measuring

Collecting data

Report writing

Hooks for learning

P6 - We apply our learning in different contexts
Down on the allotments

Our outdoor classroom

The ranger had a vast knowledge about wildlife, it enabled children to observe all different types of birds, not just common garden birds. The ranger knew where to take us and children gained a deeper understanding of habitats.

We value science
We are actively engaged;
We enjoy science;
Science supports other curriculum areas;
We have links to outside agencies

P7 – It is relevant to me and my environment
P4 - Our families get involved...

“We had great fun creating a science costume and I have loved seeing science in school, it has changed since I came here!”

The children clearly enjoy science here, they were very enthusiastic and constantly referred to similar activities in science club. (Family Learning Development Officer)
P8 - It is practical, investigative and fun!

Actively engaged
Science Safari
Science principles in action

There was an air of excitement around school; children were eagerly anticipating the next classroom.

I loved science safari week – it was so much fun doing lots of activities all over school!

My children are still talking about it!
The scientific enquiry book has helped me get children to think and open up more discussion.

CPD gave us the opportunity to plan activities related to scientific enquiry and share good practice from other teachers.

We were able to think about the learners in our class and what they thought was good.

I have a better subject knowledge as a result of thinking about science in different year groups!

It was good to see different approaches towards delivering a science concept.

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The scientific enquiry book has helped me get children to think and open up more discussion.

It improves my subject knowledge and confidence….
The impact for our school was ..... 

• Staff and children know what to expect and what is expected of them in order for science to be good.

• Reference to science principles during planning ensures a balance between working scientifically and learning scientific facts.

• Children reflect on the lesson by adding their comments on the classroom principles posters.
Science Subject Leaders Comments

These lessons take the children’s interests into account as we seek their opinion before, during and after episodes of learning. Children can be relied upon for their honesty (sometimes ruthless!) so in seeking their feedback we can be certain that all of our children are actively engaged in their own learning and achievement.
What we will do next

We are going to use this process as a model for other curriculum areas to ensure that teaching and learning is at least good.