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Working Wonders with Primary Science

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The major changes

- More in ‘Working Scientifically’ about different types of enquiry
- Lots more on naming and identifying living things - common plants (including evergreen and deciduous trees) and animals (carnivores, herbivores and omnivores) in Y 1 & 2 especially
- Seasonal changes including day length in Y1
- Simple digestion in Y4
- Evolution and Inheritance in Y6

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Organisation of whole school plans

- 4 units per year group in KS1 and 5 per year group in lower and upper KS2
- You do not have to stick to the content of the year groups as laid out in the PoS
- If it helps think of it in 3 stages – KS1, Lower KS2 and Upper KS2 and manipulate the units to fit in with your school
- Y1 (or Y2) will need to make one unit stretch across the whole year to observe changes in nature and in temperature/day length/weather through all the seasons

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Are there thoughts around the use of the unallocated time?

- Review learning across the year by creating a class science newspaper, video, cartoon or poster bank
- Set up outside science areas/walks linked to learning
- Plan in local visits and revisits/links with industry/local community
- Carrying out more investigations especially those suggested by the children, share data across classes and between schools (!)
- Independent study (individual or pairs) on area of choice linked to previous learning (IERG)
- Introduce some problem based learning
- Encourage older children to teach younger children things learnt in science, or cross fertilise your classes
- Use Science as a great way to hand classes over and extend transition opportunities.
- May fruitful links with your High School partners
- Take a more risky, imaginative exploration of pedagogy – time for teachers to learn for themselves…

What about assessment?

- Levels removed.
- Schools to use their own approaches to assessment.
- Assessment framework should check what pupils have learned and whether they are on track to meet expectations at the end of the key stage, and to report regularly to parents.
- DfE to provide examples of good practice

Secretary of State NCTL 'Seizing Success' conference 13 June
http://www.education.gov.uk/schools/teachingandlearning/curriculum/nationalcurriculum2014/a00225864/assessing-without-levels

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Maintaining Curiosity (OFSTED 2013)

This report highlights the importance of teaching science for understanding. For pupils to achieve well in science, they must not only acquire the necessary knowledge, but also understand its value, enjoy the experience of working scientifically, and sustain their interest in learning it. Pupils in schools need to discover the concepts revealed through observing scientific phenomena and conducting experimental investigations for themselves. Then they are more likely to continue to study science and use that learning for work, for family, and to contribute as informed citizens.

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Primary Science

In the best schools visited, teachers ensured that pupils understood the ‘big ideas’ of science. They made sure that pupils mastered the investigative and practical skills that underpin the development of scientific knowledge and could discover for themselves the relevance and usefulness of those ideas.

Science achievement in the schools visited was highest when individual pupils were involved in fully planning, carrying out and evaluating investigations that they had, in some part, suggested themselves.

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fa**sci**nate

What does it mean to be wonder-full?

What do children wonder about?

Can we create wonder-full science learning experiences in the primary classroom?


What do we do if we feel something wonder-full is happening?

Can we authentically use children's questions…?

Scientific Weaving

Bringing specialists together to co-construct pedagogy:

- refining our understanding of what it means to work scientifically
- collaboratively developing rich learning journeys to access the primary science curriculum
- enhancing our subject and pedagogical knowledge

Debbie Eccles & Simon Taylor (2011)

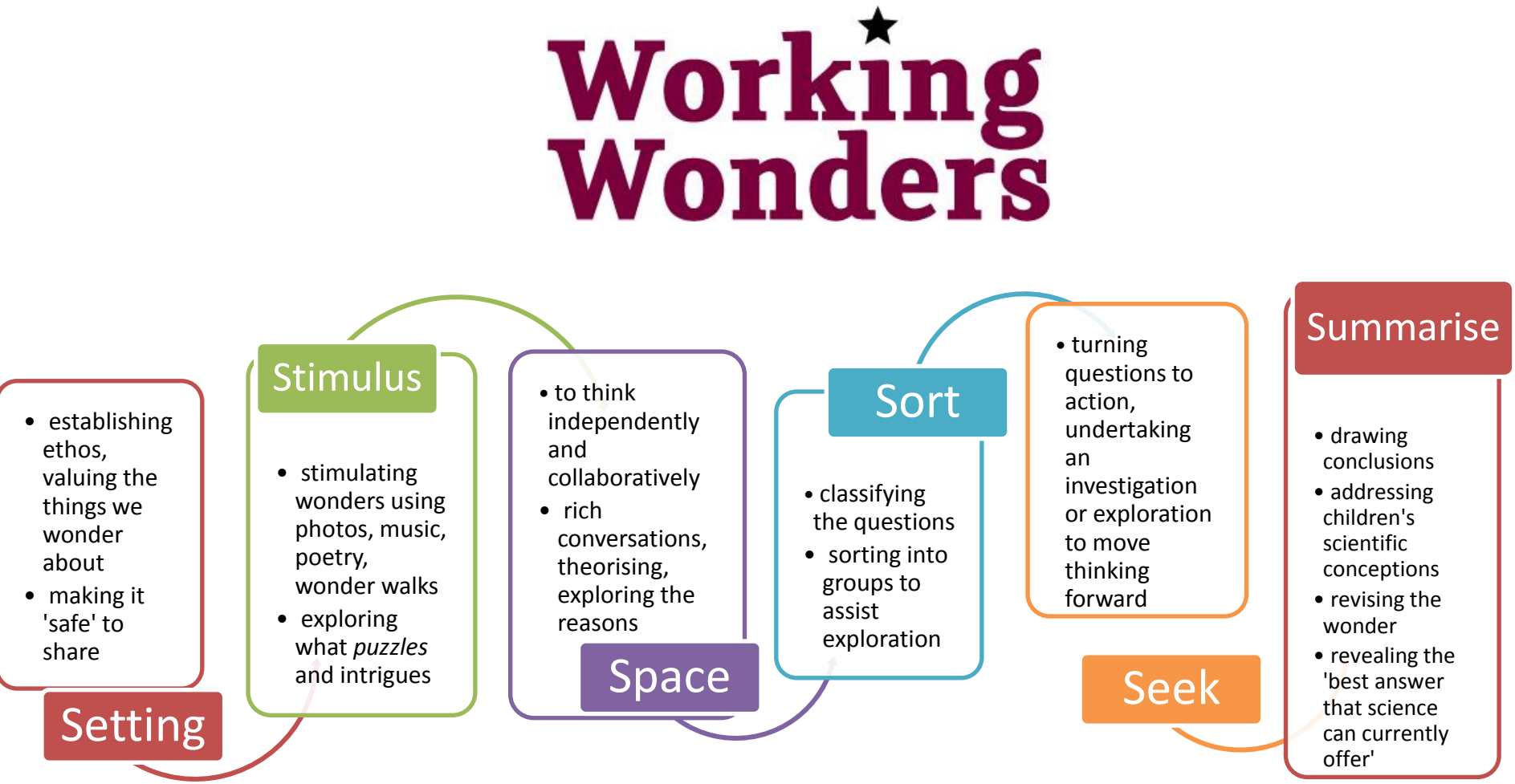
Exemplify wow events

Grabbing children's interest and generating lots of questions

- some teacher demonstrations, others free exploration by the learner

When you wander around your school to you see the evidence of ‘wonder’ or ‘wondering’ around the school?

Working Wonders



The Three Riches

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