

Types of enquiry: observing over time (KS1 & KS2)

The new science curriculum puts working scientifically at the heart of primary science and there's increased focus on children learning to work as scientists rather than just acquiring scientific knowledge.

Observing over time is a working scientifically skill that needs to be developed in primary school. A video summarising the new curriculum is also available.

Ogden primary curriculum resources can be found on the Ogden website: www.ogdentrust.com/resources.

Transcript

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Many big questions in science are about change and the type of enquiry that's great for

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finding out the answers to these questions is observing over time. It doesn't have to just be biological

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areas of the curriculum, it can be physical processes and changes in materials over time

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as well, so this is something that fits across the whole curriculum. The time limit itself could

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be seconds, minutes, days, weeks or even years - so there's a huge range of different approaches

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you could take for these types of enquiries. When observing over time, there is a big range

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of big questions that you could ask, for example a child might wonder - how does my shadow change

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over the day or how does the temperature of this cup of tea change over time?
Longer scale projects, such as how

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the shape of the moon appears to change over the month or how the temperature outside changes over

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the course of a year - some of these could lead to fantastic interactive displays in your classroom

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where you're collecting data continuously over a really long period of time. When children are

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carrying out most of these enquiries, you would immediately think that there's going to be some

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sort of measuring involved, you're obviously going to be measuring time; when the younger children

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are observing over time they're probably more likely to be making observations of how something

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has changed over time and with time this will also include measurements. So from this point of

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view, some observing over time enquiries involve doing observational sketches, this shouldn't be

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something that we get rid of as children become older because it's fantastic for them to come

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back to their observational drawing and look at how they improve that kind of detail in their

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drawings and how they can use more technical scientific language to label the features

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that they've observed. When it comes to measuring having a great range of equipment for measuring

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temperature, light and sound really is helpful for this type of enquiry; data loggers are brilliant

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here because they have settings that will look continuously over a particular measurement with

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time - there you can look at how the temperature of a classroom changes over 24 hours or the noise level

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or the light levels; a data logger can get you a huge range of data and children can interpret the

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charts that come from that. When reporting, we're looking at probably more formal reporting in terms

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of tables and graphs; in Year 3 and 4 we try and encourage our children to use the model PEE when

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writing a conclusion: first they make their point, which is usually the answer to their question;

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secondly, they give their evidence - what it is that's made them think that is the answer; and thirdly,

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they consider what is the explanation for this and try and bring in some new science ideas to

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explain what they've found. It's worth considering about when you do your predictions; often with

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observing over time, children will be able to make a prediction at the start based on their prior

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knowledge, but its always worth revisiting, making predictions again at the end of the

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enquiry when children can use their data to make further predictions that they might go on to test.

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03:16
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