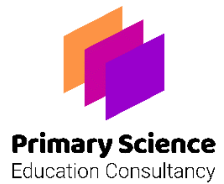





Examples of Work


Max

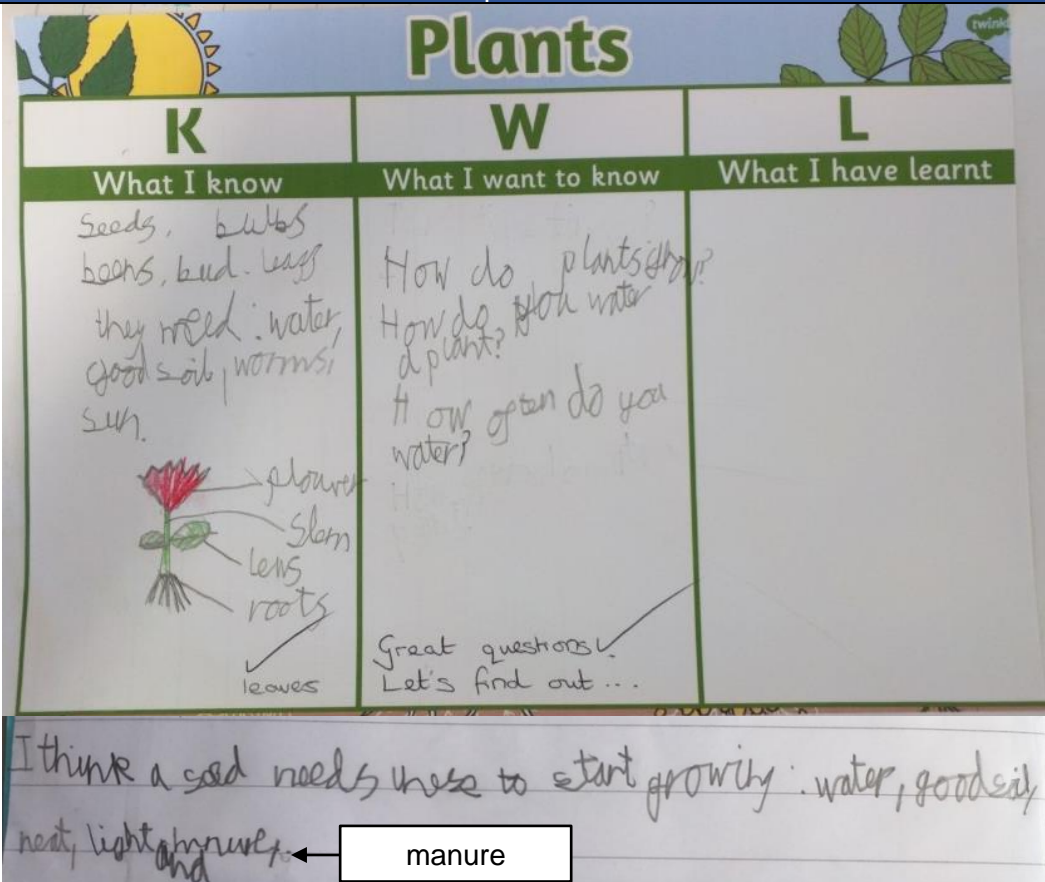
Plants - Year 2





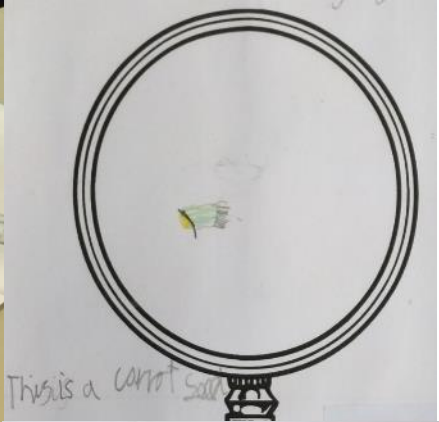
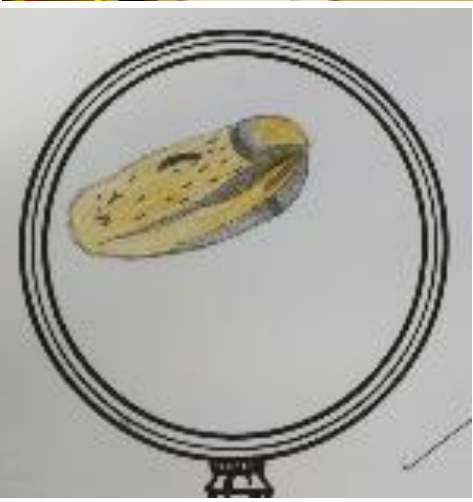

	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Identify and describe the basic structure of a variety of common flowering plants, including trees. 			
	Description of activity			
	The children were given a selection of seeds and bulbs on their table and asked to have a look at them and talk about what they noticed. They were not told what they were. The children were then asked to think about how they could sort the objects.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>“This one looks like popcorn.”</p> <p>“The seeds are like plants growing up.”</p> <p>“These are bulbs. They go together because they look alike.”</p> <p>“We could sort them by colour or texture, whether they are rough or smooth.”</p>		<p>Max is aware that plants grow from seeds and is familiar with bulbs.</p>
<p>Teacher observations</p> <p>Max’s group first sorts them into seeds, bulbs and beans. They also sorted them by size and then in order from cleanest to dirtiest.</p>		<p>Working scientifically</p> <p>Max suggests different ways to sort the seeds and bulbs and also ranks them in order.</p>



	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Identify and describe the basic structure of a variety of common flowering plants, including trees. 			
	Description of activity			
	Following on from the previous classification activity, they were asked to complete the grid to show what they already knew about plants and identify questions about them to answer.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
	 <p>The student's work is titled 'Plants' and features a KWL grid. The 'K' column (What I know) contains handwritten notes: 'Seeds, bulbs, beans, bud. legs they need: water, good soil, worms, sun.' Below this is a drawing of a flower with labels: 'flower', 'stem', 'leaves', 'roots', and 'leaves'. The 'W' column (What I want to know) contains questions: 'How do plants grow?', 'How do plants grow water?', 'How often do you water?'. The 'L' column (What I have learnt) is empty. Below the grid, the student has written: 'I think a seed needs these to start growing: water, good soil, nest, light, worms, and manure'. A box labeled 'manure' has an arrow pointing to 'worms' in the student's list.</p>	<p>Max knows the parts of a plant covered in Year 1 and is aware of what plants need to grow.</p> <p>Max is not aware that seeds do not need the same conditions to start to grow as plants require.</p>
Teacher observations		Working scientifically
When asked what seeds need to start growing, Max includes light as a requirement.		Max asks questions linked to the topic.

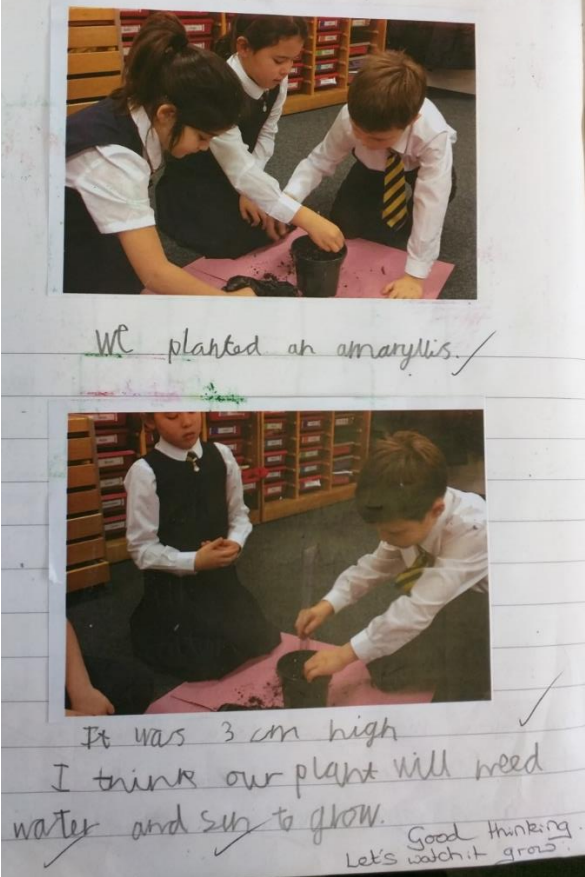
	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. 			
	Description of activity			
	The children were asked to make careful observational drawings of seeds and bulbs.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>The bulbs already have shoots, whereas the seeds do not.</p>	 	
<p>Teacher observations</p>	 	<p>Working scientifically</p> <p>Max uses a magnifying glass to help him make close observations.</p>

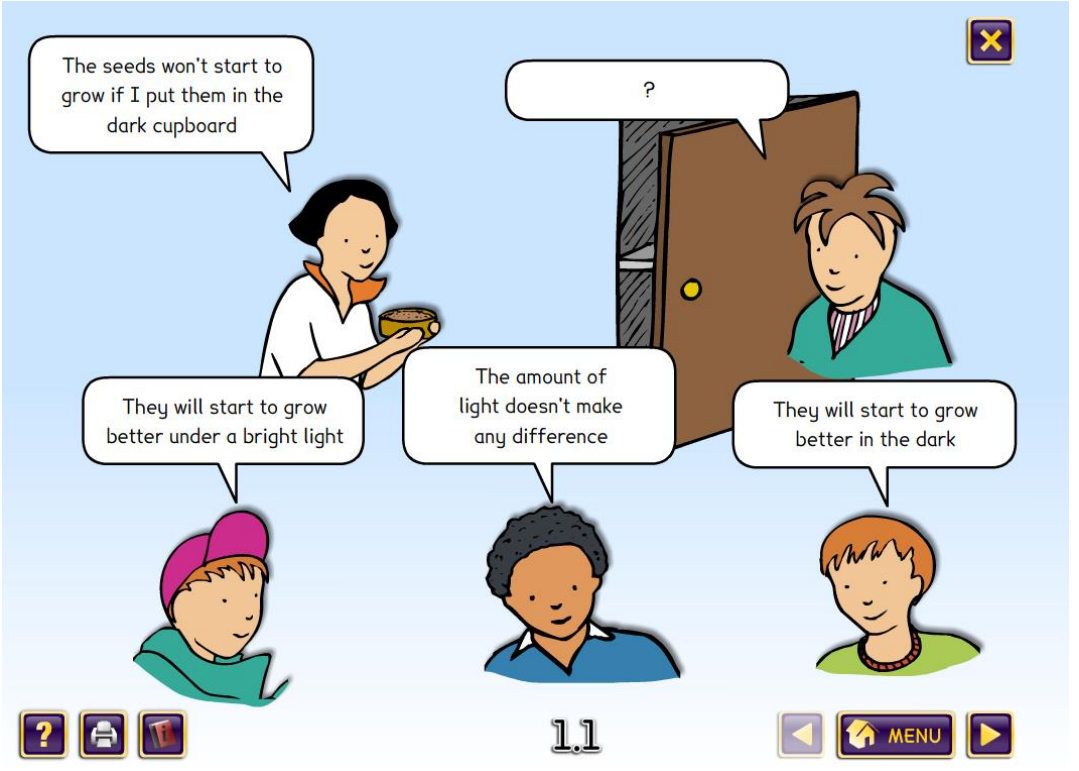
	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. 			
	Description of activity			
	The children were shown images of a sunflower seed, sunflower seedlings and an amaryllis bulb, and asked to think about which was the odd one out.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>“The seed is the odd one out because it is not growing. You can already see the shoot coming out of the bulb. The seeds look like hats on the seedlings.”</p>		<p>Max notices the green shoot already coming out of the bulb. He also notices that the seed case has been pushed out of the ground by the seedling.</p>
Teacher observations		Working scientifically

	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	The children planted an amaryllis bulb. Over the next month, they kept an eye on it, looking for how it changed and measuring it.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>"It grew really quickly. It now has three flowers. The petals are pinkish white. It smells a little bit. It needed a lot of water because it is hot in our classroom."</p>	 <p>We planted an amaryllis.</p> <p>It was 3 cm high I think our plant will need water and sun to grow. Good thinking. Let's watch it grow.</p>	<p>Max comments on the flower, how the plant grew, and how it needed to be looked after.</p>
Teacher observations		Working scientifically
		<p>Max makes and records observations and measurements of the changes.</p>

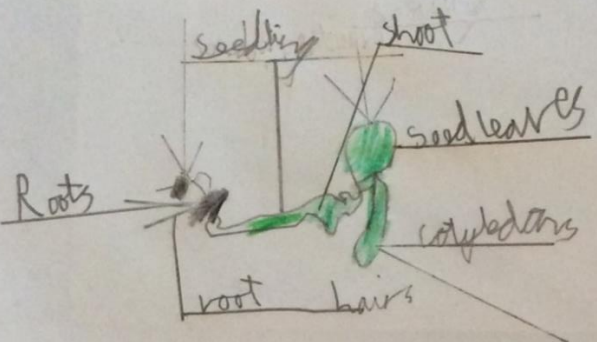
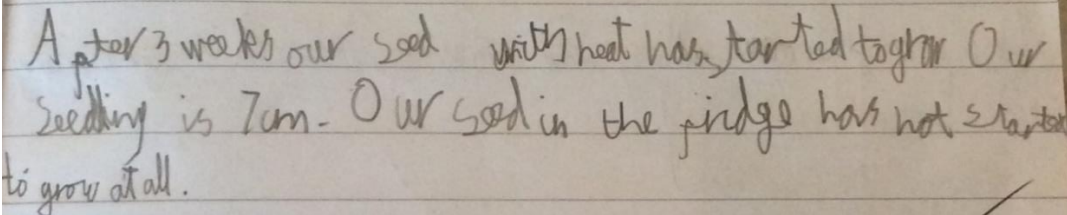
	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	The children discussed the ideas on the concept cartoon.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>“They will not start to grow in the dark, as they need sunlight. They will start to grow better under a bright light.”</p>		<p>Max does not realise that seeds and bulbs do not need light to start to grow.</p>
Teacher observations		Working scientifically

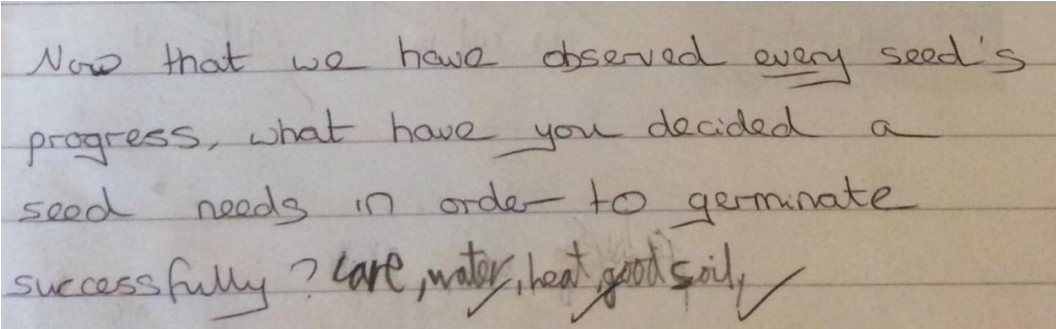
	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	Some sunflower seeds were planted and then kept in the cupboard. Max was surprised that the seeds started to grow in the cupboard.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>“The seeds in the cupboard started to grow at the same time as the ones by the window, but they grew faster. The leaves were yellow though. I don’t think they are very healthy. The plants are more healthy if they have light.”</p>		<p>Max now knows that seeds can start to grow in the dark, but that to grow healthily the seedlings need light.</p>
Teacher observations		<p>Working scientifically</p> <p>Max makes observations and comparisons, using them to conclude which conditions enable plants to be healthier.</p>

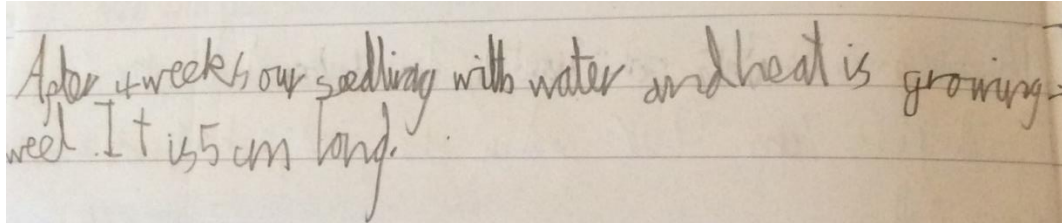
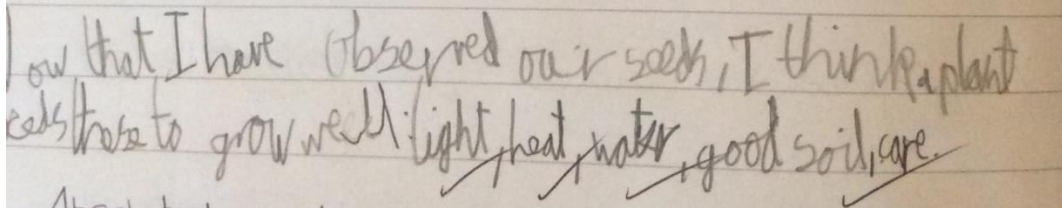
	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	Some seeds were also put in the fridge.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
		Max has observed that seeds need warmth to germinate.
Teacher observations Max picked up the word, "cotyledons" from a book the class were reading together.	 <p>After three weeks, our seed with heat has started to grow. Our seedling is 7cm. Our seed in the fridge has not started to grow at all.</p>	Working scientifically Max makes careful observations of the seedling and produces a labelled diagram of the basic parts, including root hairs which he read about in a book. He uses his observations to compare the two conditions for germination.


	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	The children were asked to reflect on what they had learnt by trying to germinate the seeds in different conditions.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
		Max now shows that he understands that seeds do not need light to germinate.
Teacher observations		Working scientifically
Max recognises that seeds grown indoors need to be looked after – they need love.		Max uses the results of all the investigations to answer the enquiry question about conditions for germination.

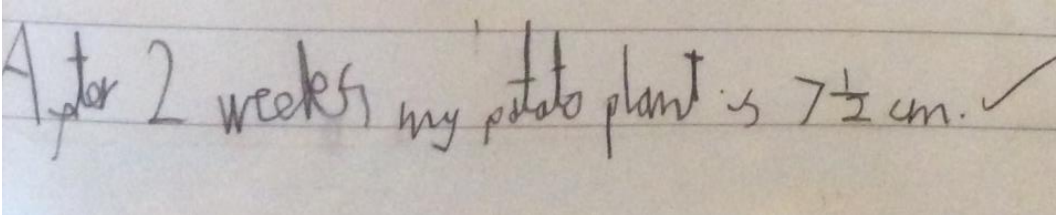


	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	The children continued to observe the seedlings growing in different conditions.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
		Max shows that he understands that plants need different conditions to germinate and grow healthily.
Teacher observations		Working scientifically Max uses his observation to draw a conclusion about what plants need to grow well.

	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	The children planted sunflower seeds in pots that were then taken outside once they germinated.			


EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>“This one is taller and more eaten by caterpillars. They both have one main stem and smaller stems coming off it. Each smaller stem has a maximum of one leaf. The smaller sunflower has got flowers growing. I can see four buds. The smaller one has had more light and is healthier and it is going to have flowers. The other one is taller, but I don’t think it is going to flower.”</p>		<p>Max continues to demonstrate his understanding that the amount of light affects how healthy a plant is and how it grows.</p>
<p>Teacher observations</p>		<p>Working scientifically</p> <p>Max uses his observations to compare the plants, decide which is healthier and why, and makes a prediction.</p>

	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	<p>As part of a 'Shelf life' project, every child brought in an item of food packaging from a list and grew the plant that provides us with the given food. The children looked after their own plants, watering them and giving them plenty of light, and they took photographs of their progress. Max grew a potato plant. He took it home to replant it into a bigger pot. Later in the year, the teacher asked him about his potato plant.</p>			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>"It was like a little potato when I planted it. Mine was one of the smallest growers. I didn't put it in a bigger pot at home. I kept watering it, but it died. There wasn't enough room for the roots."</p>	  	<p>Max understands that the plant needs water and the roots need sufficient space for the plant to grow healthily.</p>
Teacher observations		Working scientifically
		<p>Max takes measurements of his potato plant. He chose to measure its height using a ruler.</p>

	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	The children were given a selection of summer bulbs to plant in pots.			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>“I don’t think it will grow if it is planted upside down. I think it may grow if it is behind the shed, as it doesn’t need light to start to grow but it might not grow well. It might be tall and yellow.”</p> <p><i>(Observing the bulbs planted upside down later in the year when they were accidentally dug up.)</i></p> <p>“The stem went into the ground and then came back up again.”</p>		
<p>Teacher observations</p> <p>Max chose to plant some bulbs upside down to see if that would make a difference.</p>		<p>Working scientifically</p> <p>Max makes a prediction based on his previous observations of the seeds put in the cupboard.</p> <p>He tests his prediction and later answers his question.</p>

	Year	2	Topic	Plants
	Focus of assessment (National Curriculum statements)			
	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 			
	Description of activity			
	The children also planted some herb and wildflower seeds in pots in the playground. The children had handled, smelt and tasted herbs in Year 1 as part of their senses topic.			

EVIDENCE OF LEARNING		ASSESSMENT
Oral evidence	Examples of work	Knowledge
<p>Max: "None of the herb seeds have grown."</p> <p>Teacher: "How do you know that?"</p> <p>Max: "Because none of these leaves smell like herbs."</p>		
Teacher observations		Working scientifically
		Through observation, Max identifies that the herb seeds have not grown.



Overall summary

Secure

Max has made close observations of seeds and bulbs and can talk about them. He now knows from direct observation that seeds and bulbs do not need light to germinate but they do need some warmth. He has also observed how seedlings grow differently according to the light level. Through the year, he has observed a range of seeds and plants growing to maturity, although he is also aware that not all the seeds and bulbs that were planted had the right conditions to be healthy and survive.



Acknowledgements

- *Concept Cartoons in Science Education*, Naylor S, Millgate House Education