Harrowgate Hill Primary School

Children’s work, illustrating different evidence types
This school use a range of activities to collect evidence, ranging from more photographic in Foundation Stage, to more written in Year 6.

The exemplar shows the progression throughout the school of activities that build up the children science skills to improve their attainment.

Look for ideas of creative homework, which stimulates parent involvement.
What the school says

We are a large primary school with a 3 form entry and nearly 600 pupils.

Children at Harrowgate Hill Primary School enjoy a range of evidence types throughout the school.

We hope you are interested to see how our large school implements strategies of collecting evidence across the school, engaging the children at the same time.
Reception

Minibeast hunt, looking at habitats.

Testing the strength of a bridge.

Foundation: use a more photograph means of collecting evidence.

Using a black light to see dirty hands

Investigating pushes and pulls

Investigating how to be a doctor

Next step- ask a doctor to come in and speak to the chn.
Year 1

Key Stage 1

Nurse Janine visited to talk about healthy living.

Photographs were used to show the children's learning.

The school nurse came to discuss healthy living so that the children could learn from a professional in a real-life context.

Photographs show an investigation on plants in the school grounds.

Year 1+2

Class 4

Year 1+2 recorded readings using a clip board.
Year 2

Science evidence in Y2 is often written as children become more independent with their recording although photographs are still included.

On the 26th of March, I found out that if you put blackcurrant squash in the freezer, it turns solid. I watched it, it was still a liquid in some weird way! The same day, I put some water in the freezer and it went solid but it was not like the squash, it was completely hard but I could think it.

After five minutes, the 26th, it turned into liquid this is called freezing. When you take a lolly pop out of the freezer, it was fun doing my experiment. I hope that I could do more experiments another day.

Improvements:

- Better use of vocabulary
- Much more practical approach to science
- Year 2: More recording work into their book more independently.

Children enjoyed investigating solids and liquids using ice. Photographs were also taken.
E.g. of KS1 creative homework - science linked - after our listening walk in school.

Task E - Go on a sound walk and make a list of different sounds you hear.

My sound walk was at the Hancock museum. I heard lots of different noises. I heard:

- an elephant
- wolves

I also heard lots of different dinosaurs; they were making loud roaring noises.

I heard a bird, people talking, babies crying and lots of footsteps.

Work is displayed on displays # on the learning platform.
Lower KS2

2KS2 - are beginning to record their findings onto worksheets (numeracy linked)

<table>
<thead>
<tr>
<th>Animal Feature</th>
<th>Name an animal which has this feature</th>
<th>What type of habitat does this animal live in?</th>
<th>How does this feature help the animal to cope with the environment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long eyelashes</td>
<td>Giraffe</td>
<td><em>50</em></td>
<td><em>Long neck</em> 50cm long (allow to eat from trees)</td>
</tr>
<tr>
<td>Long tail</td>
<td>Ray</td>
<td>Dump</td>
<td><em>Large, flat for swimming</em></td>
</tr>
<tr>
<td>Big Ears</td>
<td>Elephant</td>
<td>Savanna</td>
<td><em>Big ears for hearing</em></td>
</tr>
<tr>
<td>Small Ears</td>
<td>Mouse</td>
<td>Cave</td>
<td></td>
</tr>
<tr>
<td>Furry coat</td>
<td>Fox</td>
<td>Forest</td>
<td></td>
</tr>
<tr>
<td>Thick feathers</td>
<td>Parrot</td>
<td>Forest</td>
<td><em>Strong, colorful for display</em></td>
</tr>
<tr>
<td>Burying itself</td>
<td>Deer</td>
<td>Forest</td>
<td><em>Keeps warm</em></td>
</tr>
<tr>
<td>Storing food or water</td>
<td></td>
<td></td>
<td><em>Store water</em></td>
</tr>
<tr>
<td>Thick layer of fat</td>
<td>Polar</td>
<td>Antartic</td>
<td></td>
</tr>
</tbody>
</table>

Photographs are also used to collect evidence of practical work.
Upper KS2

Work is more written based, although evidence is collected in a variety of ways during the experiment.

To plan an investigation showing the effect of exercise on the heart rate.

When you exercise, does your heart rate/pulse rate change?

Equipment I will need:
- Stopwatch
- Pencil/pens - for data analysis
- Book,
- Camera

Fair Test: What do you keep the same?
- The person whose pulse it is.
- The minute time limit.
- The way you breathe - naturally.
- Must do the resting pace.

Variable: What will you change?
- I will change the amount of exercise exercised.
- I do and my resting and exercise exercise pulse rate.

Prediction:
I predict that my resting pulse rate will be slower as it is not exercising and not needing as much blood and oxygen. My exercising pulse rate, however, would be faster as it needs to pump faster to get the oxygenated blood to the muscles as you exercise. And this is halfway along your

Heart rate plot over different periods:

Lead Scientist

Today I was the 'Lead Scientist.' I had to run on the spot for different periods of time, with 1 minute breaks. We found that the longer and more you exercise, the faster and higher your pulse rate is. It went up a reasonable amount each time. I measured it using my hand on my chest.

Nummery links

[Graph showing heart rate over different periods]
Conclusion

My graph shows that my prediction and earlier paragraphs were quite right and accurate. My pulse rate went up the more exercise I did. However, we learnt that the heart can only beat so fast and at a certain point will just stay the same. From personal experience, I know that it takes a little longer than you exercise for your resting pulse rate. In conclusion, the more exercise you exercise, the faster your heartbeat.

[Handwritten note: Erni, well done. Use the lines on your line graph to keep it accurate.]

Tuesday 24th January 2013

To understand what drugs are and how they can help or harm you in different circumstances.

[Handwritten note: URSZ made space movies in their ICT club. These movies were then played at the end of the topic, showcasing their learning.]
Method: We filled the first beaker with 100 ml of water, then added 1 tablespoon of salt. We repeated this process for the second beaker. After this, we repeated the method three times to create a fair test.

Conclusion: I found out that the water in the beakers did not dissolve the salt completely. The reason being, the particles took less time to travel up to the top of the beaker. It took 1 sec for the sun to travel up to the top of the beaker. Unfortunately, the prediction was not fulfilled.

Your method was not really explained clearly. I do not really understand how to repeat your experiment. You may need to learn how to repeat your experiment. A nicely explained conclusion is required to make things clear.

+ Your method does not really explain clearly what you did. Could someone else read your method and learn how to repeat your experiment? A nicely explained conclusion is required to make things clear.

2. Do solids dissolve more/less quickly in different amounts of water?

A more practical approach to science

Aim: Our aim is to find out whether solids dissolve more/less quickly in different amounts of water.

Preliminary: I predict that the more water there is in the beaker, it will take for the solid to dissolve because it takes longer for the substance to fall to the bottom of the cup.

Equipment: 5 beakers of salt (per cup), 3 cups of water (one cup, high medium, low), 3 teaspoons of salt, stopwatch, recording paper

Procedure:
1. Add 1 teaspoon of salt in the first beaker of water.
2. Add 2 teaspoons of salt in the second beaker of water.
3. Add 3 teaspoons of salt in the third beaker of water.
4. Add 4 teaspoons of salt in the fourth beaker of water.
5. Add 5 teaspoons of salt in the fifth beaker of water.
6. Record the time taken for the salt to dissolve in each beaker.

Results: The time taken for the salt to dissolve was recorded.

Conclusion: The salt dissolved more quickly in the beaker with the least amount of water. The salt dissolved more slowly in the beaker with the most amount of water.

Link to literacy:

- Photographs are used frequently to help children record more accurately in written work due to being able to explain more effectively. (Text added)
Using such a variety of evidence types has the following benefits:

- Pupils are *more engaged*
- The process of developing evidence types has *raised profile of science* in the school
- The children have opportunities to explore science in a *variety of ways*.
- The introduction of *creative homework* has enabled children to engage with science at home as well as school
What we will do next

The next steps for us are to implement new ways of recording such as *floor books* and *classroom displays*.

Children’s work is displayed on our school *website* and *phase learning platforms*.