Evidencing science learning using Explorify

So, you are enjoying using Explorify to enhance your science teaching and (most importantly) your pupils are increasing their engagement. You've noticed how they are asking more questions, using a broader scientific vocabulary, demonstrating a greater ability to reason and think critically and becoming more confident learners. Brilliant! Sorted!

What's that I hear you cry? "Evidence?!? How do I *show* all the amazing learning my pupils are undertaking? How do I create *evidence* of their progress?".

Look no further… Taking you through each activity, here are some suggestions for how you can record and evidence science learning when using Explorify.

Before you dive straight in, however, remember that the suggestions below must be modelled to your class and will inevitably take time to embed as effective teaching & learning strategies. There is also lots of scope for overlap between activity types, therefore none of the suggestions should be seen as fixed for a particular activity.

Additionally, even though your pupils' learning can be recorded in these ways, the focus should remain on developing their questioning, describing and reasoning skills and any recording should be used only to support this or to take the learning further and deeper, such as through a linked learning activity (i.e. in a cross-curricular way).

Odd One Out

A. **Post-it note writing stimulus:** Give each child a post-it note (or just a scrap of paper) and ask them to note down their observations about the images during the discussions. Keep this piece of paper and then use it as a stimulus for a piece of writing, perhaps in early morning work, the following day: e.g. Story writing: the image that they chose as the odd one out could form the setting for a story, be the main character or villain, or even be a special object with magical powers. Persuasive writing: the image could be the subject of an advertisement. Explanation text: explaining how the object works. Poetry: the image could stimulate some creative writing.
B. **Table for comparison:** Pupils create a simple two column table with headings 'similar' and 'different'. Ask them to note down what they think is the same and different about the three images. During the class discussions, they can then refer to their table and, in a different colour, also make changes and additions to their ideas before they make their final choice. Underneath their table, ask them to write down which is the odd one out and why, encouraging them to be as clear and scientific in their reasoning as possible. You could even provide sentence starters for those pupils who need support.
C. **Hoops:** Once you have had a whole-class discussion about the three images, split your pupils into small groups, provide them with the images and a hoop. Ask them to physically move the images in and out of the hoop as they discuss and explain with

their peers which is the odd one out. They can record this on a large sheet of paper with a large circle in the centre, either using drawings or words to represent the images and adding their written explanations onto the page. (See Top Tips video: https://explorify.wellcome.ac.uk/blog/top-tips-odd-one-out-activities).

Zoom In Zoom Out

A. **Consequences:** Provide children with a long narrow piece of paper. Ask them to write down what they think the image might be when they first see it really close up. After the discussion, get them to fold the paper over. Each time you zoom out, get the children to write their new idea and fold it over. After the image is completely zoomed out, they can then reveal the list of their thoughts and see how they changed.

What's Going On?

A. **Class display/learning wall discussion point:** Stick an enlarged version of the opening still from the video on your classroom science display and encourage children to write their responses. Have one colour for their own thoughts and another colour to respond to what others have written.
B. **Create their own video:** If your children are inspired by the What's Going On? videos, then they will enjoy filming their own simple investigations. The planning that goes into the video can all be recorded, perhaps using a storyboard format, and if there is going to be a narrator then writing the script provides a further opportunity for recording their learning.

What If?

A. **Plus, Minus, Interesting thought bubbles:** Children work in pairs or small groups to generate what might be the positive, negative and interesting outcomes for the question and record them in (different coloured?) thought bubbles to stick around the question. Challenge the children to pick the 'best' of their outcomes (this could be the best positive, minus or interesting) and then this can be used as a story writing stimulus.
B. **Mind map:** Pupils place the What if? question in the middle of a page and write their responses around it. Encourage them to identify connections between any of their ideas and show those links using arrows.
C. **Home learning:** Give the question out for children to think about at home with their families. Review what they have come up with in a class discussion and record it on a thought board or floor book and take a photo.

The Big Question

A. **Floorbook:** (https://pstt.org.uk/resources/curriculum-materials/floor-books) A floorbook is a large book (like a scrapbook) that is shared amongst the class and used to collaboratively record their science learning. Floorbooks can include

B. anything; e.g. photographs, comments on post-it notes, drawings, annotated diagrams, and writing. The class can therefore record their responses to the Big Question in a way that works for them. You can even get an adult to record the children's responses as the discussion is taking place.
C. **Poster presentation:** Pupils can work in pairs or small groups to present their response to the Big Question as a poster. This could then be used as a speaking & listening activity, with each group presenting their ideas to the class.

Mystery Bags

A. **Photo speech bubble:** Take photos of the children carrying out the mystery bag activity and then ask them to record in a speech bubble what they were saying about the different materials during the activity. Challenge them to use the best scientific vocabulary in their writing and to explain the link between the objects.

Mission Survive

A. **Photo and explanation text:** Take a photo of the pupils' finished design and ask the children to write a short explanation of how it meets the criteria of the mission.
B. **QR Code:** Whether your pupils have a photo of their finished design, written some text about it or made a video, if it is put on a blog or website then you can use a QR code (quick response code) as evidence. The QR code can be stuck into their exercise book or on the classroom science display and can then be scanned and take you to the learning, thus providing a fun, interactive experience.

Problem Solvers

A. **Thinking mat:** As the children carry out their investigation to solve the problem, get them to note down their individual responses to what they observe on their section of the thinking mat. They should then discuss their ideas and put into the centre things they all agree upon. (For details, see pp.20-22 in Primary Science Journal, Special Issue: Explorify, Sept. 2019; https://www.ase.org.uk/resources/primary-science/issue-1590/getting-grips-assessment)
B. **Pupil conferencing:** Use photos of the children conducting their investigation as a prompt to get them talking about their learning. You can take notes and prompt them with carefully chosen questions as they recall their learning and describe what was happening and justify their decision making. (For details, see pp.9-11 in Primary Science Journal, Special Issue: Explorify, Sept. 2019; https://www.ase.org.uk/resources/primary-science/issue-1590/building-confidence-through-having-go)