

## Science, Art and Writing (SAW) - How to get started.

**1) First choose your theme.** This may be a science curriculum topic that you would like to cover (e.g. magnetism), or another topic of interest (for example, the sea).

It may be helpful at this stage to make a list of key words that are relevant to your chosen theme. Let's say that you have decided to work on photosynthesis. Key words that you might choose could be leaf, chloroplast, chlorophyll, starch, sun.

**2) Next search on the Internet for high quality scientific images that illustrate the different facets of your theme.** You will find that this is addictive. Good websites to use are the Science Photo Library ([www.sciencephoto.com](http://www.sciencephoto.com)), NASA ([www.nasa.gov/multimedia/imagegallery/index.html](http://www.nasa.gov/multimedia/imagegallery/index.html)) SAPS Plant Science Image Database ([www.plantscienceimages.org.uk/](http://www.plantscienceimages.org.uk/)), The Why Files (<http://whyfiles.org/coolimages>) Science Image Online ([www.scienceimage.csiro.au/](http://www.scienceimage.csiro.au/)). The terms and conditions of use of these image collections can be found on the respective websites.

For example, on the Science Photo Library website, try typing "photosynthesis" into the search box and see what comes up. Aim to find around ~10-15 images that are relevant to your chosen theme in total, using appropriate key words for your searches. "Photosynthesis" brings up many pages of images including chloroplasts and internal leaf structures, along with lots of other things that you may find interesting. What about "chlorophyll"? You might decide to choose a molecular model of chlorophyll, and also maybe an X-ray image showing the structure of the molecule. Don't worry if these images seem challenging. If you saw them and wanted to know what they were, then so will the children in your class. Now try "starch". Are you getting excited about possibilities yet? You can, of course, combine keywords – how about "leaf and photosynthesis". You can see the science in these images. You should also begin to see the potential for using the theme and images as inspiration for other activities – for art, for poetry and more.

It is useful to have a range of keywords since some of them will prove to be fruitful while others are less so. For example, if you search for "sunlight" you tend to get a lot of very nice images of light shining through trees. Avoid these – unless you find something remarkable in there. Children are used to seeing sunlight shining through trees. They are not used to seeing close-up images of a chloroplast that looks like an alien in an egg or getting lost in the magic world inside a Christmas rose leaf.

**3) Now hone your image collection.** Have a good look at the images that you have chosen. Prune out any that look too obvious – those that do not illustrate any particular scientific facet of your theme and/or that are not inspirational - the sunlight through the trees, for example. Also think about which images are the most visually exciting and that are likely to provide inspiration for art, poetry and perhaps other approaches that you have in mind (movement, music, maths, IT, DT, the possibilities are endless). Cut your image collection down to ~6-8 carefully selected pictures that span your theme and collectively give good coverage of the science that you would like to cover. You will have to be hard-nosed about this (but you can always save surplus images for another time!).

You might like to see some sets of images that have been used in other SAW projects by looking at examples on the SAW Trust website under the “SAW in the classroom” heading. Just click on different projects within each year and you will begin to be inspired!

**4) Now you are ready to explore your theme through science, art, poetry and whatever else you have in mind.** The next step is to decide what you would like to achieve with your students, to define your learning objectives and to design your lessons. The theme and images will serve as an anchor as you move between disciplines. The images can be used in a variety of ways and you will need to experiment with different strategies for deploying them. For example, you could introduce them bit by bit as you go through the science of photosynthesis and then go on to do some experiments. It is good to ration the images – use them to gain excitement and interest at intervals throughout the lesson. If you decide to start with art or poetry first then you might prefer to go for a naïve response to the images – children have the most incredible imaginations. They can explore the images through the creative arts and then when you move to do science they will see them in a whole new light.

Using SAW does not get you out of planning lessons – but it makes the whole process far more exciting and rewarding.

***Extra information:***

- You could think about using objects instead of images. This proved to be very successful when 4-6 year olds working on the theme of “The Sea” went to the beach.
- SAW is hugely flexible. Personalise it and make it your own. There are no boundaries – just an infinite number of possibilities. Perhaps you are thinking of working on Nelson. Maybe you can get your hands on a piece of HMS Victory (I know someone who has a substantial chunk of it in his backyard!). Think about the scientific images associated with Nelson’s life and times. What can you assemble?
- SAW is not prescriptive – it is open-ended. The children need to be able to take ownership of their work and follow their noses. If you give them freedom to operate the most amazing things will happen. You need to do the same when planning your lessons.
- If you have time and enough computers you could give the children the opportunity to find their own images to work with. Or they could do this as their homework. Then they can choose what really intrigues them.