

20 ideas for using technology in the science classroom

1

Explain and share. [Explain Everything](#) is an app that enables students to record ideas using text, drawing, and image. Multiple slides encourage the structuring and sequencing of ideas. Furthermore, it records sound and anything visual in real time. Students can use it to practice explaining, well, pretty much anything.

2

Videos settings. Use a green screen app to record video of someone talking to the camera with an image of anything you choose in the background. Students could do a news report from the surface of the Moon or from inside the bloodstream. Use a green sheet clipped to a board as the backdrop.

3

Digital assessment. [Plickers](#) gathers assessment evidence digitally. Download a set of cards, enter names online and give each student the right card. Students select one of four responses to a question by holding their card a particular way up. Scan the room; the system records and displays the success rate.

4

Microscope magnifiers. Get a microscope magnifier to clip on the lens of a smartphone or tablet. You might need to get the phone out of the case; focusing usually works by tapping the screen. Capture images of crystals, reaction products or things found on fieldwork to illustrate reports. Basic USB microscopes are also pretty cheap and can be used to capture magnified images or video.

5

Digital post-its. [Padlet](#) is like a wall of post-it notes - but digital. Anyone else using the same URL (using the built-in QR codes is a good way) can see the wall and post ideas. Share a question and gather answers or suggest an experiment and gather students' results. Entries can be text, photo or link.

6

Online quizzes. [Socrative](#) enables questions to be posed and answered on screen - multiple choice, true/false or open response. Try the space race version, in which teams compete to be the first to get their rocket across the finish line first. Each correct answer moves them forward. Other favourites are [Kahoot!](#) and [Quizizz](#).

7

Interactive PowerPoints. [Nearpod](#) combines features of PowerPoint and Socrative. Load slide decks onto the site and add interactive features. Control how slides are advanced on everyone's screen. The teacher can see the success rate and can share the text or diagrams submitted.

8

Physics motion capture. [Vernier Video Physics](#) is an app that uses the camera on a machine to capture motion. The user then advances the video frame by frame and plots the position of an object. The app then analyses the motion in both vertical and horizontal directions and displays it graphically.

9

Give audio feedback. An alternative method for providing feedback is to record yourself discussing a piece of work. This works well for longer pieces of work, perhaps at KS5. Use a sound recording app to record yourself and then send the MP3 file to the student as feedback.

10

Making videos. Try iMovie which runs on iPads in a form that is stripped down from that on a Mac and as such avoids the risk of students getting lost in fancy features. It enables them to quickly and easily put together a presentation with images, videos, and sound.

11

Go paperless. [Edmodo](#) is a way in which the paperless classroom can become a reality. Input class lists, set assignments, receive submissions, provide feedback and record attainment without a sheet of paper in sight!

12

QR codes. Attach codes to anything and everything, using the [Qrafter app](#); any student pointing their device at a code is taken straight to the embedded website. This could show them how to use a piece of equipment, provide background on a famous scientist or link to a revision website.

13

Comment and ad free YouTube videos. YouTube is an excellent source of science videos, but there's no way of knowing what distracting content may appear below or beside the video. Use a service like [viewpure.com](#) to show just the video.

14

Interactives such as tools and activities from [Teachit Science](#) or [Wordwall](#). One of the best uses is sequencing text. Drop the steps for doing an experiment onto a set of tiles and let the program shuffle them. Other activities include Matching, Magnet tiles, and [Teachit Timer](#).

15

Displaying images. [PicCollage](#) is a way of gathering and displaying images. It can be used as a summary activity and is particularly supportive of visual learners. You could get students to, for example, research and display places in which friction is useful, ionic compounds or wind pollinated plants.

16

Digital mind mapping. Apps such as [SimpleMind](#) can aid revision. Not everyone works well with mind maps but for students who do, they can be really powerful, displaying key ideas, offering an overview of a topic and encouraging students to make links in ways that support the answering of synoptic questions.

17

Peer reviewing. Google Docs is a great way of encouraging peer review. If students produce a report and then want to bounce it around to get feedback or additions, then this is an effective way of doing so. A document can have comments and text added in real time, making collaborative writing a reality.

18

Sharing iPad screens. Apple TV can be used for sharing work that students have been doing on iPads, mirroring the screen display through a projector or TV. Ask students to share a diagram they've labelled or their written answer to a question. Settings can control how easily students get to display their screens.

19

Creating comic strips. [Comic Life](#) is an app that enables students to turn stories into comic strips. This can be a great way of making ideas memorable. Displacement reactions are but one example that can be turned into a story be using characters to represent elements

20

Microsoft hacking STEM. Microsoft had a strong presence at BETT 2018, showing how students can develop technical solutions to scientific questions, such as how to measure windspeed or test how earthquake proof structures are. Materials are at www.microsoft.com/en-us/education/education-workshop/default.aspx.