QR Codes in the Elementary Classroom

What is a Quick Response Code and why does it matter?

- 2D barcode that can contain lots of different types of information in up to 7,000 characters. The more information there is, the larger and more complex the code will be.
- To access, you need a device that has a camera so you can scan or take a picture of the code, a program or app to do the decoding, and web access to see where the code takes you.
- Take a look at this video using a QR code.

Program and Apps to Decode

QuickMark (for desktop, iOS, and Android)

NeoReader (for iOS, Blackberry, and Android)
Creating a QR Code

- **Kaywa** (http://qrcode.kaywa.com/) – The simplest creator you can use. Simply drop in the website you want the user to be directed to (or other information like general text, phone number, or SMS message), click Generate, and BANG! A QR Code you can embed or print anywhere.
- **QR Stuff** (http://www.qrstuff.com/) - There are lots of free QR code creators out there, but it will be tough to find one that does as much as QR Stuff. Not only can you create codes for URLs, but how about when the code is scanned, it creates an automatic "like"
on Facebook? Or what about a QR code that opens an iTunes podcast feed? Or a code that, when scanned, makes a Skype call? You can set codes for emails, text messages, and directions; the list does go on and on and on. And you can change the colors and size of your codes and print them on shirts, coffee mugs, and more.

- **QR Code Generator** (http://keremerkan.net/qr-code-and-2d-code-generator/) - The number of options is terrific and the Google Maps interface works really well.
- **SnapMaze** (http://www.snapmaze.com/) – Creates URL, text, phone number, SMS, or contact information.

**Other QR Code Features**

- **QR Voice** (http://qrvoice.net/) - When you visit the website, you can create a QR code from your voice. The site uses text-to-speech to create text-based QR codes. So students could do a ticket out the door or be able to post feedback to other student projects or send anonymous information. The voice is slightly robotic, but easy to understand.
- **Delivr** (http://delivr.com/) - On the surface, this looks like a simple QR creator website, and it really is. But the beauty in this site is in the free registration. When you sign up, you get the ability to track the number of scans and you can change the destination of the code on the fly.
- **SnapVu** (http://snap.vu/) – SnapVu is good because it sends you an email telling you how many times your QR code has been accessed.
- **QR Code Scavenger Hunt Generator** (http://classtools.net/QR/) - This is an easy to use (and free) site that will create a series of QR codes for you to use in a scavenger hunt. Codes are created for questions and answers. You can see this post by one of the most awesome media educators out there, Gwyneth to see how she used a scavenger hunt with QR in her media center if you are looking for ideas.
- **QR Code Bookmarklet** (http://www.activehistory.co.uk/QR/bookmarklet/) - Drag this button onto the bookmarks bar on your browser. When you click the button, it will create a QR code of the page you’re visiting. You can also highlight text on a page and the button will then create a QR code based just on that text.
- Use the excellent **QR Stuff website** to make colored QR codes. Use different colors for websites and resources in different subjects. You can then see which QR codes belong to certain subjects and will help you organize lots of them in the classroom.
Uses in the Classroom

- When I was in the classroom, kids would go to the library and literally judge a book by its cover. But think about if you threw in a QR code on the front cover. The students can scan and read a book review written by a student from last year or even watch a video trailer of the book that a student created as part of a project. All of that information contained in a small black and white square on the cover of the book.
- Add codes to the hallways for additional learning during down or passing times.
- Add a code to a Word document for students to check their own answers. Laminate these sheets and post them around the classroom. (Moving to check their answers also gets their blood flowing again and may help them they better!)
- Put a QR code in your classroom window so people can see what’s going on. It could point visitors to the classroom blog or website.
- Create a scavenger/Easter egg hunt. The students must seek out the QR codes that are posted in a given area. Use the codes to go to information to answer a question and/or find a clue. Then on to finding the next code.
- Add QR codes to math worksheets with video tutorials of how to solve the problems.
- Stick a QR code wherever there is a child's target like at the front of their textbook or on a wall display. Link to an audio or video recording explaining what their target is and the steps and strategies to achieve it.
- Make displays of student work interactive. Add QR codes to classroom displays to show: videos of how the display was made (e.g. making stuff in technology); blog posts on pupils' commentaries on their artwork, poems, writing; further information about the country, period in history, person, etc.; or a Google Form for feedback.
- Create a more realistic class store. Price some of the class shop items with QR codes. Children can scan these to find out the price in the same way that items would have their barcodes scanned at the checkout of a real shop. After a while, you could have a “sale” and get children to adjust the prices linked to the QR codes by 10% to extend learning.
- Stick QR codes in reading books that the children take home. These could link to online comprehension questions for parents or to websites that children can use to find out more information about the books or to related games that they can play.
- Attach QR codes to a physical object to allow for a thorough exploration of the object.
  - Create a "choose your own adventure" story that has individual QR Codes that need to be scanned in order to advance through the story.
• Create a virtual museum – past and present. Use the following videos as stimulus for QR codes in the real world (http://www.youtube.com/watch?v=fGaVFRzTP4 and http://www.themobilists.com/2011/08/30/qr-codes-in-museums/). If studying a Past and Present Unit, students can find images of past objects or bring in objects from the past. Record information using QR voice http://qrvoice.net/ or text (any QR app will work) to explain the object. Place the QR code on the image or object and invite other students or parents to tour your virtual museum.

• For very young students, use QR codes to show pictures with sight words, color words, number words, numbers, letters of the alphabet, and names. If you only have one device to scan the code with, then have the Helper of the Day scan each day.

• Create Valentine cards with Audio Boo messages.

• Have the students access a website quickly by just following the QR code.

• Post a QR code to your classroom newsletter on your class door for parents and administrators to access.

• You can have the students become self-directed learners by creating QR stations. The students scan the QR code to reveal the task and the students must work together to get the task complete.

• Create a “parents code tree” in the hallway where parents can scan to bookmark the school’s website, the teacher’s website, follow the school on Twitter, access the school’s Facebook page, and more.

• Make an exercise trail around the school or playground that shows students how to do different exercises at each station.

• Create a virtual tour of the school for new students. Put QR codes around the building with videos of the teachers or the principal explaining rules or giving directions or safety tips.

• Show exemplars to students by creating a code that links to example of quality work. You can link to both the best and the unacceptable.

• Have students do a service project by creating and posting QR codes based around a theme around the school or the town. For example, to create awareness about how to prevent the spreading of germs, they can create codes linking to videos, websites, and even cartoons on the topic and then post them in the restroom and other places.

• Award prizes by having students scan a code leading to an animation or badge. When they pass a test on commas, perhaps they get a code that takes them to a badge for Comma Guru! Students can even create their own codes to award each other. When a student sees something great happen, they can give a code that links to messages such as "Good Job from Andrew" and "Thanks for doing your part for the team."
• QR codes can be a great voting tool, allowing students to vote by simply scanning the code as they enter or exit the classroom. This can save time and it gets your students up and moving.
• Create QR codes for famous people, places, items you just studied from content. Place them on a sticker and then place one on the back of each student. Tell them to circulate around the room scanning/giving clue to people as to what/who they are. Have students try to guess.
• Involve students in a storytelling experience. Send one group of learners on a tour of an environment (which can be indoors or outdoors) and ask them to learn about various QR code-tagged artifacts on their way. Reading the QR codes will lead them to a blank web page form on which they can record their observations and questions for further research. (I would use Primary Wall or Corkboard.me.) When they get back to the classroom, they can find and associate different multimedia elements with these QR code pages, creating challenges for other learners to take part in.
• A PE teacher has created these skill set posters with QR codes.
• Want to promote a school play or performance to parents? Create different codes made up of short (no more than 2 minute) videos of different students who will be taking part. Send the code home with parents and invite them to see what everyone else is doing.
• Link a code to a free downloadable ebook for students to read or listen to on their device. Project Gutenberg is a good start, as is iTunes U.
• As a teacher, create several codes that contain compliments to students, print them on cards, then laminate and save them. When a student does something well, grab one of the cards and hand it to him/her to scan.

Quickly Creating Codes in Google Docs

To create multiple QR codes quickly, use Google Docs. This template will do it for you. Just access it and make a copy of it. Then you can enter your resources.

Other QR Code Resources

• QR Codes in Education Livebinder (http://www.livebinders.com/play/play/51894)