

Welcome to **Teaching + Learning Tuesdays**

September 17, 2013 | 2:30PM to 4:30 PM



Teaching + Learning Tuesday

SCTCS
plugged  **IN**
REBOOT. REDEFINE. RECONNECT.

Title:

Mobile Tools in and out of the Classroom

Presenter:

Dr. Paul Wallace,
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Reich College of Education
Appalachian State University



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Mobile tools in and out of the classroom

Mobile Learning Inside the Classroom

Feedback

Formative Assessment

Games

Backchannel Communication

Socrative



- <http://socrative.com>
- Use for feedback, formative assessment, games, and to enable backchannel communication
- Web-based interface for laptops, tablets, and phones
- iOS and Android app for students
- Allows 50 participants in each Socrative classroom

- <http://m.socrative.com>
- Room: 5221

Socrative: Quiz & Games

- Create Quiz in Socrative or import
- Use in Quiz and/or Space Race game
 - Student pairs or groups share one device
- Send report

NearPod

Content

Quiz

Poll

Multimedia

Draw it

NearPod



- <http://nearpod.com>
- Use for sharing synchronized content, including video
- Student feedback with polls, quizzes, drawings
- Reports of student responses
- App for iOS and Android
- Free and school accounts

NearPod Example

- Instructor runs presentation from iPad, using the NearPod Teacher app
- Student uses NearPod Student app
- Presentations require a PIN to access
- Example presentation PIN#

NearPod Content Type

Select a feature from the list below and press Continue to customize.



Slide

Upload a PDF or image file to add one or more slides to your current presentation.



Poll

Survey your audience and reveal poll results in real time.



Q&A

Pose a question live, assess students and show answer results to the audience in real-time.



Quiz

Provide a series of test questions for participants to answer at their own pace and track their progress.



Video

Insert a video (in MP4 format and up to 3 minutes long) in your presentation to play back on participant devices.



Draw it

Ask your audience to draw on their device over a blank canvas or an image background, then select drawings to share with the group.

Mobile Learning Outside the Classroom

Object Tagging

Augmented Reality

Student Created Mobile Learning

Object Tagging: QR Code

- A simple way of “tagging” objects in the physical world
- Easily used in mobile learning games, by either printing them on stickers or on index cards
- Generated at a number of websites for free
- (<http://www.qrstuff.com>)
- Can be used with non-smartphone and older handheld devices lacking GPS, but with a camera
- Used to create games or tours for indoor spaces, like museums and school buildings
- A drawback is that QR code actions are limited, such as opening a web page or dialing a phone number



QR Code: Creator

HOME ABOUT THIS SITE QR CODES PHONE SOFTWARE EXAMPLES FAQs AFFILIATES SHARE

• Editable short URL's • High resolution artwork files • Account history
• Batch process up to 500 QR codes at a time • Scan analytics

SUBSCRIBE NOW FROM \$3.95 →

twitter QRStuff Blog

ENTER DATA TO ENCODE

1 DATA TYPE

- Website URL
- YouTube Video
- Google Maps Location
- Social Media   
- iTunes Link
- Plain Text
- Telephone Number
- SMS Message
- Email Address
- Email Message
- Contact Details (VCARD)
- Event (VCALENDAR)
- Wifi Login (Android Only)
- Paypal Buy Now Link

2 CONTENT

Website URL

Embed URL into code as-is
 Use our qrs.ly URL shortener

[Subscribers](#) get analytics and dynamic destination editing for shortened URL's.

3 FOREGROUND COLOUR



Foreground Colour (Hex):

4 OUTPUT TYPE

 **DOWNLOAD**

 **PRINT**

 **EMAIL**

 **GENERATE HI-RES IMAGES**

 **BATCH FILE UPLOAD**

 **PUT YOUR CODE ON OTHER STUFF**

Dynamically create your own custom QR code products

QR CODE PREVIEW



DOWNLOAD IMAGE

<http://www.qrstuff.com>

QR Code: Uses in Education

- To “tag” objects in the real world with more information (text, web page, image, video)

QR Code Examples: Rocks

Appalachian State University

Geology Department Interactive Rock Garden

<http://mckinneymuseum.appstate.edu/rock-garden/>

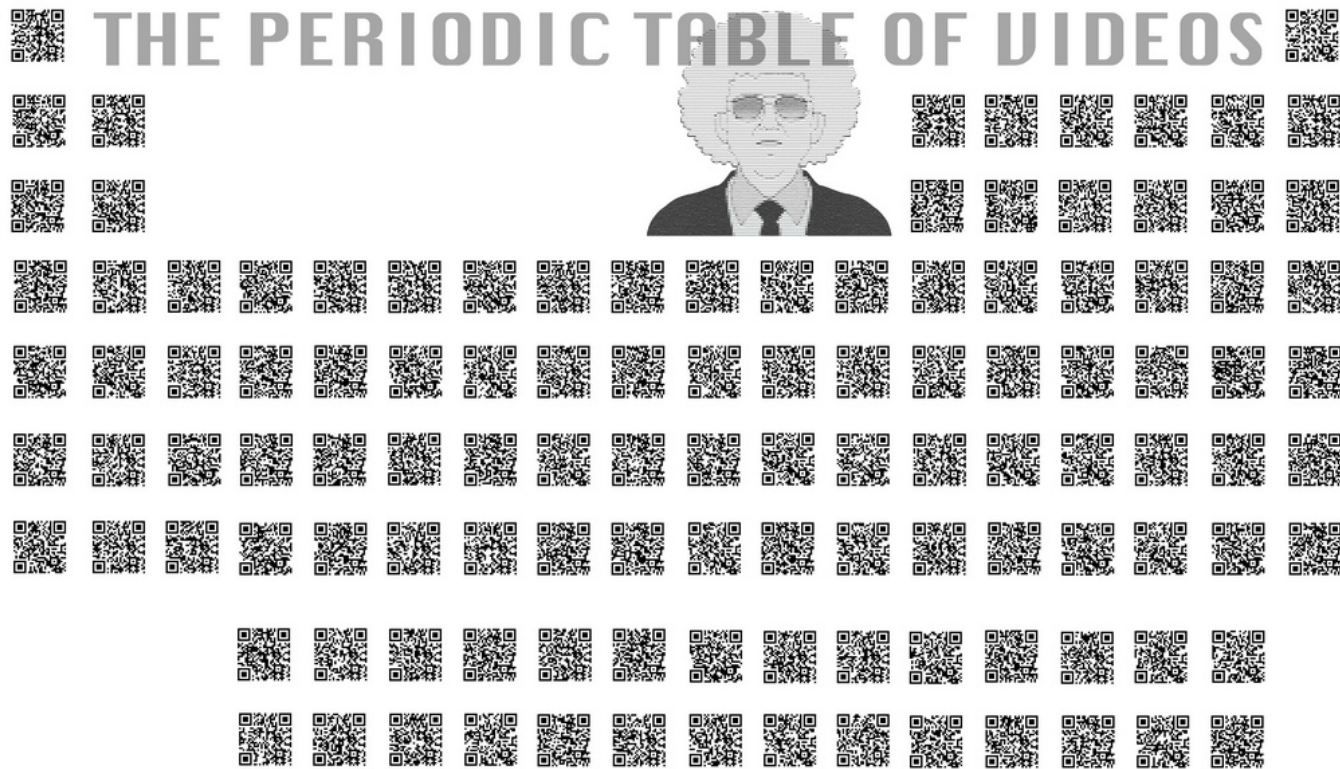


QR Code Examples: Rocks

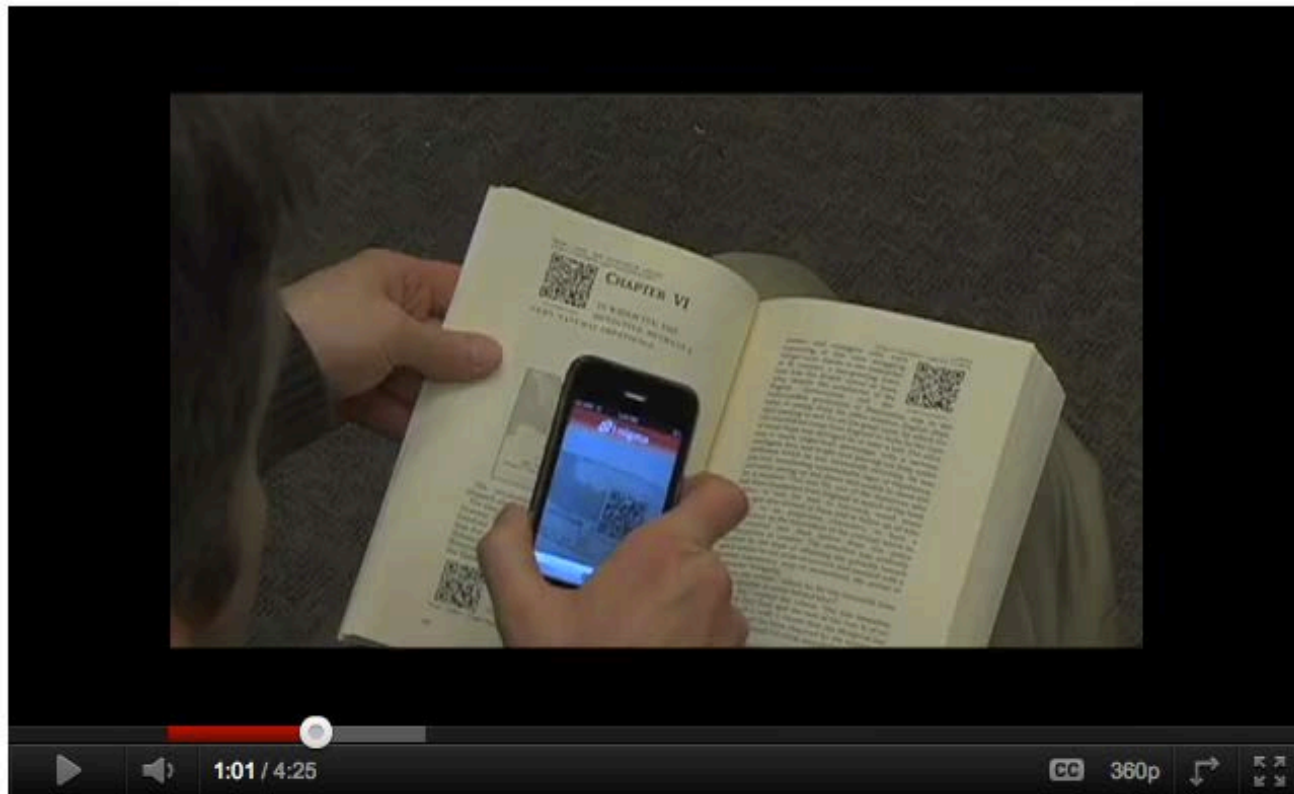


<http://mckinneymuseum.appstate.edu/rock-garden/beekmantown-formation>

QR Code Example: Periodic Table



QR Code Example: Books

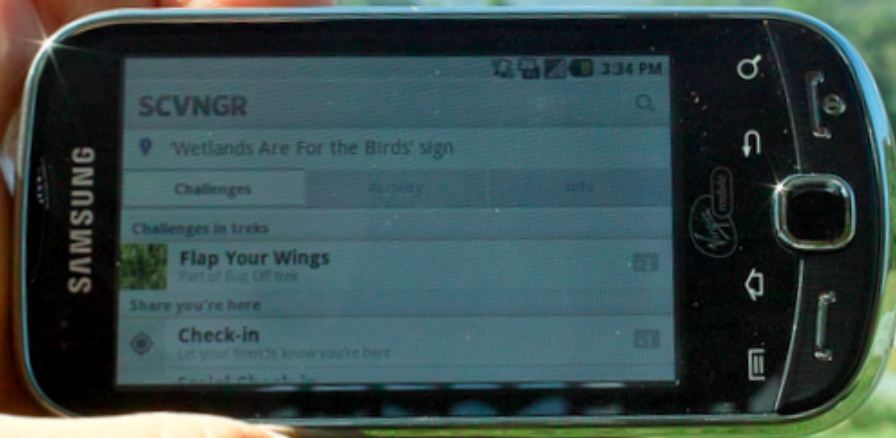


<http://www.youtube.com/watch?v=OE5Ch4NnVu0>

Maker Activities: Mobile Learning Games

- As far as pedagogy, I like to use a constructionist (rather than instructionist) approach: My students create the content and projects using mobile technologies
 - Research, data collection, analysis
 - Collaboration with peers and professionals in the outside world
 - Creative project and media development
 - Presentation of project for authentic use

Mobile Learning and Community Engagement



- Students in campus ITC 5220 class
- Creating mobile learning content / experiences for visitors of the Boone Greenway Wetlands area to access on mobile phones

Service-learning experience

- Applying knowledge of constructing digital learning
- Collaborating with Boone Greenway Trail, Watauga River Conservation Partners, NC Cooperative Extension

Constructed Stormwater Wetland—Boone, NC

During a rainstorm, stormwater runoff flows across the land, picks up pollutants such as oil and gas, food trash, lawn and lawn care, pet waste, automotive fluids, motor oil, paint, and other pollutants. Without treatment, the polluted water will flow into the South Fork of the New River, contributing to one of the major causes of surface water quality degradation in the nation, non-point source pollution, degraded river habitat for trout in the mountains.

This constructed stormwater wetland catches and treats the run-off coming off parking lots, tennis courts, baseball fields, and rooftops. Stormwater wetlands are effective environmental protection practices because they remove pollutants using physical, chemical, and biological processes. They catch and filter out sediment, nutrients, and pesticides. They can also reduce the amount of runoff that enters the river, helping to prevent flooding.

The town of Boone is located at the headwaters of the New River watershed which flows north into Virginia. The entire watershed is experiencing tremendous growth and increased runoff into the streams and rivers. Wetlands are one way to improve water quality, enhance beauty, and provide wildlife habitat. The town of Boone strives to protect and conserve our water resources for today and the future.

The Boone wetland was designed to capture and treat the runoff produced by the new park (approximately 1.2 million sq ft) that is being built on top of the wetlands. A discharge pipe (shown in photo) was used to direct runoff into the wetland.

Discharge pipe that drains stormwater from 30 acres of impervious parking lots, walkways, buildings and even runoff from the baseball fields.

Wetland Mosquito Predators

Do you ever get annoyed by mosquitoes? Don't they annoy your skin because it bites? Mosquitoes are a pest because they transmit diseases, such as malaria and dengue fever, which can be fatal. Many people perceive that standing water is a source of mosquitoes. This is usually not true. There is growing evidence to show that properly functioning wetlands can actually reduce mosquito populations. These wetlands provide habitat for dragonflies, damselflies, frogs, toads, and other mosquito predators. Mosquitoes only become a problem in areas that don't support these natural species. Wetland restoration and constructed wetlands can reduce the mosquito population in two ways: 1) provide proper habitat for natural predators of mosquitoes, and 2) prevent flooding in areas that aren't normally wet and thus support mosquitoes but not their predators.

Boone Greenway Trail
Watauga River Conservation Partners
NC Cooperative Extension
North Carolina Clean Water Management Trust Fund

Example mobile learning student projects:

- Mobile tagging with QR Code
- Social scavenger hunt games

Streamside Forests

Another name for the streamside forest is a riparian buffer. Riparian Buffers are zones along a stream or riverbank where vegetation

Native Riparian Trees & Shrubs at Clawson Burnley Park

Trees:

Platanus occidentalis - sycamore
Acer rubrum - red maple
Amelanchier arborea - serviceberry
Quercus acutissima - sawtooth oak
Hamamelis virginiana - witch hazel
Cornus florida - flowering dogwood
Betula nigra - river birch

Shrubs:

Kalmia latifolia - mountain laurel
Rhododendron calendulaceum - flame azalea
Rhododendron viscosum - swamp azalea
Ilex verticillata - winterberry
Physocarpus opulifolius - ninebark
Cornus amomum - silky dogwood
Sambucus canadensis - elderberry
Hibiscus moscheutos - swamp hibiscus
Lindera benzoin - spicebush
Vaccinium spp. - blueberry

The Town of Boone developed this park to protect the river, enhance wildlife, and clean surface water.

Trees are what hold the river together!

Streamside Forests Protect the River

- **Roots provide bank stability** - roots woody vegetation hold the soil in place which reduces sediment in the river
- **Provides shade** to help moderate stream temperature for trout
- **Intercepts pollution** - "acts like a sponge" to absorb extra fertilizer, pesticides, sediment, etc.
- **Provides habitat**
 - food chain: aquatic insects eat the leaves and fish eat the insects
 - canopy for birds and other wildlife



South Fork of the New River

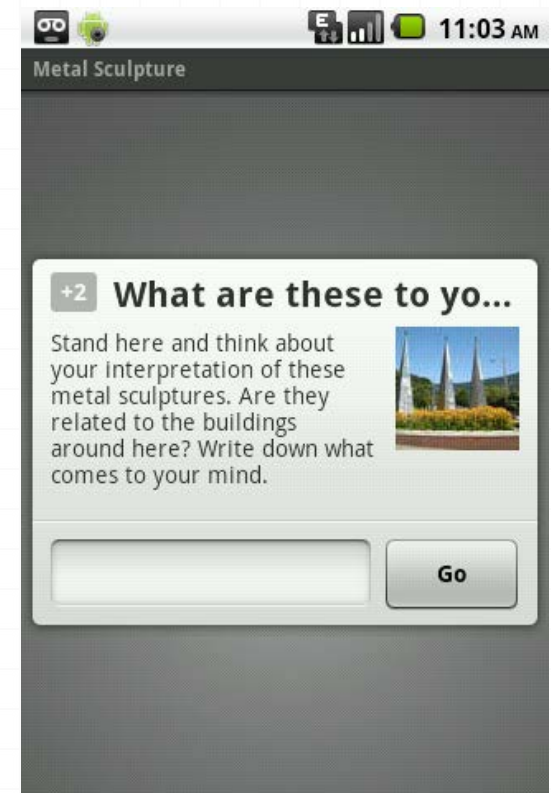
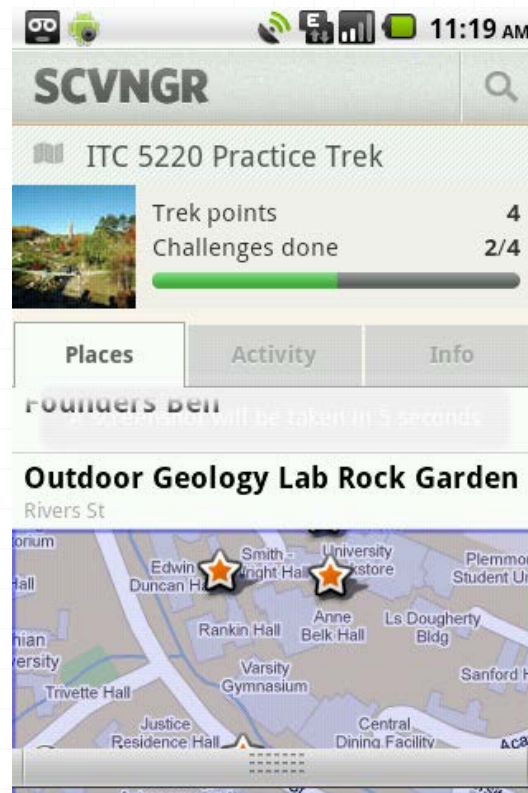
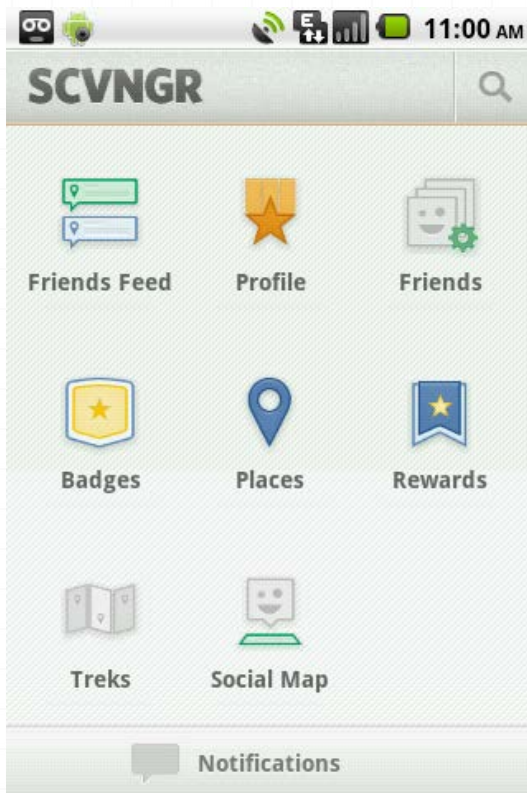


North Carolina Clean Water Trust Fund

Scavenger Hunt Games

- A popular location based scavenger hunt games is Geocaching, which focuses on hidden containers, called geocaches, that are placed outdoors for people to find
- SCVNGR (<http://scvngr.com>) uses the GPS in a mobile device to present challenges at specified physical locations
 - Challenges are presented on the player's screen, and can be enhanced with audio, image, and video content
 - Actions that can be asked of a player at a challenge point can be: to take a photo, scan a QR Code, or answer with either a specific or open ended text response
 - Players are awarded points by completing a challenge
 - Stringing together challenges into “treks” can create sequenced learning games

SCVNGR Mobile Platform



SCVNGR Builder



Profile Builder | SCVNGR for Business FAQ Contact Log Out

SCVNGR > Create Challenge

Add Challenge

Challenges are quick, fun things to do at places.

Place ?	<input type="text" value="Boone Greenway Wetlands"/>	<input type="button" value="Select Place"/>
Title ?	<input type="text" value="Wetlands as Bird Habitat"/>	
Points ?	<input type="text" value="3"/> <input type="range"/>	
Challenge ?	<input type="text" value="Snap a photo of one bird species that inhabits the wetlands."/>	
Challenge Type ?	<input type="text" value="Photo Challenge"/>	

Player takes a photo. Learn how players using SMS submit photos [here](#).

- Multimedia

Image No attachment | Edit

SCVNGR Game at the Wetlands

- One Example of a wetland game created: Bug Off
- Game for middle school aged students / general public
- Challenges include information and activities related to the importance of dragonflies in the wetlands:
 - Dragonfly wings – A Dragonfly flaps its wings over 2,000 time per minute! How many times can you flap your arms in a minute? Take a photo of your partner flapping her “wings” (text input / photo input)
 - Eat your weight – In a single day, the dragonfly eats more than its own weight in mosquitoes. How many chicken nuggets would you have to eat in one day to equal your weight? (text input)

SCVNGR



Bug Off



Trek points 0
 Challenges done 0/5



Places

Activity

Info

House

New River



comment



Evaluation Feedback Survey

Make your thoughts count!

- Did this session meet or exceed your expectations?
- What topics would you like to see covered in the next quarter? Tell us!



Teaching + Learning Tuesday



Join us every **Third Tuesday** for more Professional Development opportunities.

Next Session: October 15, 2013

TIME: 2:30pm – 4:30pm

TITLE: **Better Together: Integrating Student-Led Blogging Into Your Course**

PRESENTER: Mr. Matthew Cazessus, Sociology Instructor,
Greenville Technical College



Teaching + Learning Tuesday

