

## Portable Technologies in the Classroom: Ubiquitous Tools to Support Cultural Diversity and Environmental Education

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## Ubiquitous Tools



Investigating ecosystems with handhelds and sensors

## Why Handheld Computers?



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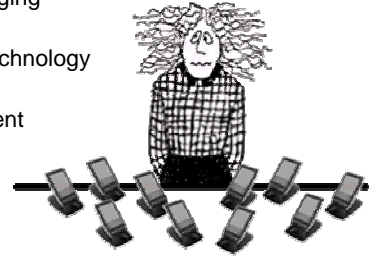
- Learning curve
- Low cost
- Availability of 14,000 software applications

## Why Handheld Computers?

**Portable**  
**Affordable**  
**Collaborative**

## The Problem

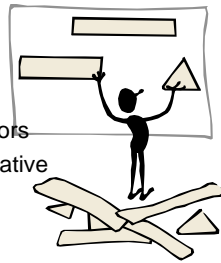
- Rapidly changing technology
- Integrating technology into content
- Diverse student populations



*You want me to do WHAT with these?*

## The Design

- Design master teacher model lesson
  - Take PLT curriculum
  - Infuse with technology
  - Adapt for cultures
- Conduct workshop with preservice teacher as mentors
- Interviews/constant comparative analysis



## The Questions

- What did preservice teachers perceive as valuable about the model workshop demonstration?
- What do you perceive as the value of portable technologies for use in science education?



## The Findings: Part 1

What do you perceive as valuable in this model lesson workshop?



A Butterfly Metaphor for the Metamorphosis of a Diverse Populations

## The Findings: Part 2

What do you perceive as valuable regarding the use of portable technologies in instruction?



## The Details

- Activity structures
- Sequential knowledge

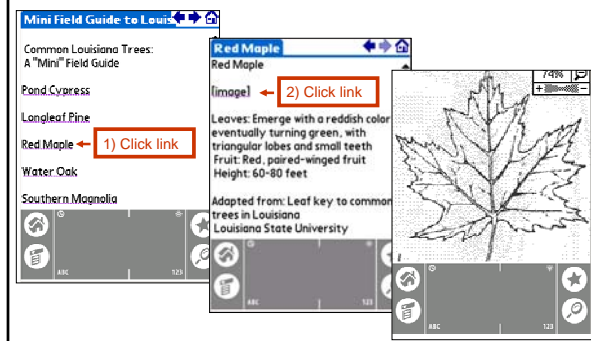


## Scavenger Hunt

[http://www.figg.com/UL\\_forestry\\_lesson/](http://www.figg.com/UL_forestry_lesson/)



## Using eBooks as Field Guides



## Digital Collections



## Portable Data Collection with HandBase



## Portable Data Collection with Proeware



## Creating a Virtual Map

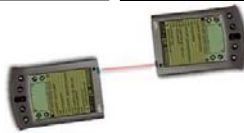


## Environmental Snapshot

Latitude:35°N Longitude:102°W



## Digital Storytelling



## Oral Histories



## Medicinal Herb Guides

DataViz Slideshow To Go 1 of 2

1 **Medicinal Herb Guide**  
by Jason Childs

2 **Sassafras**

- Bark boiled to make a tea
- Used as a stimulant, pain reliever, astringent and treatment for rheumatism

Sassafras

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## Conclusion

