

Design Document for Frog Identification Training Course at the Mequon Nature Center

By Julie Cabaniss

Purpose of the Course

Over ten years ago, some residents of Mequon, Wisconsin decided to raise money to purchase farmland in the community and convert it back to its natural environment. They hired the experts who knew how to do this, built a beautiful nature center and have been collecting data on all the changes that have been (and are still) occurring on the land since they began. There is so much data to collect that the experts on staff cannot do it all. They enlist volunteers to help, but the data needs to be both accurate and accurately recorded.

Frogs and toad species are just one of the many animals that have re-emerged on the property. The aim of this short course is to provide a way for frog data collection volunteers to quickly learn what they need to know, in order to go out into the field and collect good data for the staff at the preserve. The other goal is to provide a mobile application where volunteers can access visual and audio files of the different frog and toad species while out in the field. If they are new to this process, they may need to double check their assessment of what species they think they are hearing or seeing and the mobile access will allow them to do this.

The training module will be designed to be both computer accessible but also something they can use on their mobile device. It will be delivered through a link or button on their Mequon Nature Preserve website.

Audience Description

The audience for this course includes adults and possibly older adolescents (high school). The learners are volunteering their time to do this work, so it is an area of high interest for them. The adults so far have been college graduates. While no high school students have volunteered yet, the director is open to having them volunteer as well, so the learning solution will need to be appropriate to their age as well. It is assumed they have no or almost no background in frog identification.

Major Course Objectives (Terminal)

Terminal Objective #1: Learners will be able to identify by sound and appearance, nine different species of frogs typically found in the Mequon Nature Preserve including Wood frog, Chorus frog, spring peeper, Northern leopard frog, Pickerel frog, Eastern grey treefrog, American toad, Cope's Grey Treefrog, Cricket frog, Northern green frog, American bullfrog (Cognitive)

Terminal Objective #2: Learners will be able to identify surrounding biotic factors in the nature preserve including but not limited to mallards, red-winged blackbirds, squirrels, sparrows, tree swallows, Canadian geese, woodcock, killedeer, robins, crayfish, otters?, (Cognitive)

Terminal Objective #3: Learners will be able to look at a map of the Mequon Nature Preserve property where they are to collect data and identify all eight?? locations where data is to be collected. (Cognitive)

Terminal Objective #4 Volunteers will learn and be able to recall the protocol for collecting research data.

Terminal Objective #5: Volunteers will be able to demonstrate how to accurately enter data onto the sheet used in the field and how to translate that data into an excel sheet on the computer to submit to the nature center.

Course Enabling Objectives

Enabling Objectives #1a-c:

1a. Learn the difference between the frog calls using the DNR/EPA voice recordings of the frogs and be able to pass a test to the 100% proving their knowledge on the frog call identification.

2a. Learn to identify the frog species by sight and pass a test proving their mastery of this knowledge to the 100th percentile.

3a. Match the appearance of each frog with their corresponding frog call and prove their knowledge on a test.

Enabling Objectives #2a-b:

2a. Be able to identify mallards, red-winged blackbirds, squirrels, sparrows, tree swallows, Canadian geese, woodcock, killee, robins, crayfish, otters by sight and prove knowledge on a test.

2b. Recognize the call of some of these other species (double check with Jason at the center)

AGILE in action here☺

Enabling Objectives #3a-b:

3a. Be able to orient map to N/S/E/W and orient themselves to the directions by standing outside and pointing to N/S/E/W.

3b. Be able to identify and walk to each collection site on the map including: **Strietch, Prairie Basin, Hidden Wetland, Farmstead Woods, Harvey's Woods, Paul's Pond, Darter Pond, Strauss Pond.**

Enabling Objectives 4a-f:

4a. State the time of day and weather conditions ideal for data collection.

4b. Know where to find the checklist for materials needed in the field and also where to find materials at the nature preserve if need be.

4c. Know where to access the data sheets and be able to explain what each data field means.

4d. Understand what the time commitment will be to successfully collect useful data on each outing by identifying the time they will need to allocate to do a session.

4e. Be able to articulate or list 80% of the safety protocol and know where to access the list for safety protocol on the website.

4f. Be able to identify and list the steps i

Enabling Objectives 5a-b:

5a. Answer questions on an automated test that ask about valid data for each field and the overall form.

5b. Accurately enter data on a nature preserve excel spreadsheet using data provided in an assessment online.

RLO Enabling Objective

I know we are supposed to do one enabling objective, but these are all so closely related and I envision how I'm already going to design this with all three factors.

1a. Learn the difference between the frog calls using the DNR/EPA voice recordings of the frogs and be able to pass a test to the 100% proving their knowledge on the frog call identification.

	<p>2a. Learn to identify the frog species by sight and pass a test proving their mastery of this knowledge to the 100th percentile.</p> <p>3a. Match the appearance of each frog with their corresponding frog call and prove their knowledge on a test.</p>
Learning Assessment for Course	<p>Learning assessment will come in many forms throughout this short course. There will be formative mastery quizzes (students can retake them until they get in the 90-100% range) on the frog call identification and visual identification. These will consist of matching games that have the learner match the call with the species, the call with the appearance of the species, the name of the species with the appearance. They will also have mastery formative assessments on the procedure in the field in the form of pick one multiple choice questions as well as opportunities to order the procedures appropriately. The feedback will be immediate and include elaboration on why the answer is correct or not. They will have to retake the formative quiz for mastery. They will also have multiple choice questions as well on how to enter data into the spreadsheets.</p> <p>At the end of the training, they will have one large summative assessment that asks them to prove their mastery of the content. If passed at the 95% or so level, they get a badge or certification or something saying they are ready to collect data.</p>
Learning Assessment for RLO	<p>The assessment for the reusable learning object will be matching games as formative assessments where they can learn to master the content. They will then be asked to take a summative assessment of all the information for the three RLOs after they feel they have mastered the content. The Summative Assessment will be in the form of a series of pick one multiple choice questions.</p>
Instructional Delivery method for Course (overall)	<p>The training module will be all online and self-paced. It will be designed to be both computer accessible but also something they can use on their mobile device. It will be delivered through a link or button on their Mequon Nature Preserve website.</p>
Instructional Strategy for RLO	<p>Short tutorials will be used to teach the content.</p> <ul style="list-style-type: none"> - Overview of content followed by - Practice

Media	The media used will include text, audio files, photographs and graphics.
508 Accommodations	I hope to have a text reader for any vision impaired volunteer. Certainly, a totally blind volunteer would need help getting out to the field locations, but their hearing and possibly frog call identification talents may be far superior to any sighted person. Therefore, I'd like this first Frog Call Identification module training to be accessible to vision impaired people who would do the id with a helper that could enter the data for them. Also, a text reader would be nice for the protocol as well.
Course Structure Description	<p>This is a 4-hour course designed to bring novice adults and/or high school or college students up to speed on how to accurately gather frog data in a local nature preserve. The course layout is as follows:</p> <p>Module 1 – Frog call and appearance identification (2 hours)</p> <p>Module 2 – Procedure (Protocol) and Quiz (1 hour)</p> <p>Module 3 – Materials and Safety Reminders (1/2 hour)</p> <p>Module 4 – Data Collection and Entry (1/2 hour)</p> <p>Module 5 - Other Animal Identification (1/2 hour)</p> <p>These modules will be accessed behind descriptive graphic icons on the introductory page and will be accessible to the volunteer at any time after the training as well. It is up to the volunteer to choose what order in which to proceed.</p>
Seat Time of Course	[4 Hours roughly]
Seat Time of RLO	120 minutes
RLO Outline	<p style="text-align: center;">Frog Training Course Outline (Pink is the RLO Outline)</p> <p>I. Users decide the path they take for training.</p> <p style="padding-left: 20px;">A. Frog Identification</p> <p style="padding-left: 40px;">1. Visual identification of all nine species.</p> <p style="padding-left: 40px;">2. Audio identification of all nine species.</p>

3. Putting visual to audio identification of all nine species.
4. Play games to practice both visual and audio identification.
5. Take a quiz to test your knowledge.

B. Protocol (Procedure)

1. When and where to go on the property.
2. What to do once you are there.
3. Time commitment for data collection.

C. Materials and Safety

1. List of materials to bring out to the field.
2. List of safety reminders.

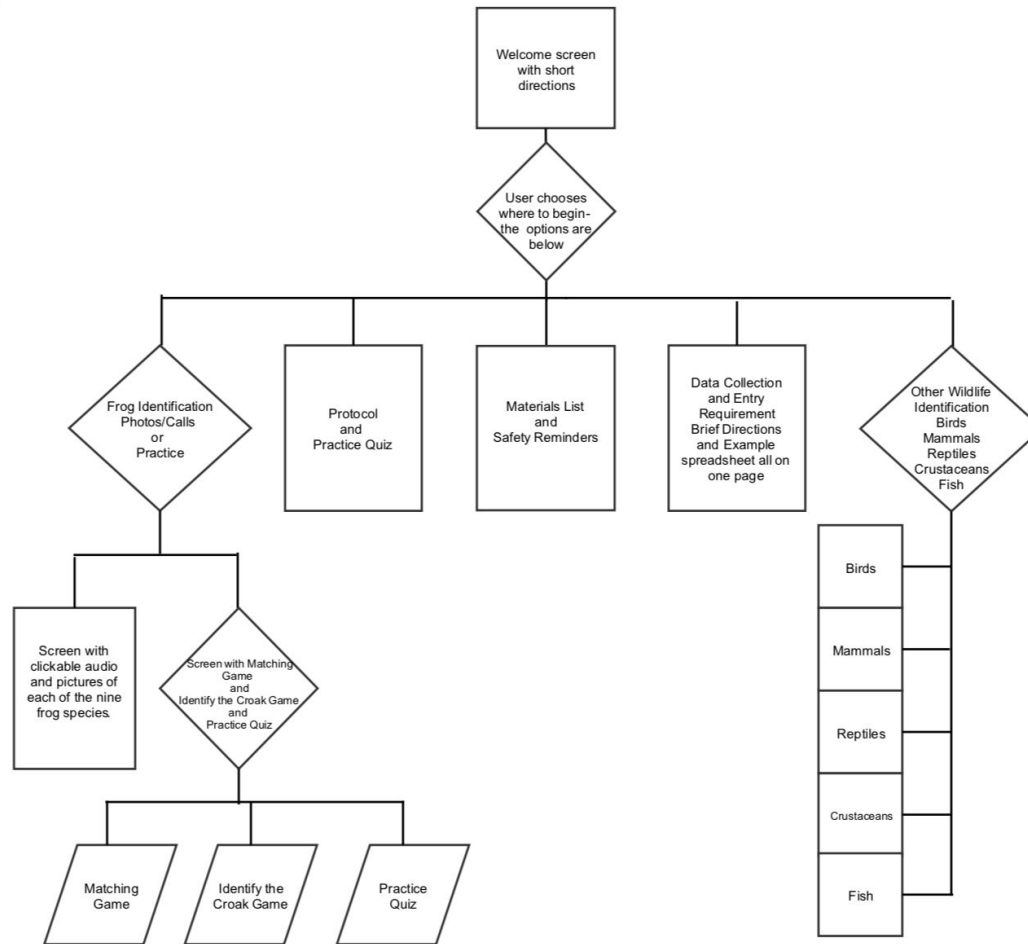
D. Data Collection and Entry

1. Example picture of spreadsheet into which volunteer enters data.
2. Explanation of fields when they rollover.

E. Other Animal Identification

1. Other birds
2. Mammals
3. Reptiles
4. Amphibians
5. Fish
6. Crustaceans

RLO Flowchart



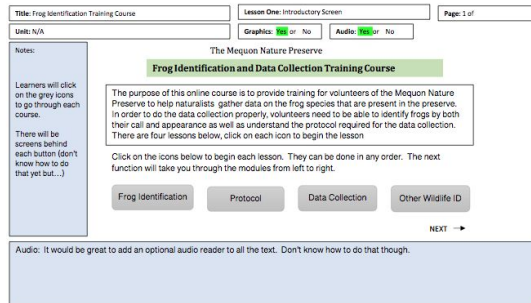
Screens/Pages in RLO	There will be 11 and then three other screens for the games and the quiz, I just don't know what tool I can use for those or how those would look in storyline 360.
Knowledge Checks or Other Assessments or Practices for RLO	<p>Estimated number of interactions.</p> <p>___ Dichotomous (T/F, Y/N, etc.)</p> <p>__1__ Multiple Choice</p> <p>___ Multiple Select</p> <p>__2__ Drag and Drop</p> <p>___ Custom – describe; if appropriate, supply flowchart in an Appendix and reference it here.</p> <p>___ Matching with line</p>
Rollovers/click events	<p>[mod 4 – estimated number of individual rollover or click event items/objects, outside of navigation elements]</p> <p>__??__ Rollovers</p>

8 Click Events

RLO Navigation

Initial screens with options will have descriptive buttons to dive deeper. Once you are at the deep screens, each one will have a “Return to Menu” option, a “Next” and a “Previous” option. There will also be a “Home” button on each screen so they can go back out to the very beginning introductory screen if they want.

Screen Layouts for RLO











Title: Frog Identification Training Course Lesson One: Frog Identification Lesson Page: 2 of

Unit: N/A Graphics: Yes or No Audio: Yes or No

Frog Identification Lesson

Click on the name of each frog to hear its unique call. The "info" button provides added information and pictures of that species if you are interested. When you can identify the frog species by its call and appearance you are ready to start the "Check Your Knowledge" section, so press the Next button.

 Wood Frog (info)	 Spring Peeper (info)
 Western Chorus Frog (info)	 Northern Leopard Frog (info)
 American Toad (info)	 Eastern Gray Tree Frog (info)
 American Bullfrog (info)	 Northern Green Frog (info)

← BACK Photos are by Wisconsin Department of Natural Resources Staff unless otherwise noted. NEXT →

Audio: Audio MP3 files are also from the Wisconsin DNR. There is a lot on this screen but the volunteers need quick access to the audio when they are in the field, so they need it all on one page.

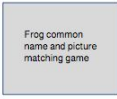
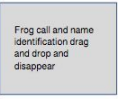
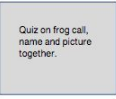
Title: Frog Identification Training Course Lesson One: Frog Identification Lesson Page: 3 of 11

Unit: N/A Graphics: Yes or No Audio: Yes or No

The Mequon Nature Preserve

Frog Identification - Check Your Knowledge

Play the matching and drag and drop games as many times as you would like, to practice your skills. When you feel pretty good about your ability to identify the frogs with their calls and pictures, take the quiz. Keep taking the quiz until you master it to the 90% level.

		
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← BACK NEXT →

Audio: It would be great to add an optional audio reader to all the text. Don't know how to do that though.

Title: Frog Identification Training Course Lesson One: Frog Identification Page: 5 of 11

Unit One: Frog Identification Graphics: Yes or No Audio: Yes or No

Frog Identification Lesson - More Information by Species

Western Chorus Frog - *Pseudacris triseriata*

[Listen to the Frog Call](#)

Information about this species including:
Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

Photo Photo Photo

← BACK NEXT →

Notes:

NEXT →
BACK →

This is one of the information screens. They will all have the same format AND they will have the audio option if they want to listen to the audio while reading about the frog.

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Title: Frog Identification Training Course Lesson One: Frog Identification Page: 4 of 11

Unit One: Frog Identification Graphics: Yes or No Audio: Yes or No

Frog Identification Lesson - More Information by Species

The Wood Frog - *Lithobates sylvatica*

[Listen to the Frog Call](#)

Information about this species including:
Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

Photo Photo Photo

← BACK NEXT →

Notes:

NEXT →
BACK →

This is one of the information screens that they can optionally visit. I am putting them after the three primary screens.

They will all have the same format AND they will have the audio option if they want to listen to the audio while reading about the frog.

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Frog Identification Lesson - More Information by Species

American Toad - *Anaxyrus americanus*

[Listen to the Frog Call](#)

Information about this species including: Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

← BACK NEXT →

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Frog Identification Lesson - More Information by Species

American Bullfrog - *Anaxyrus americanus*

[Listen to the Frog Call](#)

Information about this species including: Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

← BACK NEXT →

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Title: Frog Identification Training Course Lesson One: Frog Identification Page: 8 of 11

Unit One: Frog Identification Graphics: Yes or No Audio: Yes or No

Notes:
 NEXT →
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This is one of the information screens. They will all have the same format AND they will have the audio option if they want to listen to the audio while reading about the frog.

Frog Identification Lesson - More Information by Species

Spring Peeper - *Pseudacris crucifer*

[Listen to the Frog Call](#)

Information about this species including:
 Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

Photo Photo Photo

← BACK NEXT →

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Title: Frog Identification Training Course Lesson One: Frog Identification Page: 9 of 11

Unit One: Frog Identification Graphics: Yes or No Audio: Yes or No

Notes:
 NEXT →
 BACK ←

This is one of the information screens. They will all have the same format AND they will have the audio option if they want to listen to the audio while reading about the frog.

Frog Identification Lesson - More Information by Species

Northern Leopard Frog - *Lithobates pipiens*

[Listen to the Frog Call](#)

Information about this species including:
 Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

Photo Photo Photo

← BACK NEXT →

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Title: Frog Identification Training Course Lesson One: Frog Identification Page: 10 of 11

Unit One: Frog Identification Graphics: Yes or No Audio: Yes or No

Notes:

NEXT →
BACK ←

This is one of the information screens. They will all have the same format AND they will have the audio option if they want to listen to the audio while reading about the frog.

Frog Identification Lesson - More information by Species

Eastern Grey Tree Frog - *Lithobates pipiens*

[Listen to the Frog Call](#)

Information about this species including: Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

Photo Photo Photo

← BACK NEXT →

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Title: Frog Identification Training Course Lesson One: Frog Identification Page: 11 of 11

Unit One: Frog Identification Graphics: Yes or No Audio: Yes or No

Notes:

NEXT →
BACK ←

This is one of the information screens. They will all have the same format AND they will have the audio option if they want to listen to the audio while reading about the frog.

Frog Identification Lesson - More information by Species

Northern Green Frog - *Lithobates clamitans*

[Listen to the Frog Call](#)

Information about this species including: Size, specific unique markings, mating behavior, geographic region, a fun fact or two about this little guy.

Photo Photo Photo

← BACK NEXT →

Audio: Optional audio behind the listen to the frog call button at the top if they want to hear it while learning more about the frog.

Development Tools for RLO	[mod 5 -Storyboarding tool will be powerpoint, Storyline 360 authoring tool, quizlet or Storyline 360.
Ownership	The course is designed for Mequon Nature Center but I will be available to fix or tweak anything they feel needs changing or tweaking.
Development Time of entire course and RLO	Entire Course: 200 hours RLO: 40 hours
Support requirements for RLO and course	Education Director at the Mequon Nature Center is the SME that I have been relying on. Also, the DNR has audio and photo files of different frog species.
Project Sign-off [optional]	Please sign below indicating agreement with the proposed course plan and approving start-up of the storyboard and development phases.
	<p style="text-align: center;">Instructional Designer Date</p>
	<p style="text-align: center;">Project Manager/Sponsor Date</p>