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ETEC 570  
Fall 201

## E-Project: Online Course

**Website link:** <https://sites.google.com/site/biomesandadaptations/>

My final project is an online course for third grade students. It is a science course, specifically focusing on biomes and organisms' adaptations. I decided to create an online course in science because I believe that science should be a fun and hands-on subject and that reading information in a book will not provide the best learning experience for students. Although e-courses for elementary are still rare, I strongly believe that today's youth have the capability and willingness to take an online course. Most youth have devices at home they enjoy using and have the basic skills to use them. An e-course is a great opportunity for elementary age students to build on their skills and become more productive learners and digital citizens.

Students will be using a variety of online tools throughout the course, including: *Audacity*, *Comic Life*, *Evernote*, *KidBlog*, and *Little Bird Tales*. Students will use *Evernote* to take online notes. *KidBlog* will be used for writing assignments and to submit activities. Students will use *Comic Life* and *Little Bird Tales* to create informational stories about their learning. Students are also encouraged to have a Google Account since some assignments were created using Google. To guide student learning, I included Screencast Tutorials to show students how to use these online educational tools so that students can feel more successful and less stressed when utilizing them to complete assignments.

Online programs you  
will need to download  
and have accounts for:

- [Audacity](#)
- [Comic Life](#)
- [Evernote](#) –  
Remember to  
share your notes  
with me.
- [KidBlog](#)
- [Little Bird Tales](#)
- [Google account](#)

### Course Description and Objectives

I created a four-week course about biome habitats and types of adaptations that animals and plants have which allow them to survive in the biomes in which they live. The Home page provides the learner with the information that they will need to successfully complete the course. It includes important vocabulary, the Next Generation State Standards (NGSS) that would be covered during the course, the course objectives, and the online programs that students should be familiar with. The Home page also includes a table with the dates, topics, and assignments that would be covered each week. A grading scale is included so that students know how they are doing throughout the course.

The Next Generation State Standards that are covered in this course include survival of living things and how organisms' traits can be influenced by the environment in which they live. Based on those NGSS, I created the following course objectives:

- Define and identify the characteristics of the following biomes: forest, grassland, and tundra.
- Demonstrate understanding of the biomes by comparing and contrasting them.
- Define and identify behavioral and physical adaptations.
- Show how an organisms' adaptations help them survive in their biome.

To meet these standards, I created a variety of Absorb, Do, and Connect activities to be completed during a four-week online course. The first week introduces two biomes, the forest and grassland. The second week of the course discusses the desert biome. The third week of instruction discusses the tundra biome. The final week of the e-course goes over the two types of adaptations and reviews the four biomes introduced in the first three weeks of instruction.

Date	Topic	Assignments	Possible Points
Week 1 1/16/17 - 1/22/17	Forests and Grasslands	<ul style="list-style-type: none"> <li>- Lesson: Forest and Grassland Tutorial</li> <li>- Virtual field trip: Notes</li> <li>- PowerPoint presentation</li> <li>- Grassland summary</li> <li>- Connect Activity</li> <li>- Assessment: Forest and Grassland Quiz</li> </ul> <p><b><u>Due Date: 1/22/17 at 8 p.m.</u></b></p>	26 points
Week 2 1/23/17 - 1/29/17	Deserts	<ul style="list-style-type: none"> <li>- Lesson: Desert Tutorial</li> <li>- Brace Map - Plants</li> <li>- Online research</li> <li>- Informational Essay</li> <li>- Double Bubble Map - Compare &amp; Contrast</li> <li>- KidBlog Entry</li> <li>- Assessment: Desert Quiz</li> </ul> <p><b><u>Due Date: 1/29/17 at 8 p.m.</u></b></p>	55 points
Week 3 1/30/17 - 2/05/17	Tundras	<ul style="list-style-type: none"> <li>- Lesson: Tundra Tutorial</li> <li>- Audio recording</li> <li>- <i>Build a Biome</i> game</li> <li>- Comic book</li> <li>- KidBlog Entry</li> <li>- Assessment: Tundra Quiz</li> </ul> <p><b><u>Due Date: 2/05/17 at 8 p.m.</u></b></p>	55 points
Week 4 2/06/17 - 2/12/17	Types of Adaptations	<ul style="list-style-type: none"> <li>- Lesson: Types of Adaptations</li> <li>- KidBlog Entry</li> <li>- Jeopardy Review Game</li> <li>- ZebraZapps Picture Sort</li> <li>- Compare &amp; Contrast Biomes</li> <li>- Create an animal</li> <li>- Assessment: Informational Story</li> </ul> <p><b><u>Due Date: 2/12/17 at 8 p.m.</u></b></p>	64 points

## Course Design

Since the course is meant for third grade students, I made the course design simple and consistent throughout. The tabs are found on the left-hand side of all pages on the website and are clearly labeled. I used tables to organize the activities and resources so that they are easy to find. All four weeks of instructions have the same format, which includes: a summary of instructional content for the week, a lesson tutorial, and a table with the activities that should be completed and the resources needed to complete each activity. I used a basic template with a black background and either black or navy blue font. The links are underlined in red font so that students can distinguish them from the rest of the text.

## Course Advancement

Students should complete the course by beginning with Week 1: Forest and Grassland. Students should begin the week on Monday and complete and submit all activities, including the assessment, by Sunday of the same week. All activities should be completed in the order in which they are presented. I numbered the activities and organized them on a table so that students can easily see the order that they are in. Students may not progress to the next week until all activities and the assessment are complete. On week 4, students will have a final project to conclude the course. The final project requires students to showcase what they have learned throughout the four weeks of the e-course.

### Week 1

The first week of the online e-course focuses on two biomes, the forest and grassland. I combined the two biomes into one week because they are the most common types of biomes and most known to students. The objectives that will be covered in this course are: define and identify the forest and grassland biome and show how and organisms' adaptations can help them survive in the forest or grassland.

#### *Activities*

I began the week with a lesson tutorial that I created using *ZebraZapps* and *Camtasia*. I also required that students take notes during this absorb activity to make sure that they are actively engaged in the activity instead of being passive listeners. Another Absorb activity during this week is the Virtual field trip that I had created for this course. The virtual field trip was to the rainforest, which is appropriate for this week of instruction. I also have students read through a couple of websites to find information about the grassland biome. This type of Absorb activity is different than the previous two because students are only reading instead of reading and listening.

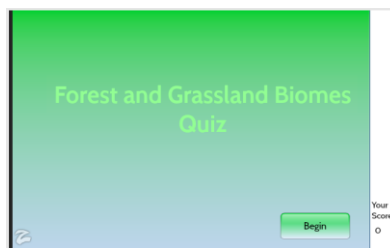
The first Do activity is connected to the Absorb activities. Like I mentioned before, students are required to take notes as they go through the lesson tutorial and the virtual field trip. Another Do activity for this week is a collaborative authoring PowerPoint presentation. Horton (2012) states that this type of activity is good to use when creating documents such as a presentation. This activity requires that all students add one slide of information to complete a collaborative presentation. Another Do activity for this week is to write a summary of their learning from the grassland biome.

<p>2. When you complete the virtual field trip, add one slide to the PowerPoint presentation. Include the following in your slide:</p> <ul style="list-style-type: none"><li>o Your name</li><li>o Picture of one of the animals you learned about in the virtual field trip, a description of the animal's adaptations, and how the adaptation helps them survive in the forest.</li></ul>	<p><b>PowerPoint Presentation</b> - Add a slide to the presentation</p>
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I incorporated two Connect activities this week. The first one is a summary activity, which asks students to summarize what they learned from the two websites. This type of activity can show me if students are really understanding what they are learning because it will show me their understanding of the information (Horton, 2012). The second Connect activity is a rhetorical question (Horton, 2012). Students are asked to think about their own surroundings and connect it to what they have learned.

### *Assessment*

The last Do activity for this week is the assessment. The assessment was created using ZebraZapps. I also included a rubric so that students are aware of the score they can get. I made this assessment simple for the first week so that students can feel confident about the e-course. By building their confidence, students will be more likely to continue the course.



### **Week 2**

This week is dedicated to the desert biome. Students will do a variety of activities that will help them learn more about the desert biome and the plants and animals that live there. The objectives that were met during this week include: define and identify the desert biome and show how and organisms' adaptations can help them survive in the desert biome.

### *Activities*

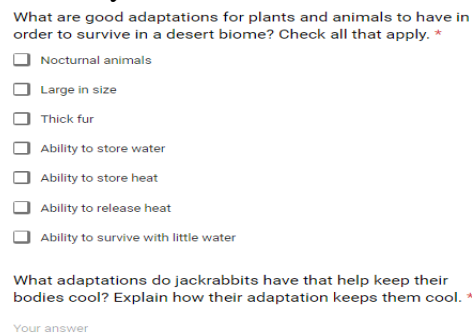
The week begins with an Absorb activity. Like Week 1, students will watch a lesson tutorial and take notes. Students will use the program *Evernote* to take notes. I chose it because it is grade-level appropriate, free and easy to use. *Evernote* also allows students to be able to share their notes with me, which allows me to check whether students are understanding the content. The first activity is a Do activity that is connected to the Absorb activity where students are required to apply what they have learned a complete a Brace Map about plants. The school district I work for has adopted the use of Thinking Maps and students are very familiar with them. By incorporating a tool that students are familiar with in the physical classroom, they will be able to make a connection and feel more comfortable.

The next activity also combines Absorb with Do activities. Students will read through a few websites and watch a couple of videos to learn more about the desert (Absorb). Through these activities, students are absorbing both verbal and oral information. They also must play an Animal Adaptation game. I found the game on the *Desert Museum Digital Library* website. Through the game, students are absorbing information (Absorb activity) while playing the game (Do activity).

The following activity is a research essay, which is a Connect type activity. Students should write an essay using the information they obtained from the previous activities. To submit this activity, I introduced KidBlog. This site allowed me to create a class blog. Students can create writing assignments and submit files on this website. Another Connect activity for this week also requires the use of KidBlog. Students will answer a question in which they will state their opinion and back it up with evidence from their learning.

### *Assessment*

The assessment for this week is a quiz. This quiz requires more than the first week's quiz. I created the quiz using Google Forms. There are a variety of question types including: pick one multiple choice, pick multiple, and composition (Horton, 2012). The questions on the assessment test their knowledge about the biomes and whether objectives were met. A rubric is also included for students to know how they did.



What are good adaptations for plants and animals to have in order to survive in a desert biome? Check all that apply. \*

- Nocturnal animals
- Large in size
- Thick fur
- Ability to store water
- Ability to store heat
- Ability to release heat
- Ability to survive with little water

What adaptations do jackrabbits have that help keep their bodies cool? Explain how their adaptation keeps them cool. \*

Your answer \_\_\_\_\_

### **Week 3**

The focus for the third week of the online course is on the tundra biome. The objectives that were covered this week include: define and identify the tundra biome and show how and organisms' adaptations can help them survive in the tundra biome.

### *Activities*

The first activity is an Absorb activity, which is a lesson tutorial about the tundra biome. To add to their knowledge, students will also conduct an online search using *Kiddle* as an Absorb activity. This activity can also be considered a Do activity because students will be in charge of their own learning. Students will use *Kiddle* to conduct their search because it is kid-friendly and a safer environment than just using any search engine. Then, they will do a Do activity by using Audacity to record a summary of their findings. This activity is a different way for students present what they know. This can be good for those students who do not do very well with writing.

The next activity is an Absorb and Connect activity where students play a game (Do) while acquiring information about the tundra biome (Absorb). Then students will go through some websites to absorb more information about the tundra biome. Then they will do an Original-Work Connect activity (Horton, 2012), using Comic Life to create an information

report. This is another great activity for students to showcase their originality and creativity in the form of a comic book. Students will also do a prompt entry on *KidBlog* and will respond to at least one other entry as part of a Connect activity. This is also a good social learning activity using a Post and Comment pattern (Horton, 2012).

<p>3. Go through the following websites. Choose three animals or plants that live in tundras and create an informational comic book using Comic Life to report your findings. Your comic book should include the following:</p> <ul style="list-style-type: none"> <li>◦ Title page</li> <li>◦ One page for each of the animals that you choose (total of 3 pages). Each page should have: Characteristic of the animal adaptations and how those adaptations help them survive in a tundra.</li> </ul>	<p>Websites:  <a href="#">Conservation Institute</a>  <a href="#">Tundra Animals</a>  <a href="#">Tundra Plants</a></p> <p>Program:  <a href="#">Comic Life Tutorial</a>  <a href="#">Comic Life</a></p>
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### Assessment

The assessment for this week was also created using *Google Forms*. It includes a variety of question types. I considered Horton’s suggestions when creating the assessments for this course (Horton, p. 215-284).

### Week 4

The last week was designed to sum up the course and bring it all together. Throughout the course, students learned about the adaptations that animals have that helps them survive in the biomes they live in. This week reviews those adaptations and refers to them in terms of behavioral or structural adaptations. The week also reviews the four biomes that students learned about throughout the course. The objectives that will be met this week include: demonstrating understanding of the biomes by comparing and contrasting them, defining and identifying behavioral and physical adaptations and showing how an organisms' adaptations help them survive in their biome.

### Activities

The first activity is an Absorb activity. Students will watch the lesson tutorial I created using *ScreenCast-o-matic* and the second is a YouTube video created by Mark Drollinger, which uses illustrations to discuss types of adaptations. Then students will use what they observed to enter a KidBlog Entry, which can be a Do and Connect activity. The second activity is a social learning activity where students can use Skype to play a Jeopardy game. I created this game using *Google Slides*. It is a review of the previous three weeks of the online course. I also included a ZebraZapp game where students sort pictures into the appropriate biomes (Do activity).

The next two activities can be considered Do and Connect activities. They are Original-Work activities because students will create something on their own. First, they will compare

and contrast two different biomes and present their findings in any way they choose. Allowing students to choose the presentation mode is a way to get them to demonstrate ownership of their own learning using a tool they feel comfortable with. Second, they have to create an animal based on what they learned about the biomes and the adaptations needed to survive.

To conclude the course, students will do a final project as an assessment of their learning throughout the course. The final assessment project requires students to create a story using the online program *Little Bird Tales*. Students should include information from each of the weeks from the course in their final project. This project is a composition assessment because students are creating an original story (Horton, 2012). This assignment will demonstrate if they acquired the information and met the course objectives because they will be applying what they have learned throughout the course. It also allows them to use a digital tool to do their project.

6. <b>Assessment:</b> Create a digital story using <i>Little Bird Tales</i> . It will be an informational story about the four biomes you learned about throughout this course. Pick one animal/plant from each biome. Describe it, tell what adaptations they have, and how the adaptation helps them survive.	<a href="#">Little Bird Tales Tutorial</a> <a href="#">Little Bird Tales</a> <a href="#">Assessment/Project Rubric</a>
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## Conclusion

Creating this e-course was a challenging, but rewarding experience. William Horton's *E-Learning by Design* (2012), really helped me with the creation of the activities and assessments. Making the course for third grade students was even more of a challenge because I had to use online tools that would be appropriate for their grade-level. I had to consider their abilities and what they can do. I had the same considerations when choosing the online tools that students would use to complete assignments. I used a variety of online tools that would allow students to be creative and able to showcase their strengths. The activities that I chose to do were varied in type, including Absorb, Do, and Connect activities. It was a great learning experience that allowed me to apply what I have learned throughout the course and program.

## Resource

Horton, W. (2012). *E-learning by design*. John Wiley & Sons.