

## TECHNOLOGY INTEGRATION LEARNING PLAN (TILP)

7377 Introduction to Technology in Schools – Fall, 2008

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**Lesson Topic:** Honey Bees

**Content Area:** Language Arts

**Grade Level:** 2<sup>nd</sup> Grade Deaf Education

### Overview –

In this lesson, students will learn about honey bees in correlation with a unit from our reading text. We will:

- 🐝 View videos (available through video streaming) to foster conversation and discussion.
- 🐝 Complete guided and assisted research at given websites
- 🐝 Have shared reading of non-fiction (*Bees and Their Hives*) and fiction books (*Ant and Honey Bee: What a Pair*)
- 🐝 Make a story map of a fiction book and practice retelling the story
- 🐝 Collaboratively create a Question/Answer book from the non-fiction book and our online research
- 🐝 Visit and explore the Haagen-Dazs website (<http://helpthehoneybees.com>). Have an ice cream tasting of the Haagen-Dazs Honey Bee Dependent Flavors.
- 🐝 Plant Sunflowers and other bee-friendly plants on the campus to help increase the native bee population. Create an animated bee at the Haagen-Dazs bee site. Compose a bee-mail message and send it to teachers and the principal.

### Analysis:

This lesson is designed for three deaf second grade students. A main objective for every lesson when teaching young deaf children is to build language and expand their basic knowledge base. All three students have limited prior knowledge and limited vocabulary. All have delayed language. The language skills of two are delayed by 2 years and the third student's are delayed by 4 years. The Individualized Education Plan (IEP) goals for the students to be addressed in this lesson include asking and answering questions, retelling stories from books read to them, and writing basic sentences. The students will learn the following vocabulary and concepts regarding honey bees and practice conversation and writing skills using the learned concepts.

- 🐝 Bees live in hives in trees or logs.
- 🐝 It takes about 2 weeks for bees to build their hive.
- 🐝 Hives are made with wax from the bees body.
- 🐝 The wax cells inside a hive is called honeycomb.
- 🐝 The queen bee lays eggs.
- 🐝 Worker bees feed the baby bees and gather pollen and nectar from flowers.
- 🐝 Guard bees protect the hive.
- 🐝 Honey bees get pollen and nectar from flowers.
- 🐝 Honey bees spread pollen from flower to flower. They pollinate flowers.
- 🐝 They take nectar and pollen to their hive and store it in the honeycomb.
- 🐝 Honey bees make honey.
- 🐝 Beekeepers are people who raise honey bees and gather honey from hives.
- 🐝 Honey bees communicate by dancing.

- 🐝 People need honey bees. They are necessary for us to have foods like fruits and nuts.
- 🐝 Honeybees are disappearing. We need to help the bees by planting flowers.

These students do not have any experience conducting searches on the internet. Therefore, students will be introduced to and gain experience in using the internet for obtaining information through teacher guided research. They have knowledge of using KidPix for creating pages. They will be guided through the process of taking their created pages and putting them into a slide show to share with other students. Students will be introduced to Kidspiration as we make a story map of a fiction book together. The students will learn about e-mail addresses in order to send the bee-mail to the principal and faculty.

Estimated Lesson Time: Ten 60-minute sessions

### **Design and Development:**

#### **Desired Learning Objectives:**

- 🐝 Students will be exposed to new concepts and oral vocabulary
- 🐝 Students will increase their knowledge base by learning information about honey bees.
- 🐝 Students will participate in discussions of the topic.
- 🐝 Students will be exposed to fiction and nonfiction books.
- 🐝 Students will gain experience in retelling a story.
- 🐝 Students will write simple questions and answers about a given topic.

#### **Resources and Media**

*Ant and Honey Bee: What a Pair!* By Megan McDonald

*Bees and Their Hives* by Linda Tagliaferro

Honey Bee Book List

Sample Question and Answer Book

Computer with Internet access and color printer

Kid Pix

Kidspiration

Scott Foresman My Sidewalks Level A Unit 2

<http://animals.nationalgeographic.com/animals/bugs/honeybee.html>

<http://www.cbsnews.com/video/watch/?id=3870476n>

<http://www.pbs.org/wgbh/nova/bees/>

<http://helpthehoneybees.com/>

<http://www.roctronics.com/Bee-base.htm>

Discovery Education Streaming:

*City of Bees: A Children's Guide to Bees*

<http://player.discoveryeducation.com/index.cfm?guidAssetId=187569F3-0889-4DA9-81EB-688B7702B964&blnFromSearch=1>

*The Bee*

<http://player.discoveryeducation.com/index.cfm?guidAssetId=AA3CE822-DD79-4391-A657-33C5973C74CA&blnFromSearch=1>

## **Theoretical Learning Perspective**

I believe this lesson conforms to the Constructivism Learning Theory. The primary goal of this lesson is to build language and knowledge. In Constructivism teachers “tailor their teaching strategies to student responses and encourage students to analyze, interpret, and predict information.”

(<http://www.funderstanding.com/constructivism.cfm>). Another characteristic of constructivism is extensive dialogue between students and the teacher. The goal of this lesson can be reached most effectively through multiple discussion opportunities for students with each other and the teacher. In the implementation of this lesson, the teacher will be explaining and questioning continuously throughout the activities. The questioning is vital for encouraging students to think, promoting dialogue, and assessing student comprehension and understanding.

This unit is designed on Thematic Theory of Instruction. It integrates reading, language, writing, and science into the study of a broad topic. The theme for this unit was selected to correlate to a unit from the students’ reading text.

The technology used in this unit will support the learning activity by:

- providing the students with glimpses inside a working hive through video streaming.
- providing them with an introduction to research using the internet.
- being a tool to create original work to express what they have learned and share it with others.
- being a tool to organize story parts (setting, characters, etc.) into a visual graphic story map
- allowing students to share their knowledge with others via e-mail

The above mentioned uses of technology in this unit enhance the learning opportunities of my students by providing them with visuals that I can not provide in any other way but through technology. Pictures in a book cannot achieve what a Discovery video of the inside of a bee hive can. The students will be able to watch the queen bee lay the eggs in each cell of the honeycomb and see how the larvae grow until it becomes an adult and emerges from the cell. They will be able to watch the dances of the bees that are the bees’ way of communication. It will provide a richness to the lessons that will make it memorable for the students and that will keep them fully engaged.

The Kid Pix and Kidspiration activities will be motivating and rewarding for the students because it will allow them to produce a quality product and share it as a slide show with another class. The technology will foster excitement and pleasure into reading and writing activities. The organization and visual strength in a story map made by the Kidspiration program will enhance the students’ ability to visualize and remember the parts of the story making them more successful in their retellings.

## Structure and Sequencing of the Learning Activity

Day 1:

KWL Chart – Complete the “What We Know” and “What We Want to Know” columns of the chart.

Shared reading of *Bees and Their Hives*

Guided web research to find answers to “What We Want to Know” items

<http://animals.nationalgeographic.com/animals/bugs/honeybee.html>

<http://www.cbsnews.com/video/watch/?id=3870476n>

<http://www.pbs.org/wgbh/nova/bees/>

<http://helpthehoneybees.com/>

<http://www.roctronics.com/Bee-base.htm>

Day 2:

Video streaming (Discovery Education Streaming) – The teacher will explain and discuss during the video. The pause button is a great tool and will be used often. These videos are to be used not only as a source of information but also as stimulus for conversation.

*City of Bees: A Children's Guide to Bees*

<http://player.discoveryeducation.com/index.cfm?guidAssetId=187569F3-0889-4DA9-81EB-688B7702B964&blnFromSearch=1>

*The Bee*

<http://player.discoveryeducation.com/index.cfm?guidAssetId=AA3CE822-DD79-4391-A657-33C5973C74CA&blnFromSearch=1>

Day 3:

Explore and discuss Haagen-Dazs Help the Honey Bees website  
Bee Dependent Flavors Ice Cream Tasting

Day 4:

Complete the remaining “What We Learned” Part of the KWL chart  
Guide creation of questions for the book from the information we have learned.  
Students will decide how to divide the questions up between them and write answers for their given questions.

Example: What does the queen bee do? The queen bee lays eggs.

Day 5, 6, 7, and 8:

Create pages of Question/Answer book using Kid Pix. The question will be on a single page. The answer will be on another page. Put book together into slide show. Students will share the book with the students in another class. Teacher will print the pages also and bind the book together so that the question page is seen first and then the page is turned to read the answer. The hard copies of the books will be for the children to take home.

Day 9:

Plant sunflower seeds

Create animated bee at Haagen-Dazs Help the Honey Bees website, compose e-mail and send to principal and teachers

Day 10:

Shared reading of *Ant and Honey Bee: What a Pair!*

Complete a story map together.

Use the story map for retelling practice

## **Assessment of Student Learning**

Fiction Retelling Scoring Form (from Reading A-Z) (form is attached at end)  
Teacher will constantly assess student comprehension throughout the discussions.  
Teacher observation and anecdotal records during discussion, question/answer activity, student creation of their pages and presentation of the slide show.

### **Implementation:**

My students and I have all enjoyed the lessons in this unit. The introduction to internet research went well considering the students' age and academic levels. They enjoyed discussing the pictures and wanted to explore other topics. I had to redirect the students several times to keep them on topic. This is not unusual for deaf children. The National Geographic site was their favorite and they will probably all be exploring it more when they are allowed computer time. We were able to find the information we wanted to learn and made note of them on our KWL chart. I loved the responses of the children and the way the websites fostered conversation and inquiry even from the student with the least amount of language skills.

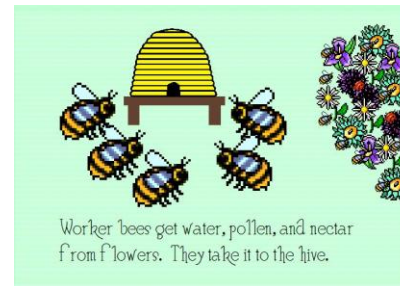
Day 2 was a very exciting day. The students were very engaged in the video streaming of The Bee by Discovery Education. They were fascinated with the eggs in each cell and how they could see them develop and grow to adulthood. They were in awe of how far the little bee flies to gather the nectar, water, and pollen to take back to the hive only to turn around and go again. We paused the video frequently to have discussion and for explanation and clarification of what was happening. The quantity of conversation and comprehension prompted by these videos was very rewarding to me as a teacher. I feel the videos pulled all the research from the previous day together in the students' minds into something meaningful as evidenced by their conversation, comments, and questions.

Day 3 was a yummy day full of conversation and fun. The students absolutely loved the ice cream tasting! The concept that we need bees to have the ingredients for the ice cream was an eye opener for them.

Day 4 brought the completion of our KWL chart. We used the chart to help us create the questions for our book project.

Days 5-8 we created our pages using the KidPix program. The students loved it. Here are some samples of pages they created.





The limited computer access available in my classroom dictated that students take turns. This required me to manage various student activities at the same time. Fortunately I do have interpreter/aides during parts of the day that could assist some students while I helped the other.

On Day 9 the students really enjoyed the bee making activity at the Haagen-Dazs site. They wanted to create several bees. We had quite a discussion and some compromise in order to agree on a final bee to send with our e-mail to the principal which we sent as a group. We created our e-mail text together. I introduced the students to e-mail addresses and each child was able to e-mail their homeroom teacher with their own bee design and the same text we had created together.

On Day 10 we read our book then I introduced the students to the Kidspiration program with a quick overview. I modeled how to make a web using a story they were all familiar with. We then did the web of the book together. Each child took a turn creating a part of the web with my prompting. Following the I Do, We Do, You Do plan, the students will probably be able to create their own webs after we complete a few more together in future lessons. I allowed the students to use the web we created for a visual for the retelling practice. I feel it gave them a clear understanding of what I wanted out of them when I ask them to retell a story.

### **Evaluation:**

Did learners achieve my intended objectives? How do I know?

Teacher observation and student participation leads me to the conclusion that my objectives for this lesson have been achieved. The students are able to give back to me the information they have learned in conversation. They gained valuable conversation and discussion practice throughout the lessons. They successfully wrote simple questions/answers to use in the book. The three students had varying levels of success at the retelling activity however this was expected as none of the students has mastered retelling. The objective of this lesson was to gain experience in retelling and that was achieved.

Did they learn anything incidental that was unplanned for?

Incidental learning is a daily event in my classroom. For this unit one of my students was appalled to learn that one of the baby bees died and the worker bees just threw him away to keep the hive clean. Another incidental learning opportunity arose when a beekeeper in one of the videos pulled a dead mouse from the hive. The children learned that the bees attacked the mouse and killed him with multiple stings to protect their hive.

How feasible was the learning activity?

The technology available in my classroom made this unit feasible. I do not think the objectives could have been achieved without the video streaming or internet research. This unit required a lot of time but the language experience it provided was well worth it.

What, if anything, should I change?

Overall I feel the lessons work well in the sequence as planned. On Day 2 (video streaming) and Day 10 (retelling) I really would have liked a little more time. On Day 3 I would have liked to have some real items from the list of bee dependent ingredients for the students to touch, smell, taste, etc.

How will I use this evaluation data?

The data from this unit will be used to document student work toward mastery of IEP goals.

### **Standards:**

#### **Alabama Language Arts Course of Study Grade 2**

- Recalling information
  - Examples: plot/story beginning, middle, and end; characters; character traits; setting; main ideas; details; topic
  - Responding to comprehension questions
- Demonstrate an interest in and enjoyment of literature in a variety of forms and contexts.
- Exhibit expanded vocabulary and sentence awareness.
  - Participating in shared reading and writing
  - Responding to questions
- Use appropriate sources for obtaining information.  
Examples: newspapers, electronic media, resource people, graphs, pictures, books, maps, dictionaries, diagrams, telephone directories, glossaries
- Use the writing process when creating different forms of written expression.
  - Prewriting • Drafting • Revising • Editing • Publishing
- Use conventional mechanics and spelling when editing written expression.
- Use available technology for expression.
  - Word processing
  - Multimedia presentations
- Exhibit an increased facility in self-expression in a variety of forms.
  - Sharing experiences, facts, and information
  - Retelling stories
- Read and comprehend a variety of material.

### **National Technology Standards for Students 2007 (NETS-S):**

#### **1. Creativity and Innovation**

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes

using technology. Students:

- a. apply existing knowledge to generate new ideas, products, or processes.

- b. create original works as a means of personal or group expression.

## 2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance,


to support individual learning and contribute to the learning of others. Students:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- c. develop cultural understanding and global awareness by engaging with learners of other cultures.
- d. contribute to project teams to produce original works or solve problems.

### Extension Activities:

-  The students can participate in The Great Sunflower Project at:  
[http://www.greatsunflower.org/files/images/Great\\_Sunflower\\_Project\\_Insert.pdf](http://www.greatsunflower.org/files/images/Great_Sunflower_Project_Insert.pdf)

This is a project where students grow their sunflowers then record data on bees that come to the sunflowers and submit it to bee researchers.

-  Invite a Beekeeper to come as a guest speaker or arrange a field trip to a beekeeper's farm.

# Honey Bee Book List

*The Honeybee and the Robber: A Moving Picture Book* by Eric Carle.  
*Ant and Honey Bee: What a Pair!* by Megan McDonald  
Bees and Their Hives by Linda Tagliaferro  
From Blossom to Honey by Ali Mitgutsch  
Hey, Little Ant, by Phillip M. Hoose,  
Honey Bees by Lola M. Schaefer  
Honey Bees by Martha E. H. Rustad  
Honey Bees and Honey by Lola M. Schaefer  
Lost! By Alex Moran  
The Magic School Bus Inside a Beehive by Joanna Cole  
The Rose in my Garden by Arnold Lobel  
Two Bad Ants by Chris Van Allsburg  
The Life and Times of the Honey Bee by Charles Micucci  
Busy, Buzzy Bees by Allan Fowler  
Brilliant Bees by Linda Glaser  
The Honey Makers by Gail Gibbons  
Bees and Wasps by Valerie Swenson  
*Nosey Gilbert* by Abigail Pizer  
*Fiona's Bee* by Beverly Keller



# Fiction Retelling Scoring Form

Student's Name \_\_\_\_\_ Date \_\_\_\_\_

Book Title \_\_\_\_\_ Score \_\_\_\_\_

Rubric for Scoring Individual Story Elements	
Complete, detailed	3 points
Partial	2 points
Fragmentary (sketchy)	1 point
Inaccurate or not included	0 points

Key Elements	Prompts	0	1	2	3
Beginning	How does the story begin?				
Setting	Where does the story occur?				
Characters	Who are the main characters? Which was most important? Why?				
Problem	What is one important problem in the story?				
Sequence	What important things happened in the story? What was the order of events?				
Resolution	How is the problem solved? How does the story end?				
Level of prompting: high (1), medium (2), none (3)					

<b>Total points</b>				
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**Observer Comments:**

Interpreting the Point Totals	
Level	Total Points
Skilled	15-21
Developing	8-14
Needs work	0-7