

## **We Are All Scientists**

*Kharna Banks*

### **Introduction**

When I graduated from college, I wanted to become the type of teacher that provided opportunities for students to “discover” their learning through inquiry-based, hands-on, rigorous and relevant activities. I did not want to be a “direct” instructor because students retain more information when they create meaning for themselves and communicate it with others. Since becoming a teacher, I have developed many units that have allowed me to live out my dream of teaching with a discovery learning philosophy. In science, I provide students with several experiences where they create their learning in order to grasp scientific concepts. When school starts back in the fall, I do not spend enough time allowing students to discover that they are scientists and that all the information they get during their second grade experience will be because they actually are scientists and can solve problems which might allow them to have a positive impact on the school and community.

I teach at David Cox Road Elementary School in the Charlotte-Mecklenburg Schools, a large, urban school district in North Carolina. The school embraces the Basic School philosophy. This means that we are a “community for learning,” and have four priorities: community, curriculum with coherence, climate, and character.<sup>1</sup> Teachers are encouraged to be leaders and accept ownership and empowerment in the overall direction of the school, in addition to individual classrooms. We have the freedom to be the professionals we have been trained to be and are allowed to use creative liberties in order to deliver our curriculum to our students in the way that is best for them based on data and best practices. The school has approximately 950 students consisting of several different subgroups, including African-American, Asian, Hispanic, Multi-Racial, Native American, White, Female, Male, Economically Disadvantaged, Non Economically Disadvantaged, Students with Disabilities, Limited English Proficient, and non-Limited English proficient.

My particular class this year is an English-as-a-Second Language (ESL) inclusive classroom. I have 24 students including seven English Language Learners (ELL's). The ESL teacher at the school “pushes” into my classroom for 40 minutes per day to assist these students in their regular education environment to support the Sheltered Instruction Observation Protocol (SIOP) model in our district. This model includes the belief that English Language Learners can learn successfully in the classroom without pullout services and includes strategies regular education classroom teachers can use to make

their classrooms more ELL friendly. I also have 11 African American students, six Hispanic students, one Asian student, one Indian student, and five Caucasian students. Gender is made of 13 males and 11 females. Four students in my class have Individualized Education Plans (IEP's). Three of those are for speech and language problems and one of those is for a student with a learning disability. The class that I have designed this unit for is extremely low academically as 11 of my 24 students are on Personalized Education Plans (PEP's) because they exhibited qualities of being somewhere in academic jeopardy when they entered the second grade. The plan is an agreement with parents and teachers on how we can help the child reach grade level goals and expectations. The unit I have prepared lends itself to students of many backgrounds and levels as it is differentiated for students, it is hands on and requires communication and visual stimulation for those with language processing and recall concerns and also with English language acquisition. The unit provides opportunities for reading fluency to be integrated into this unit as students are low readers and need as much practice with reading fluency as possible across the curriculum areas. It also provides opportunities for students who are on grade level and above to have an appropriate challenge while "discovering," through high-level activities, that they are scientists.

## **Objectives**

When students reach second grade, they are expected to do more hands-on experiments in science. These experiences are exciting and beneficial for fundamental conceptual understanding. As a teacher, I want my students to understand that they are fully capable of all scientific activities and problem-solving because they are scientists if they can use the process skills. Science has many definitions, but, according to *Webster's New Universal Unabridged Dictionary*, the second meaning goes well with what second graders do for science. The definition is, "a systematic knowledge of the physical or material world gained through observation and experimentation."<sup>ii</sup> Using this definition, we can figure out that a scientist for second grade would be, "one who obtains a systematic knowledge of the physical or material world gained through observation and experimentation." According to the definition, all second graders are scientists and need to recognize themselves as such since they are learning how to be independent problem-solvers in science experiments and beyond. The personal connection is essential for ownership of scientific learning. I am writing this unit to have a sequence of activities and experiences for second graders to discover that scientists are not just stereotypical images, but that scientists are modern-day and that they can learn/do science through the use of the process skills. The typical scientist from history used these skills to help them come up with inventions, formulas, and solutions that have helped others. Science process skills are important to learn so students know what to do to solve scientific problems or figure out answers to questions in any area of their lives. As students in my class are preparing for the year of hands-on science experiments, it's important that they understand what the process skills are as they will be using them over and over and

benefit from having the vocabulary and language to discuss their findings intelligently. When students are in charge of their learning, have hands-on experiences where they discuss, perform, solve problems, and determine meaning, they take ownership through this higher-level thinking and retain more information. According to educators at Longwood University:

“Science and teaching students about science means more than scientific knowledge. There are three dimensions of science that are all important. The first of these is the content of science, the basic concepts, and our scientific knowledge. This is the dimension of science that most people first think about, and it is certainly important. The other two important dimensions of science in addition to science knowledge are processes of doing science and scientific attitudes. The processes of doing science are the science process skills that scientists use in the process of doing science. Since science is about asking questions and finding answers to questions, these are actually the same skills that we all use in our daily lives as we try to figure out everyday questions. When we teach students to use those skills in science, we are also teaching them skills that they will use in the future in every area of their lives.... The science process skills form the foundation for scientific methods. There are six basic science process skills: observation, communication, classification, measurement, inference, and prediction. These basic skills are integrated together when scientists design and carry out experiments or in everyday life when we all carry out *fair test* experiments. All the six basic skills are important individually as well as when they are integrated together.”<sup>iii</sup>

I have added “compare/contrast” as a seventh process skill in my classroom because solving problems often incorporates searching for similarities and differences.

Second grade students in North Carolina do many experiments throughout the year as they study matter, weather, animal life cycles, and sound. In order to take ownership of their learning all year in science, they must realize that they are scientists. This two-week unit is designed to be implemented at the beginning of the school year for the students to make that connection that as they consistently use science process skills, they are scientists and that science is everywhere. To be successful scientists and productive citizens, it is imperative that people know and learn how to solve problems rather than just memorizing facts. Scientific knowledge is important, but, there is more that is needed to answer questions of life. When I ask students what it is, I typically get responses such as “Science is nature,” “Science is experiments,” “Science is learning,” or “Science is fun.” All of those statements prove that students have been exposed to science before. No students have ever answered, “I don’t know.” I, then, ask my students, “Who are scientists?” I get responses such as, “I don’t know,” “They are really smart people that work on medicines,” “Ryan is because he wears glasses,” and “They study about animals.” No one ever mentions themselves or a parent or a teacher or

someone they know. When I asked students if they were scientists, the response from each student was, “No.” One student even said, “No, but I want to be.” It is important that students end up believing they can create scientific meaning because the more they are guided towards doing so at this age, the more they will use their skills to help solve scientific problems or answer scientific questions on their own, therefore independently being the scientist or other type of problem-solver they learned they could be.

## **Strategies**

The unit opens by having a pre-assessment activity where the students illustrate their idea of what a scientist looks like. This gives the teacher an idea of how they view scientists or whether they have a picture for what a scientist is at all. Students will explain their drawings as they rotate through partners and the class will record some early scientist ideas on chart paper as a group. The artwork and chart paper will need to be saved throughout the unit so the class can compare their illustrations and ideas at the closing of the unit to their prior ideas to show growth. After seeing lots of student interpretation, I plan to show a pre-recorded video of myself doing a dramatic interpretation of Edison or other historical scientist. The students will then brainstorm what Edison did that made him a scientist based on this video. I will explain that we will be learning about how scientists solve problems by using science process skills and then we will do a process skill song. The video and song will introduce to the students that science is more than just facts and information. It incorporates more than just nature lovers. Many of Gardner’s Multiple Intelligences will be pulled in to support as many students engaging in meaningful activity to further their learning in science. These intelligences are how students learn and demonstrate learning the best. Most people have the capability to perform using each of the intelligences, but have one or more at which they excel. The intelligences include: “linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal (social understanding), and intrapersonal (self-understanding).” According to the book, Looking in Classrooms, Howard Gardner has also argued that “the naturalist” is another type of intelligence that some possess.<sup>iv</sup>

As we are in a time where technology is quite important for most people, the video is a way to show students that technology will be used during science time. For the next few lessons, students will practice using the process skills to solve a scientific mystery. After becoming familiar with those skills, I will provide three reader’s theater plays on particular individuals to integrate a literacy component. The plays are about Harriet Tubman, Ben Franklin, and a fictional character named, Inspector Insector. The first two plays show how people from long ago used process skills and Inspector Insector demonstrates students as scientists and more modern times so the students will see that process skills span the course of history. Reader’s Theater is a research-based strategy to help students improve their reading fluency (speed and expression). According to From the Page to the Stage: The Educator’s Complete Guide to Reader’s Theater by Shirlee

Sloyer, “Children who have difficulty when they read silently often find material easier to understand when they read it aloud or when they hear it read to them. By participating in the program or by listening to it, students make close contact with the text and can see more easily how a story builds to its climax and how the characters relate to one another.”<sup>v</sup> Even more so in my classroom, the students will completely connect with identifying science process skills through the text. Since I have a class that has difficulty with reading, they’ll have the opportunity with Reader’s Theater to practice words and lines as they employ repeated readings, another strategy that helps students with reading fluency. The more students read and recognize words, the more they will recognize them in other texts. Students will learn and act out their parts in small groups. They will perform their plays and watch classmates supportively as they perform their plays. After each play, we will discuss what science process skill they witnessed in that particular play for that person. The discussion allows students the opportunity to make connections themselves to our learning and also gives them an independent opportunity to use drama to help them with their process skill knowledge. I will use this unit to provide opportunities for students to trust and respect each other when taking dramatic and academic risks in the classroom to build a sense of community and support among students in the classroom as I plan to incorporate more drama with science throughout all units for the school year. After all students have presented, we will have a class discussion to see if any ideas have changed about who a scientist is. As the definition of scientist changes from the beginning of the unit to the end, I will lead the students to come up with the realization that anyone is a scientist, including them. After they realize their ownership of scientific learning, I will explain what science will look like for their second grade year and they will journal to one choice of a prompt, “I am a scientist because...” or “Since I am a scientist, I will be able to....” By the end of the unit, students will be familiar with the science process skills and be able to clearly justify why they are scientists. As the unit comes to a close, the students will be ready to move on into a content-based unit according to the state standards and conduct experiments as they take ownership of their learning.

## **Classroom Activities**

### Lesson 1

Materials: What is Science by Rebecca Kai Dotlich, one piece of paper for each student’s drawing, chart paper, TV, VCR, videotape of you acting out the dramatic interpretation

I begin science time with a discussion about what science means to them. I read the book entitled, *What is Science?* by Rebecca Kai Dotlich. It does not have to be that particular book, but any book that introduces the thought of what science is will be fine. I have the students draw a picture of what a scientist looks like to them and then share the

drawings with classmates. As a class, we discuss what a scientist is to them based on looking at all the pictures and record all responses on chart paper that will be used at the end of the unit to show growth. I will then show a video of myself doing a brief, dramatic interpretation of Thomas Edison (stereotypical scientist). This could be done in person for the students, but, I find it easier during class to have it already prepared instead of worrying about costuming and turning myself into a real character while I am the only adult in the room with 24 students. After watching, the class will discuss what they think made Thomas Edison a scientist. If no one brings up any of the process skills (which are addressed in the dramatic interpretation), briefly tell that scientists must use different problem-solving, process skills in order to help find answers to questions and we'll be learning about what those skills are and we will determine which types of people can be scientists. Then as the close for the lesson, I teach the "Process Skills Chant." On chart paper in front of the room, I post the following song and the students and I read and reread the song to integrate reading fluency practice.

"Process Skills Chant" (to the tune of "Jingle Bells")  
"Process Skills, process skills, they help solve a problem,  
Classifying, measuring, and observation (hey!)  
Process Skills, process skills, they help solve a problem,  
Prediction and comparing and inferencing.  
Process skills, Process skills, they help solve a problem,  
Communication must happen in science communities! (hey!)"

Lesson 2 (This lesson may take a few class periods to complete as students need to visit six centers to complete activities on the process skills.)

Goal: NC ELA (English Language Arts): Objective 3.04  
Increase oral and written vocabulary by listening, discussing, and composing texts when responding to literature that is read and heard.

Math: NC Objective 2.01  
Estimate and measure using appropriate units.

Materials: chart from previous lesson, sentence strips with a different process skill written on each one, cards with mini-stories and prediction sentences, recording chart and objects for observation center, magnifying glasses, objects to sort and student classification page, rulers, tape players with multiple headphones, tapes with teacher-recorded stories and questions for students to infer, flip book examples and construction paper for each student to make a flip book

We will review our illustrations and chart from lesson one and discuss some of the things that came up as descriptions of scientists. Also, we will review the dramatic interpretation of Thomas Edison and responses from the previous session. I will have the

seven process skills posted on the board, we will review the song and discuss what science has to do with solving problems and how people who use the process skills we will learn about are scientists. We will go over examples of and act out each process skill (like vocabulary words) as a class.

Students will go through six different process skill centers in order to “do” a skill and make it more concrete for them. The skill addressed in most centers is communication and it will be discussed at the end of the entire lesson rather than devoting one center to that, since it is integrated so well at each center. One center will be matching stories with prediction sentences. There, students will read cards with mini-stories on them and need to predict what will happen next. They will have cards with an appropriate prediction sentence written on it and they’ll have to match up the correct story with the correct prediction sentence (cards included in this unit). After that has been done, they will need to choose one story to finish. They must copy the number of the mini-story they chose, the prediction sentence, and complete the story on their own to share with the class.

Another center will be observing objects. Students will need to complete a recording chart (included in this document) for each object at this center where they must observe the object’s shape, color, smell, sound, and texture. They may also include any other interesting information that they noticed (observed). A magnifying glass will be included at this center for detailed observation of items such as rocks, grass blades, mini cars, dice, etc.

A third center is for classification. Students will have to sort objects into groups. They may choose how they would like to classify the objects and how many groups they will need. The teacher may choose what types of items to use at this center. Some ideas are: put out objects of different colors and let them sort items according to color, include objects that have different textures for students to sort, use objects for different tasks like objects you can write with and objects you can write on. You could also use objects you can build with, etc. After doing so, they must record their groups and then draw a picture **or** list the items in each category.

Another center will be for the measurement process skill. Students will be expected to measure objects with non-standard units as they learned in first grade. For example, there will be several items at the center for students to measure using paper clips to see how long they are using paper clips. Also, they will have to measure the same items using square, inch tiles. They will be expected to record their findings and compare their responses with an answer key that matches items the teacher decides to include.

Students will also go to the center for making inferences. This will be at the listening center where there will be stories read to them and then questions will follow that will be worded, “From the story, you can infer that... and then there will be answer choices. Students will need to record the letters of their responses with an individual dry erase

board and marker and they may check because after appropriate “wait” time, the recording will tell the correct answer so that they can check and then move to the next story.

The last center that students will have a chance to go to is for comparing. They will make flip books to write or draw the similarities and differences between objects or nouns. After students have visited all centers, they have recorded or responded in some way and will be able to discuss why it is important for a teacher to have responses from them as communication and assessment for whether students learned the lessons. Just like teachers need some sort of communication from students to see if they’ve learned, scientists also need some sort of communication from experiments to show others what they’ve learned. Then, we’ll connect that to why scientists need to have communication for problems and experiments and research.

### Lesson 3

Goal: NC ELA (English Language Arts): Objective 3.04

Increase oral and written vocabulary by listening, discussing, and composing texts when responding to literature that is read and heard.

Materials: dry erase markers, white boards, google images of all types of scientists, books about several different types of people (biographies)

Now that the students know what the science process skills are, we will review the big ideas behind each one. I will write each skill on the board and some key words beside each one. After that, students will read a biography (at an appropriate reading level) and decide how they can do a quick action to act out the process skill they read about their person doing during their lifetime. They will be able to choose from different people from all walks of life and the actions will focus on one of the process skills. Some book choices are included in the bibliography section of this unit. Any biographies will be appropriate if the suggestions listed are not available. I made sure to include people of different ethnicities, genders, ages, jobs, etc. As long as students have a choice of several different types of people to act out, the selection of people will be fine. The purpose is for all students to be able to see people they can relate to doing process skills in some way. I will also hold up some images of people who are scientists and the students will observe what makes those people scientists. Students will need to secretly record on individual whiteboards which process skill has been acted out and then hold it up in the air after I prompt them to do so. This will allow me to assess who understands the differences between the skills and who needs extra help. We will discuss how if an action that is done, or someone uses a process skill, then that person is a scientist.



#### Lesson 4 (all North Carolina English Language Arts goals)

Goal: Objective 3.04

Increase oral and written vocabulary by listening, discussing, and composing texts when responding to literature that is read and heard.

Objective 3.02

Connect and compare information within and across selections (fiction, nonfiction, poetry and drama) to experience and knowledge.

Objective 2.02

Use text for a variety of functions, including literary, informational, and practical.

Objective 2.03

Read expository materials for answers to specific questions.

Objective 2.07

Discuss similarities and differences in events, characters and concepts within and across texts.

Objective 1.03

Self-monitor decoding by using letter-sound knowledge of all consonants and vowels.

Objective 4.03

Read aloud with fluency and expression any text appropriate for early independent readers.

Materials: Readers Theater scripts for students

When students are much more familiar with the process skills, the class will become involved with readers theater plays; these will be about people, real or imaginary, some scientists and some not, who all use science process skills. Then, they will act it out and discuss which process skills they noticed in the play. One of the plays requiring 12 students is *Ben Franklin's Visit: A When Machine Play* by Candice Kramer. A second play, requiring six students is *Harriet Tubman and the Underground Railroad* by Jane Anderson. The last play, requiring 6 readers is *Inspector Insector* also by Jane Anderson. Each of my 24 students will be able to have a part in one of the plays to read and they will also be able to practice listening skills with the other plays. Parts will be assigned based on reading fluency abilities. Students will read and reread their parts before getting up in front of the class to read so they will become more comfortable with the words they need to work on. This process promotes reading fluency for students needing to increase the speed of reading, amount of expression, and is also enjoyable for all students. After the performances, students will discuss how each of the characters from the plays used process skills making them a scientist. Then, they will be asked to think of people they know or have heard of in the present time or from history that use or have used the process skills to connect their learning to real life.

## Lesson 5

Goal: NC ELA (English Language Arts): Objective 2.01

Read and comprehend both narrative and expository text appropriate for grade two by:

- making predictions.
- asking questions.
- locating information for specific reasons/purposes.
- making inferences and drawing conclusions.

Math: NC Objective 2.01

Estimate and measure using appropriate units.

- Length (meters, centimeters, feet, inches, yards).

For this lesson, students will solve a mystery using the science process skills. While students are out of the classroom, I will mess up my desk, open the window, and place some cut-outs of some large animal-like footprints on the carpet following a path from the door to my desk and then from the desk to the window. When the students come back into the classroom, we'll have a mystery to solve because they will need to figure out what probably got into our classroom and messed up my desk area. In order to do so, I will provide the students with magnifying glasses, rulers, pencils, boards, markers, and pre-made papers to record information they can use to solve the mystery. They will be allowed to work with a partner and will first need to make a prediction as to what type of animal they believe got into the classroom. They will need to follow the directions on the paper (included in this document) in order to figure out what process skill tasks they must complete in order to figure out the animal. The first question will be, "What animal do you believe came into our classroom?" The next question will be, "What did you observe when you first walked into the classroom?" Then, they will read, "Measure a footprint and from top to bottom and from side to side and write the measurements." After that, it will say, "From all the clues and information, what do you think happened while you were out of the room? I have researched the deer tracks and footprints and will create several deer construction paper footprints on the carpet and floor in the classroom. You can choose any animal. I chose deer tracks because they are easier for me to make. After the students have "investigated" the prints, we will discuss their observations and findings. Then, we will look at photo choices of animals and their foot/paw prints to compare with our results to see which animal probably came into our classroom. I used Google Images to find pictures of animals and their prints for the choices. I have used a skunk, deer, bear, and elephant for the choices because the prints are noticeably different and we can draw conclusions during a discussion to rule out animals because of where we live as well as the footprint data we collected. We will use creature cards for each of

the animal choices that have a picture of the animal and its name on the front, and print information on the back as well as a picture image on the back to check after the choice has been made. Below I have listed some sites where I found some pictures and footprint information as well as sites that give good information on how to tell animal prints from others because of identifying characteristics.

<http://pelotes.jea.com/footprn.htm>

<http://www.animalskulls.com/pdf/animal-tracks.pdf>

<http://www.leslietryon.com/animals1101/animalfootprints.html>

<http://www.dnr.state.wi.us/org/caer/ce/eeek/nature/track.htm>

## Lesson 6

Goal: NC English Language Arts Objective 4.06

Plan and make judgments about what to include in written products (e.g., narratives of personal experiences, creative stories, skits based on familiar stories and/or experiences).

Materials: paper, drawings from lesson one, chart from lesson one

At this point, students should be very familiar with all of the process skills and they should be able to use them and recognize who is a scientist. For this lesson, they must write an answer to the following questions, “Am I a scientist? Why?” After they have a chance to write their response, they must illustrate what they think a scientist looks like so that the drawings can be compared with the drawings from the first lesson in this unit. These writings and drawings are the post-assessment to show the growth that students have made in their thinking of what a scientist is and who can be one. They should have a response that agrees that they are scientists because they can do the seven process skills they have learned throughout the unit. They will share their writing activity with the class and then compare some of their responses with the chart from lesson one as well.

Name \_\_\_\_\_ Date \_\_\_\_\_

Observation Center Recording Page

Item: \_\_\_\_\_

Color	
Size	
Shape	
Texture	
Smell	
Sound	
Something else you notice	

Item: \_\_\_\_\_

Color	
Size	
Shape	
Texture	
Smell	
Sound	
Something else you notice	

Item: \_\_\_\_\_

Color	
Size	
Shape	
Texture	
Smell	
Sound	
Something else you notice	

Name \_\_\_\_\_

Date \_\_\_\_\_

### Classification Page

Directions: Sort your objects however you would like to sort them. Write your categories in the columns below and write or draw your objects in the correct column.



Now, sort your objects in a different way and record in this chart.

Name \_\_\_\_\_

Date \_\_\_\_\_

Mystery Creature Recording Page

1. What do you think came into our classroom? \_\_\_\_\_

Why did you make that *prediction*?

\_\_\_\_\_  
\_\_\_\_\_

2. What did you *observe* when you came into the classroom?

\_\_\_\_\_  
\_\_\_\_\_

3. *Measure* a footprint from toes to heel and write how many inches. \_\_\_\_\_ inches

4. *Measure* a footprint from side to side and write how many inches. \_\_\_\_\_ inches

5. What can you *observe* about the footprint. (Are there toes or hooves? How many toes or hooves? Are the prints next to each other or spread apart? Etc.)

\_\_\_\_\_  
\_\_\_\_\_

6. *Classify* this footprint as a footprint from a large animal or a small animal.  
\_\_\_\_\_ animal

7. *Classify* this footprint as a footprint from a land animal or a water animal.  
\_\_\_\_\_ animal

8. *Classify* this footprint as a footprint from a fast or slow animal. \_\_\_\_\_  
animal

9. *Compare* your information with the mystery creature cards and decide which animal came into our classroom. Write it here. \_\_\_\_\_

*Prediction Center Cards*

<p><b>Story 1--Joe and Silva rode their bikes in a race. Joe pedaled faster than Silva. Then, Silva passed Joe because she went faster. They were really close for the entire race, but Joe made it over the finish line first. What do you think happened next?</b></p>	<p><b>The winner got an award for coming in first place at the race.</b></p>
<p><b>Story 2--My mom and I made cookies together. We got the milk, flour, eggs, water, and oil. Of course, we could not forget the chocolate chips. We mixed all the ingredients together and put them in the oven. After about 20 minutes, they were done and very hot. We took them out of the oven and let them cool. What do you think happened next?</b></p>	<p><b>They tasted their warm snack with a glass of milk.</b></p>
<p><b>Story 3--Juan went to his friend's house to play after school on Monday. His mom said he had to be home by 6:00 for dinner. When Juan got to his friend's house, he forgot all about the time and the next time he looked at the clock it said 7:00! What do you think Juan did next?</b></p>	<p><b>He jumped up and said, "I have to go home!!" Then, he left and went home as quickly as he could.</b></p>
<p><b>Story 4—A baby was crying and crying because she was hungry. The baby's mom heard her and went over to pick her up. What do you think happened next after her mom picked her up?</b></p>	<p><b>The mom gave the baby a bottle to feed her.</b></p>
<p><b>Story 5—Kendra used blocks to build a tower. The tower was so high that she had to be very careful putting each block on top of another so it would not fall over. Kendra's brother later came running into the room where she was</b></p>	<p><b>Her brother fell on the tower and knocked it down.</b></p>

<b>building the tower. He tripped near the tower. What do you think happened next?</b>	
--	--

Measurement Center Chart

Item	How many paper clips long?	How many inch-tiles long?

**Stories to Read Aloud on the Tape for the Inference Center (from the SRA Specific Skill Series)**

1. **“Mother and the children got into the car. They were going to visit Grandmother and Grandfather. Then Mother got out of the car and went back into the house. When she returned, she was carrying an umbrella. What can you infer from the story: Grandmother lives next door, Mother thought it might rain, or the children wanted to stay home?**
2. **“I think I’ll make a picture of the lake,” said Frank. “It would be a beautiful picture if I could use paints.” Frank made a picture of the lake. But he used crayons instead of paints. What can you infer from the story? Frank didn’t have any paints, Frank likes to swim in the lake, or the lake water gets cold in winter.**
3. **Bill was walking in the woods. All of a sudden he heard a hiss. Bill stopped to look. It was a snake! Bill yelled and ran away. The snake hurried away, too. It slipped into a hole by a big tree. What can you infer from the story? Bill has a pet snake at home, Bill was in the woods at night, or the snake was afraid of Bill.**
4. **Mary and Lois were playing in a field by a factory. After a while they heard the factory whistle blow. The workers came out for lunch. Lois said, “Come on, Mary. We’re late. We were supposed to be home by noon.” What can you infer from this**



story? The factory makes baseball bats, the factory whistle blows at noon, or Mary and Lois are new friends.

5. “I have so much to do,” thought Kim. “I’d better get started right away.” Kim took her school books and went into her bedroom. She turned on her lights and sat at her desk. What can you infer from this story? Kim did her homework for school, Kim has a job in a big store, or Kim never finished her work.

**\*\*You may find more of these stories within the Specific Skill Series or you may make up your own. \*\***

### **Bibliography for Teachers**

Adler, David A.. *A Picture Book of Thomas Alva Edison (Picture Book Biography)*. New York: Holiday House, 1996.

Berger, Kathleen Stassen. *The Developing Person Through the Lifespan (Budget Books)*. New York: Worth Publishers, 2000.

Boyer, Ernest L.. *The Basic School: A Community for Learning*. San Francisco: Jossey-Bass, 1995.

Brophy, Jere, and Thomas L. Good. *Looking in Classrooms, MyLabSchool Edition (9th Edition)*. Boston, MA: Allyn & Bacon, 2003.

Dotlich, Rebecca Kai. *What is Science?.* New York, NY: Henry Holt and Company, 2006.

Hollihan, Kerrie Logan. *Isaac Newton and Physics for Kids: His Life and Ideas with 21 Activities (For Kids series)*. Chicago: Chicago Review Press, 2009.

Pelotes Island Nature Preserve. “Animal Footprints.” <http://pelotes.jea.com/footprn.htm> (accessed November 15, 2009)

Skulls Unlimited International, Inc. “Animal Tracks.” <http://www.animalskulls.com/pdf/animal-tracks.pdf> (accessed November 15, 2009)

Sloyer, Shirlee. *From the Page to the Stage: The Educator's Complete Guide to Readers Theater*. Englewood: Teacher Ideas Press, 2003.

“Teaching the Science Process Skills.” How Can We Understand Our Water Resources?.

<http://www.longwood.edu/cleanva/images/sec6.processskills.pdf> (October 18, 2009)

Tryon, Leslie. "Animal Footprints."  
<http://www.leslietryon.com/animals1101/animalfootprints.html> (accessed November 15, 2009)

Webster. *Webster's New Universal Unabridged Dictionary*. New York: Barnes and Noble, Inc., 1996.

Wisconsin Department of Natural Resources. "Follow that Footprint, Paw Print, Hoof Print..." <http://www.dnr.state.wi.us/org/caer/ce/eeek/nature/track.htm> (accessed November 15, 2009)

Wittenburg, William H.. *Identifying Inferences Book B (Specific Skills Series)*. Columbus, OH: Sra/Mcgraw Hill, 1997.

*Young Thomas Edison*. New York: Holiday House, 2005.

### **Bibliography for Possible Student Texts**

Adler, David A., Alexandra Wallner, and John Wallner. *A Picture Book of George Washington (Picture Book Biography)*. New York: Holiday House, 1990.

Adler, David A.. *A Picture Book of Frederick Douglass (Picture Book Biography)*. New York: Holiday House, 1995.

Adler, David A.. *A Picture Book of Harriet Beecher Stowe (Picture Book Biography)*. New York: Holiday House, 2004.

Adler, David A.. *A Picture Book of Louis Braille (Picture Book Biography)*. New York: Holiday House, 1998.

Adler, David A.. *A Picture Book of Sitting Bull (Picture Book Biography)*. New York: Holiday House, 1993.

Adler, David A.. *A Picture Book of Thomas Alva Edison (Picture Book Biography)*. New York: Holiday House, 1996.

Adler, David A.. *Thomas Alva Edison: Great Inventor (A First biography)*. New York: Holiday House, 1990.

- Adler, David/, and Dan (Ilt) Brown. *A Picture Book of George Washington Carver*. New York: Holiday House, 1999.
- Anderson, Jane. *Readers Theater: Harriet Tubman and the Underground Railroad*. Pelham, NY: Benchmark Education Company, 2005.
- Anderson, Jane. *Readers Theater: Inspector Insector*. Pelham, NY: Benchmark Education Company, 2005.
- Blue, Rose. *Mae Jemison: Out Of This World*. Brookfield, CT: Millbrook Press, 2003.
- Dotlich, Rebecca Kai. *What is Science?.* New York, NY: Henry Holt and Company, 2006.
- Fradin, Dennis B.. *Louis Braille: The Blind Boy Who Wanted to Read (Remarkable Children Series)*. New York, NY : Silver Burdett Pr, 1997.
- Hollihan, Kerrie Logan. *Isaac Newton and Physics for Kids: His Life and Ideas with 21 Activities (For Kids series)*. Chicago: Chicago Review Press, 2009.
- Kramer, Candice. *Readers Theater: Ben Franklin's Visit: A When Machine Play*. Pelham, NY: Benchmark Education Company, 2003.
- McLeese, Don. *Albert Einstein (Discover the Life of An Inventor)*. Vero Beach, Florida: Rourke Pub Group, 2005.
- Mckissack, Fredrick, and Pat Mckissack. *Louis Armstrong: Jazz Musician (Great African Americans Series)*. Berkeley Heights: Enslow Elementary, 2001.
- Rivera, Sheila. *Alexander Graham Bell: A Life of Helpfulness (Pull Ahead Books)*. Minneapolis: Lerner Publications, 2006.
- Sandler, Michael. *Lebron James: I Love Challenges! (Defining Moments: Super Athletes)*. new york: Bearport Publishing, 2009.
- Vernon, Roland. *Introducing Chopin (Famous Composers Series)*. New York, NY : Silver Burdett Pr, 1996.
- Whitehurst, Susan. *Dr. Charles Drew, Medical Pioneer (Journey to Freedom)*. Chanhassen, MN : Child's World, 2001.
- Young Thomas Edison*. New York: Holiday House, 2005.

Created at [www.bibme.org](http://www.bibme.org)

## Notes

---

- i Ernest L. Boyer, *The Basic School: A Community for Learning* (San Francisco: Jossey-Bass, 1995), 3-12
- ii Webster, *Webster's New Universal Unabridged Dictionary* (New York: Barnes and Noble, Inc., 1996), 1716
- iii Longwood University, "Teaching the Science Process Skills." How Can We Understand Our Water Resources?.  
<http://www.longwood.edu/cleanva/images/sec6.processskills.pdf>
- iv Thomas L. Good and Jere E. Brophy, *Looking in Classrooms, (9th Edition)* (Boston: Allyn & Bacon, 2003), 93.
- v Shirlee Sloyer, *From the Page to the Stage: The Educator's Complete Guide to Readers Theater* (Englewood: Teacher Ideas Press, 2003), 6.