

The True Story of the Big Bad Wolf!

By Stacey Hervey

Fairy Tales aren't just for elementary school. The CEC Pig Chronicles began after I attended a seminar titled "Locating Clandestine Graves" sponsored by NecroSearch International <http://www.necrosearch.com/training.html>. NecroSearch International "is a volunteer multidisciplinary team dedicated to assisting law enforcement in the location of clandestine graves and the recovery of evidence (including human remains) from those graves." They also provided yearly training to interested parties and course topics include: animal signs and scavenging of corpses, human and non-human bone identification, botany, hydrology and geology, entomology and search and mapping techniques. Just as it should be in a real classroom, the lectures took a back seat to the lab work outside where we were able to watch a pig decompose throughout the week and location of graves were pigs had been buried in previous years. The course provided an overview of the various sciences that are used to locate human remains. After completing this course, I decided to introduce "The Pig Chronicles" into my urban classroom located in Denver, Colorado. The first year, our "project" consisted of one 70 pound dead pig stowed beneath a bush next to a busy street. Needless to say, my Principal and the neighbors weren't very enthusiastic about my learning lab and the Humane Society quickly dragged our rotting carcass away. The next year, I put our pig in a secure small lot that our Auto body program used to store cars. We were fine until a neighbor lady became curious as to what the students were examining and called the Health Department. After a few phone calls and desperate pleas, the head of the Health Department decided that he would allow our experiment to continue because "I wish I would have done something like that when I was in high school..."

Ten years later, the initial dead pig has evolved into a multidisciplinary unit that includes integration of language arts and math as well as science. I also incorporated the Project Learning method used in the book "21st Century Skills: Learning for Life in Our Times" by Trilling and Fadel to guide my inquiry based unit

1. Project outcomes are tied to curriculum and learning goals
2. Driving questions and problems lead students to the central concepts or principles of the topic or subject area
3. Student investigations and research involve inquiry and knowledge building
4. Students are responsible for designing and managing much of their own learning
5. Projects are based on authentic, real-world problems and questions that students care about

The unit begins with the reading of the children's book by Jon Scieszka "The True Story of the 3 Little Pigs." Students learn about writing for different points of view, fact versus opinion, and writing for different purposes. Students then use the Scieszka book and the original version of the fairy tale to create reports for different audiences. We then move on to the

decomposition portion of our unit by purchasing a pig from a local farm. In previous years, we had construction build us a shed, used donated cars or half buried the pig to examine different conditions. This year I bought an outdoor storage Tupperware container to house our pig (<http://www.walmart.com/ip/Rubbermaid-75-Gallon-Outdoor-Storage-Box/8143890>) for the duration of the experiment to allow for durability with Colorado's ever changing weather. For example, last week we had 85 degrees one day and the next day received several inches of snow. The shed protects our pig and bugs from the elements that wash away the evidence. Students respond to the crime scene and perform the duties of a first responder which include sketching out the crime scene and location of evidence. After the initial investigation is complete, students are assigned different writing assignments that will later be utilized in the mock trial component of our unit. The writing assignments include police reports, witness statements, newspaper articles, tabloid articles and press releases. When the writing samples are complete, we discuss writing for different audiences and purposes.

The science portion of the unit then begins with the collection of data for two weeks. I have used teacher created worksheets in the past but find that allowing students to create their own data sheets encourages the most learning. Links that can provide more information on forensic entomology include:

- a. <http://www.maggotsfrommurders.net/>
- b. <http://www.rasmussen.edu/student-life/online-community/education-through-entomology/>
- c. http://www.clt.uwa.edu.au/projects/asistm/forensic_investigations/forensic_entomology
- d. www.wardsci.com

This year, the unit will expand to include a unit on autopsies with new resources from NASCO that allow students to perform a pig autopsy and determine cause of death. (http://www.enasco.com/product/LS03825MH/?utm_source=Dissection&utm_medium=banner&utm_campaign=featureproduct0911). I introduced the autopsy portion with a video by Frontline that was suggested by my law colleague (<http://www.pbs.org/wgbh/pages/frontline/post-mortem/>). This documentary discusses the controversies involving coroners and medical examiners and also looks at cutbacks in funding which has led to flawed autopsies. Students study manner, cause and mechanism of death while also becoming familiar with different ways to determine time of death. I also try and use a current event that students are familiar with to understand the writing involved in this field. A good example this year was the complete Whitney Houston Autopsy report which included the initial police report as well as autopsy report. They also created PowerPoint on various organs of the body with views of a healthy and diseased organ and the purposes of the organ to the living organism. Students also reviewed various links regarding autopsies and watched a real autopsy in class.

- <http://www.whitman.edu/content/virtualpig>
- http://webcom4.grtxle.com/khforensics/VirtualAutopsyPackage/VirtualAutopsy3_fs.html

- <http://australianmuseum.net.au/interactive-tools/autopsy/>

With virtual autopsies complete, it was now time to introduce the fetal pigs for dissection. Due to the fact that my background is criminal justice and my experience in dissection was an earthworm in high school, our school nurse, Tess Callinocos, stepped in to help by walking me through a pig dissection before completing with students. Our final determination was death due to blunt force trauma to the head.

Before the actual dissection, I assigned students different groups with four roles

- Medical examiner who would perform the autopsy (volunteer)
- Medical assistant
- Recorder
- Assistant

My personal objective was to create a true learning lab that was student run without teacher participation. Each question they asked me resulted in a five point reduction in their overall grade. I created different stations in which students could go to for information if they needed assistance

- Station one-Computer with pig virtual autopsy
- Station two-Resources on pig autopsies from NASCO with visuals
- Station three-textbooks with additional information
- Station five-Google station

The autopsies were a perfect addition to our unit and students enjoyed the interactive component. Each cause of death was different and students spent a great deal of time writing the reports because they knew their reports would be used during our mock trial.

Student writing samples are used for the basis of our trial but there are many good resources that are out there that already have the documents necessary to hold a basic mock trial:

- <http://apps.americanbar.org/abastore/index.cfm?section=main&fm=Product.AddToCart&pid=3170117>
- <http://www.med.uscourts.gov/kc/mocktrials/mocktrialscripbbwolf.pdf>
- http://19thcircuitcourt.state.il.us/services/pages/mock_trials.aspx

At first I questioned whether high school students would enjoy performing a mock trial geared around a children's fairy tale but my fears were quickly put to rest when students bought pig noses for trial and other students were begging teachers to allow them to view our performance. Voir dire was especially entertaining as the students interviewed characters from other well-known fairy tales such as Little Red Riding Hood.

The Pig Chronicles started off as a simple decomposing experiment and has developed into a month long unit. Each year the program expands and next year we hope to include the new law class for the mock trial segment. It has become a wonderful learning experience but also a great recruiting tool for my program.

The Piggy Chronicles

Objectives:

1. Distinguish between four manners of death: natural accidental, suicidal, homicidal
2. Distinguish between cause, manner and mechanisms of death
3. Understand the mechanism of autopsy
4. Use evidence from autopsy to estimate time of death

SWBAT:

1. Perform autopsy of pig and determine cause, manner and mechanism of death
2. Collect data to determine time of death based on insect life cycle

Vocabulary:

1. Contusion
2. Abrasion
3. Laceration
4. Puncture
5. Incision
6. Amputation
7. Fracture
8. Rigor mortis
9. Livor mortis
10. Jurisdiction
11. Dorsal
12. Cranial
13. Ventral
14. Caudal
15. Coroner
16. Medical examiner
17. Larva
18. Pupae
19. Blow fly life cycle