



*“The mind cannot forget what the hands have learned.”™*

Welcome to the *Anatomy in Clay*<sup>®</sup> Newsletter. This publication will keep you connected with fellow educators, providing innovative tips, proven techniques, and valuable information for successful hands-on anatomy teaching. Our goal is for this to be an effective resource and tool, driven by you, to share and explore anatomy teaching ideas and concepts.



## FEATURED TEACHER

### Tracy Wiese “Aha! Moments Teaching Anatomy”

Passionate is the word that best characterizes Tracy Wiese, who describes being an anatomy educator as “moving toward the human side of science.” Tracy, currently at Lincoln Southwest High School in Lincoln, Nebraska, has taught a broad spectrum of science classes for 22 years, with a focus on health science courses for the last ten. “I came from a family of teachers and health care professionals, so my career is sort of a natural blend of the two.”

In addition to teaching, Tracy has certification as a medical assistant and although she has worked for an orthopedic surgeon and taught post-secondary science, she returned to the high school classroom because she missed the motivation and excitement of students who love learning science.

Tracy first learned about Anatomy in Clay<sup>®</sup> Learning System at the National Consortium on Health Science and Technology Education (NCHSTE) conference about five years ago. “When I saw how the Maniken<sup>®</sup> models with hands-on clay worked together, a light went off

in my head and I thought, ‘This is fantastic — I can stop comparative anatomy instruction with cats and teach all human systems with these tools!’”

As envisioned, Tracy uses the Anatomy in Clay Learning System to teach 90 percent of her 360 students in a diverse schedule of classes including Medical Terminology, Anatomy, Introduction to Health Occupations, Physiology, Biology, and Basic Body (a special education science class for low-level readers).

Tracy has also been an Educator Liaison at our Anatomy in Clay Professional Development Workshops, where she enjoys “working with a captive educator community that wants

to learn, loves the networking, and is very receptive to share-building techniques.”

Tracy is passionate about using the Maniken models because it “gives me an opportunity to see a product develop as students learn. I can actually witness what they are absorbing, whether they are visual, auditory, or kinesthetic learners! It was an Aha! moment for me when I realized that the Maniken learning tools would help kids create a human body product — that they actually would get to put all the pieces together.”



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**Do you have your own success story? Share it with us on our Facebook page or email us at: [info@anatomyinclay.com](mailto:info@anatomyinclay.com)**



Professional Development workshop in June 2011, at Anatomy in Clay<sup>®</sup> Centers Denver.

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*Click here to receive info on training and conferences*

## EVENT SCHEDULE

- **NLN Conference**  
September 21-23 Orlando, FL  
[www.nln.org](http://www.nln.org)
- **STEMtech Workshop/Conference**  
October 2-5 Indianapolis, IN  
[www.league.org](http://www.league.org)
- **NJSC**  
October 11-12 Somerset, NJ  
[www.njsc-online.com](http://www.njsc-online.com)
- **NABT Workshop/Conference**  
October 12-15 Anaheim, CA  
[www.nabt.org](http://www.nabt.org)
- **FAST Workshop/Conference**  
October 20-22 Orlando, FL  
[www.fastscience.org](http://www.fastscience.org)
- **NSTA Workshop/Conference**  
October 27-29 Hartford, CT  
[www.nsta.org](http://www.nsta.org)
- **Anatomy in Clay<sup>®</sup>**  
Professional Development Workshop: Level 1  
November 4-5 Denver, CO  
[www.anatomyinclay.com](http://www.anatomyinclay.com)



- **STANYS Workshop/Conference**  
November 5-8 Rochester, NY  
[www.stanys.org](http://www.stanys.org)
- **NMSA Workshop/Conference**  
November 10-11 Louisville, KY  
[www.nmsa.org](http://www.nmsa.org)
- **ACTE Workshop/Conference/ ½ Day Professional Development**  
November 17-19 St. Louis, MO  
[www.acteonline.org](http://www.acteonline.org)
- **Texas CAST Workshop/Conference**  
November 17-19 Dallas, TX  
[www.statweb.org](http://www.statweb.org)
- **PSTA Workshop/Conference**  
November 30-December 2 Hershey, PA  
[www.pascience.org](http://www.pascience.org)



**Can't make it to one of these events? Contact us to host your own Professional Development:**

[info@anatomyinclay.com](mailto:info@anatomyinclay.com)  
1-800-950-5025



## FAQS

**Q.** How many Manikens<sup>®</sup> models do I need?

**A.** The decision depends on your curriculum intentions and the type of class you are teaching. The optimum number of Maniken models varies from Anatomy and Physiology classes, to Sports Medicine training to Nursing Program requirements. However, typically you will need one model for the instructor and one model for every two students. The Student models are purposefully designed to split at the midline to create two half models; with the purchase of a conversion kit and additional tool sets you end up with two complete lab stations. With student teams working at different stations, interaction between students promotes critical thinking and peer teaching. The most important concept is that the model delivers the most value when students get their hands on it and build. The more they work on it, the more they learn. Ask your area's Education Consultant what best fits your needs in your classroom.



## Results of Anatomy in Clay<sup>®</sup> Customer Use Survey

Thanks to the many educators who participated in the Anatomy in Clay Spring 2011 Use Survey. We want to share some key results from members of our "educator community":

- Most educators use the Anatomy in Clay Learning System for teaching courses in Anatomy, followed by Physiology, Career Tech, Health Science, and Sports Medicine.
- The largest block of use is in senior high schools.
- The Maniken<sup>®</sup> models are mostly used to teach the muscular system, followed by the skeletal system, cardiovascular system, and nervous system. Some users teach the muscular or skeletal systems on a daily basis.
- Many educators report they received anatomy training through professional development courses; a large majority of respondents (82%) report they would like to receive more training.
- Educators confirm that the best feature of the Anatomy in Clay Learning System is that it offers the only truly hands-on, kinesthetic approach to learning anatomy.

If you are interested in learning more about Professional Development training, please call us at (800) 950-5025.

**Congratulations!!!** Matthew Sage of Warwick, Rhode Island, is the winner of the Maniken<sup>®</sup> Student 2 Model giveaway from our Spring 2011 Customer Use Survey.



## Professional Development Workshop: Level 1

November 4-5, 2011 | 8:00 AM to 4:00 PM Denver, Colorado

*Reignite your anatomy instruction and health science instruction with engaging, interactive, hands-on teaching!*

Our Professional Development Workshop provides teachers and administrators with practical strategies created to enhance the Anatomy in Clay<sup>®</sup> Learning System in your classroom. Key elements include hands-on overviews of terminology, muscle and bone identification, body systems, effective use of clay, and managing the classroom environment.

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### Location / Date

Anatomy in Clay<sup>®</sup> Centers Denver  
2201 S. Delaware Street, Denver, CO 80223  
November 4-5, 2011

### Registration Fees / Information

Fee for the 2-day workshop is \$300. Fee includes use of a skeletal model, clay, and lunch during the workshop. After October 12th, the late registration fee will be \$400. For more information or to reserve a seat:

[info@anatomyinclay.com](mailto:info@anatomyinclay.com) 800-950-5025



## WHAT'S NEW? Research in Anatomy Education from Around the World

- The standard concept of summer camp is evolving, as evidenced by a new program offered in Massachusetts. The Exploration Sports Medicine & Orthopedics Focus Program was created for thirteen-to-fifteen-year-olds to introduce sports medicine basics to young athletes. The two-week camp concept emphasizes real-world applications with “learning by doing.” Classes include joint and bone anatomy, injury diagnosis, reading X-rays and MRIs, and computer-simulated arthroscopic surgery.

[“Keeping Athletes at Peak Performance at Exploration Summer Programs” PR Newswire 1/27/2011]

- The authors of a recent investigation of dance education explore its history and current state, with an emphasis on content and methodology. Anatomy, once a core part of dance instruction, regains importance in this survey, with the author’s noting research that suggests “how science is taught is just as important as what is taught.” They state further, “When a dancer comprehends her body relative to its anatomic design, she should have a better understanding of how it functions in dance.”

[“Teaching at the Interface of Dance Science and Somatics” Pamela Geber, Margaret Wilson. *Journal of Dance Medicine & Science*. April 2010, pg 50.]

- Are some organs of the body more important than others? In a hands-on teaching activity, students are given role-playing assignments that target selected body organs. Teams research organs and their roles

within the body, developing and utilizing research skills, cooperative learning, and learning strategies as they explore human anatomy. The resulting skits demonstrate and argue for the value of the assigned subjects; participants must also withstand questioning from peers and class leaders. This kind of teaching program can involve classroom time and homework assignments, with project time ranging from hours to weeks. According to the authors, this structured activity “has benefited some of our students, from middle school to high school to college levels, by motivating them to engage in deep learning that results in meaningful understanding of material and content.”

[“Effective Understanding of the Human Body Organs: A Role-Playing Activity for Deep Learning” About H. Cherif, Dianne Jedlicka, Ateegh Al-Arabi, Robert Aron, Sujata Verma. *The American Biology Teacher*. Volume 72, No. 7, 2010]

## Where in the World?

Andreas Vesalius (see below) — sometimes referred to as the founder of modern human anatomy — attended the medical school of the University of Padua in 1537. Many of history’s great anatomists and doctors have also attended this leading European institution over the past 600 years. Today, a Maniken<sup>®</sup> model from Anatomy in Clay<sup>®</sup> Learning System is part of this lengthy tradition. Raffaele De Caro, MD (Professor and Chair of Human Anatomy at the School of Medicine, University of Padua), states “We use your model for our laboratories with students ... I’m a strong supporter of this new teaching method of Anatomy.”

## DID YOU KNOW?

Andreas Vesalius (1514-1564) is one of the major figures in the development of human anatomy. He was born in Belgium, but spent most of his career working in Italy at the University of Padua. His knowledge came from dissecting human cadavers, a practice he promoted as necessary hands-on training for physicians. He supported

the accepted core of knowledge developed by Galen (Greek physician, c. 130–200 AD), with an emphasis on continuing observation and discovery. Vesalius believed human anatomy was a necessary basis for improvement in medical training. His work turned up a few errors linked to Galen (one example: the human liver, according to Galen,

had five lobes) and generated a few of his own. Although this made him a target for critics, Vesalius ensured his place in anatomical history with the publication of a major work in 1532, which helped spread essential knowledge. The illustrated title was *De humani corporis fabrica libri septem* (*The Seven Books on the Structure of the Human Body*).