When considering how to most effectively incorporate technology into the classroom, one must consider how people learn. The creation Dale’s Cone of Experience was an effort to categorize the level of experience that assists individuals in learning. Dale’s cone came before the big advances in technology that we have had in the recent present. But his theory and its relationship to technology, is that technology allows for more of the senses to be targeted, which creates more of a real world experience, which is the best for learning. Dale’s Cone shows that the more direct and purposeful the experience, the more the learner takes from the experience. For example, as a health teacher I would love to explain to students what the effects of smoking do to your body. It would be great if I could take them to a clinic so they could meet people that have throat cancer and are receiving treatment in the clinic, or if they could actually see firsthand someone with a tracheotomy. I could talk about a person with a tracheotomy to get the students attention, which would be at the top of the cone (text/verbal), or I could show them pictures and video, which would be right below the text/verbal part of the cone in the pictures/visual symbols section. But if I really wanted to get the students’ attention, and have them learn the most about why you should not smoke, the best experience would be the “Direct – Purposeful Experience” which is at the bottom of the cone.

Howard Gardner’s learning theory relates to 8 different kinds of intelligences which are typically referred to as Multiple Intelligences. Each of the intelligences has specific characteristics in reference to learning styles. The multiple intelligences are verbal- linguistic, logical-mathematical, visual spatial, musical-rhythm, bodily-kinesthetic, interpersonal-social, intrapersonal-introspective. Technology is an effective way to vary and maintain communication of the learner by adapting to individual learning styles. Students’ learning styles may very well be comprised of two different styles, rather than a single learning preference. When technology is used in collaboration with multiple intelligences, it can be a great motivator for students. Some students are not great readers but can produce multi- media presentations. Technology can also be a teaching tool for those students who have a hard time expressing themselves verbally. They can make movies, create digital storytelling, use pictures to map out a story, power point presentations, etc. to showcase their understanding and knowledge of specific content.

According to a study at Vanderbilt University, when students’ interests and strengths are connected to the material they are learning, their motivation to learn is increased (Dweck, 1989). In a world of gaming, multi-media, and the internet, our students are accustomed to fast-paced, click of a button accessibility to information. Teachers must incorporate these elements of students’ lives into the learning environment to entice students and increase motivation to learn. National Educational Technology Standards have been created to help students acquire the knowledge, skills, and higher-order thinking necessary for success in our technologically framed society. Teachers are provided with specific standards to help guide and direct their lesson planning and implementation to include multiple facets of technology that will enhance the learning environment for students. According to NETS, teachers should “develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress”(NETS, 2008). One example of how teachers are revamping their teaching methods using NETS can be seen in the following scenario. When teaching a unit on oceans, programs such as Xtranormal or Movie Maker can be used to create unit trailers prior to beginning the unit. This method of presentation gives students a glimpse of what is to come and sparks curiosity about the subject by using technology that is fun and creative. At the end of the unit, students can also use these programs to create their own presentations to illustrate what they have learned about oceans. For teachers that are not technology proficient, NETS provides a NETS Implementation wiki. Teachers from all over have contributed their ideas for lesson plans and technology rich scenarios. ISTE Learning provides a free membership and access to the Commons Library. Within this library, teachers have access to the Students Curriculum Planning Tool that provides age-appropriate sills and examples for each indicator by grade.

When integrating technology into the classroom digital citizenship is of vital importance. So much so that ISTE has included it among its standards for students, for teachers, and for administrators. The NETS administrator standard for digital citizenship indicates that administrators have a responsibility to promote, model, and establish policies for safe, legal, and ethical use of digital information and technology. The standard for teachers states that teachers should advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources. NETS standards also says that students need to understand human, cultural, and societal issues related to technology and practice legal and ethical behavior It is imperative that students understand their rights and responsibilities when it comes to the use of technology, both in the classroom and in the real world. An excellent source for educators to use with students regarding digital citizenship is a website called Cable in the Classroom. This site contains several subtopics of digital citizenship, each of which features tools and resources with grade-level recommendations for each activity.

References

Alabama Department of Education. (2003). The Cone of Experience. Retrieved from <http://web.utk.edu/~mccay/apdm/selusing/selusing_d.htm>

Digital citizenship: ethics & community. (n.d.). Retrieved from <http://www.ciconline.org/DigitalCitizenship/EthicsAndCommunity>

Dweck, C. S. (1989). Motivation. In A. Lesgold & R. Glaser (Eds.), Foundations for a psychology of education (pp. 87-136). Hillsdale, NJ: Lawrence Erlbaum Associates.

McInemey, D.M., and McInemy, V. (1998). Edcuational Psychology: Constructed learning. *2* Retrieved from http://eduscapes.com/tap/topic68.htm