CREATING ACCESSIBLE ART TECHNOLOGY INSTRUCTION

FOR ART TEACHERS AND STUDENTS

By

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ABSTRACT

This applied project addresses the need for more accessible art technology
instruction for both teachers and high school students, focusing on the Adobe Creative
Suite programs InDesign, Illustrator, and Photoshop. I have created instructional packets
that cover these three programs, as well as a unit that demonstrates how to use these
packets as a learning device. These packets were designed so many different learners
could use them, whether they are a student with disabilities or a teacher, someone with
ten-year-old software or a state-of-the-art computer and the most recent version of these
programs. Philosophically, constructivism was the guiding support in the creation of
these packets, the unit, and the spirit in which they were made.

INDEX WORDS: Digital art, accessibility, constructivism, Adobe, instructional supports
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List of Figures

Figure 1 33
Figure 2 35
Figure 3 39
Figure 4 45
Figure 5 50
Figure 6 51
Table of Contents

Chapter One: Introduction

Introduction

Why is technology important in an art classroom? 1
How is constructivism relevant to teaching art and technology? 4
Why do teachers need to be more prepared to teach technology? 5
Why do teachers need to be more prepared to differentiate? 6

Overview of Applied Project 7

Chapter Two: Literature Review

Framework

Jean Piaget 9
John Dewey 11
Lev Vygotsky 12

Technology and Constructivism

LOGO 13
Crickets and Scratch 15
Issues Surrounding Technology Integration 16

Teacher Preparation: Technology

Preservice Preparation 18
Professional Development 19
Art and Technology 20

Teacher Preparation: Differentiation

Preservice Preparation 25
Practical Consideration 26
Information Design and Accessibility 27

Conclusion 30

Chapter Three: Development of the Packets

Initial Construction 32

Student Teaching: Revisions 34
Chapter Four: Development of the Unit

Student Teaching: Initial Construction
- Instruction
- Projects
- Assessment

Applied Project: Revisions

Unit as Part of a Larger Curriculum
- Visual Culture
- DBAE
- Vocational

Chapter Five: Conclusion

Limitations: Development of Further Learning Packets
Reflections on Student Teaching
Recommendations
The Future of Technology and Art Education

References
Chapter One
Introduction

"So, when you're done with your project, can you e-mail the packets to all of us? ...Please?"

-Personal communication, student teaching seminar final exam

The above quote aptly summarizes everything I have heard about my applied project from my fellow preservice art education students, in-service teachers, and even my professors. Having programs like InDesign, Illustrator, and Photoshop on one's resume is no longer just a bonus - teachers, especially at the secondary level, are feeling the pressure to not only know these programs and others like them, but to be comfortable enough to teach, troubleshoot, and integrate this technology into curriculum. Yet, according to a 2004 survey, only one of the top ten art education programs in the United States requires that preservice teachers take a course in art technology instruction (Lu, 2005, p.99). Simply put, most art educators are not thoroughly exposed to technology during their preservice education, leading them to be, at best, often uncomfortable with classroom technology. This lack of accessibility to technology education, combined with the expectations of school administrations for art teachers to teach technology, leads to anxious, ill-equipped preservice teachers - who become even more apprehensive untenured teachers, ready to be fired, or passed over, in favor of more technology-savvy instructors.

When I began learning InDesign, Illustrator, and Photoshop as a high school student, I could already see the issues surrounding trying to teach art and technology together. Our instructor was well versed in the programs, but he had a major challenge in differentiating lecture-style instruction for 35 students with wildly different levels of
computer skills; some of us were familiar with the programs, others could barely turn on a monitor, and still others had issues with staying still for an hour and a half. He adopted a lecture style that satisfied some of the class, but the students with no prior experience were utterly lost, and quickly fell behind, while the more advanced students nodded off during long explanations of tools and software. Even as a student, I realized that a combination of group projects and some sort of physical guide to accompany instruction would have been ideal for, literally and metaphorically, keeping everyone on the same page. Working in (small) groups (and pairs) allows students to support each other as they construct knowledge together, rather than trying to figure out everything alone; this is particularly important for learning large, often overwhelming programs. A physical reference would allow students to go back and familiarize themselves with concepts they may have forgotten, have a reference alongside the computer screen rather than occupying space on said screen, and perhaps even encourage note-taking during lectures. Instead, I watched as my teacher struggled to keep up with the constant questions from a large, often bewildered class; he ended up doing a lot more maintenance and management than teaching design.

Over five years later, I found myself preparing to teach a graphic design pre-college program, and remembered the plight of my high school graphic design teacher. My class was filled with students who had never used these programs, and I only had a week to teach them. With some planning time and a generous printing budget, I developed the initial draft of my teaching packets that I refined through this applied project. In their first incarnation, these packets were approximately three pages per program: InDesign, Illustrator, and Photoshop. The packets contained only the most
essential information and processes for Adobe Creative Suite 4, and a few accompanying images. While these instructional packets were by no means perfect, they allowed me to make the optimum use of my time in the classroom. I could ask students to consult the packets and each other before they asked me questions, and this enabled me to quickly help the most confused students with program functions, then return the general focus of class to creating art, rather than fixing minor problems.

Shortly after I taught the pre-college program, I began my student teaching. My secondary placement was at Oconee County High School, with a yearbook class and a commercial/graphic design program very similar to the class I took as a high school student. Unlike the pre-college class I taught, I was fortunate that my supervising teacher had already instructed the students in Adobe Illustrator, which is a part of the Adobe Creative Suite. Because Illustrator and Photoshop share many of the same techniques and tools, I didn’t need to cover many of the basics for Adobe Photoshop, which was the focus of my unit. This time, with teaching experience under my belt, I greatly expanded my image editing and layout packets to reflect what I knew about student learning, and included the many techniques I wanted my students to incorporate into their art projects. Additionally, unlike the previous class, I had students of hugely varying levels of ability, since this was an introduction class that counted as both a fine arts class and a technology class. Students with disabilities required differentiation in teaching strategies, and more apathetic students required engaging and stimulating lessons. I took suggestions from my students, and adjusted my lessons to entice even the most uninterested of students, but kept projects creatively open enough to allow students with disabilities to create artwork that was on par with their classmates. While I could not afford to print out a packet for
each of my 120 students, simply having the packets available for reference on the student computers made my life as a classroom manager and an art director that much more effective. The classroom environment also worked to my advantage, as students had no objections to helping each other learn Photoshop.

As the quote I began this chapter with would imply, my fellow preservice art educators saw the packets I made for my high school students, and were intrigued. While I created the packets with students of many ability levels in mind, it had never occurred to me that teachers who wish to learn are students as well, and might find this information appealing. So, I began a new revision of my packets for my applied project, except this time, I would adapt them for as many versions of the Adobe Creative Suite as I could, while still keeping the packets easy-to-read, filled with pictures, and under 25 pages. My focus became accessibility – both teachers and students at any level of technological expertise should be able to learn enough of the Adobe Creative Suite to make art with confidence, and feel neither daunted nor uncomfortable with technology itself.

Why is technology important in an art classroom?

Whether it’s graphic design or ceramics, English or calculus, five year olds or students with facial hair, public schools expect technology to be incorporated in classrooms. The technology available varies from school to school; some teachers make do with overhead projectors and a chalkboard, while others have top of the line digital drawing tablets and computers fully equipped with the most recent design software. Technology is not an art form in and of itself, but rather a means by which information
can be conveyed or art forms created. Contemporary art and artists incorporate digital media into their art, and create art with digital media, so unless the field of art wishes to remain solely attached to the most basic of art forms and tools, it must adapt and evolve. Printmaking, photography, and other more modern processes are now established as integral parts of the K-12 art room. While digital media will never and should never completely replace paintbrushes and charcoal, it is a worthy medium in its own right, and capable of creating art no less important than photographs or paintings. In order for art to look to the future, technology – and digital media – must be included in the preservice curriculum.

**How is constructivism relevant to teaching art and technology?**

The three basic design programs I cover in this project, InDesign, Illustrator, and Photoshop, are best taught using constructivist principles. Learning these programs requires that students collaborate, construct their own knowledge, evolve their own knowledge, and participate in an inquiry-based classroom. Like previous constructivist technologies, these Adobe programs are easy to initially learn, but difficult to master; it takes a creative mind to use simple processes and turn them into complex works of art. While some traditional teaching is necessary to introduce these programs, inquiry-based, exploratory, self-directed learning helps a student not only come up with creative means to execute projects, but also helps the student learn these programs on a deeper level and retain what they learned. This style of learning also gives students experience in personal problem-solving, as well as troubleshooting.
Why do teachers need to be more prepared to teach technology?

Preservice art educators are typically required to be proficient in painting, drawing, ceramics, and printmaking; photography is also strongly suggested as an elective studio class. Art teachers are not required to know how to create art using technology or digital media, yet it is more and more commonly expected by school administrations. Professional development sessions can only help an art teacher so much, especially when the subject matter covered in such sessions rarely, if ever, ventures into art education. If a teacher is not comfortable teaching a subject, that subject either goes untaught or, in a worse case, is poorly taught. Digital media instruction is not something to be handled lightly. Teachers who are uncomfortable with technology, or who spend more time troubleshooting than teaching, will lose their audience. Students can, and will, use the computers to do everything but work on their assignments. Simply knowing how to use technology does not mean that an art teacher is capable of successfully incorporating the technology into curriculum, or navigating an entirely different classroom environment. Preservice teachers need to be comfortable with technology on a personal basis, come up with creative means to integrate technology into a curriculum, and know how to manage a class that is closer to a lab than a traditional studio.

Why do teachers need to be more prepared to differentiate?

Art is one of few subjects where students of all ability levels interact in the same classroom. Differentiating instruction for students with disabilities is necessary for effectively teaching all students, yet many new teachers feel unprepared to teach in a least restrictive environment classroom, where disabled students are among their peers
Accessible Art Technology Instruction

(Guay, 1994; Kuster, Newton, & Milbrandt, 2010). Because the art room tends to have students with a wide variety of abilities, art teachers must be fast and flexible in changing teaching methods to suit all students. The computer lab, where digital media lessons are typically taught, needs even more preparation time, since there are so many distraction factors at hand. Additionally, teaching computer programs to create art requires extra considerations for students with disabilities, because individual learning styles must be taken into account for these often complex and difficult programs.

Overview of Applied Project

My applied project is an attempt to address the many issues I have cited here. Using a constructivist learning paradigm as my guide, I have created three packets that, in 25 pages or less, explain the essential program functions of Adobe InDesign, Illustrator, and Photoshop. I also created a 67-day graphic design unit that uses these packets as instructional supports for students of all ability levels. In light of the many versions of these programs, the packets contain information necessary for using all versions of the Adobe Creative Suite (CS), from the ten-year-old (and still in use) CS2 to 2010’s CS5. These packets are by no means exhaustive, yet they contain enough information that the learner should be comfortable with independently navigating and exploring the programs beyond what is covered in the information. The packets are more than just an instructional support, though; they are capable of teaching the programs without an instructor, making them ideal for teachers who wish to learn the programs on their own time, or for the more independent student. Additionally, these packets can function separately, or as a series; if a school only has Photoshop, the image-editing packet
Accessible Art Technology Instruction

contains all of the information needed. The unit has a similar approach to the packets; the lessons can either be part of a whole graphic design unit, or a single digital media lesson focusing on just one of the programs. I have attempted to make my packets adaptable to a wide variety of situations, and usable for a full range of students, so that learning these programs is accessible to as many learners as possible. The unit is flexible enough that it can be adapted for many different students and learning environments, and usable with any version of the Adobe Creative Suite programs from the last ten years.

My goal was to create a product that is practical, contemporary, constructive, and with a wide variety of uses. I wanted my product to be usable by a large audience, and have lasting practicality. I executed this by creating multi-purpose tools, my packets of information on the Adobe Creative Suite, and an exemplar digital art unit that uses these packets as learning supports.
Chapter Two
Literature Review

Researching for this project was challenging, because research in any field related to technology can often be irrelevant within the span of two to three years. There was a spike in research in both special education and technology integration in the early 1990s, around the time that the Individuals with Disabilities Education Act (IDEA) was passed and as computer use in classrooms became more widespread. However, after this initial wave, research in both of these fields lessened considerably, and many studies only focused on extremely specific areas (such as art therapy, or specific computer programs), or were articles that required so much prior knowledge about the field they were basically unreadable for anyone not thoroughly versed in technology or special education. I have attempted to consider both recent and relevant research related to both of these fields.

Framework

The theoretical framework for this applied project focuses on constructivism defined by Jean Piaget and his subsequent followers (e.g. Vygotsky and his peers). Constructivist ideas essentially guided me through my packet and unit creation, as well as my own teaching methods. John Dewey’s (1938) *Experience and Education* very much informed my stance on accessibility as an essential part of progressive education.

*Jean Piaget*

While constructivist ideas can be traced back to the 1930s, Piaget was the one to introduce the concept that the same event experienced by a group will be interpreted very
differently, depending on factors of both age and experience. “For Piaget, reality is not an absolute but a construction based on our past experiences and our current cognitive structures” (Bjorklund, 2005, p. 81). Piaget also made important contributions to the metacognitive nature of constructivist thinking with “reflective abstraction,” a process that is “…thinking about thinking and might allow a child to apply more readily information that he or she knows to new situations, or to discover alternative cognitive routes to solving old problems” (Bjorklund, 2005, p. 102). Anderson and Milbrandt’s (2005) Art for Life delves further into constructivism as applied in an art education setting. Building on Piaget’s theory that knowledge is constructed from prior experience, Art for Life proposes that learners actively participate in their own learning environment, constructing new knowledge. The teacher acts as a facilitator, bridging students’ prior knowledge, and stimulating further inquiry into their own thoughts. A constructivist teacher must constantly collaborate with students, and “…balance the increased demands of accountability and high performance standards with students’ interests and needs” (Anderson & Milbrandt, 2005, p.30, paragraph 2). The introduction to Kafai and Resnick’s (1996) Constructionism in Practice: Designing, Thinking, and Learning in a Digital World links constructivism, accessibility, and technology together in a neat package. The introduction both addresses the importance of the LOGO program in the evolution of constructivist teaching and technology (to be discussed more thoroughly later), but also that “Constructionism also emphasizes diversity: It recognizes that learners can make connections with knowledge in many different ways. Constructionist learning environments encourage multiple learning styles and multiple representations of knowledge” (Kafai & Resnick, 1996, p.3). By acknowledging that any learning
environment will be composed of many learning styles, Kafai and Resnick support the use of constructivism in an integrated regular/special education classroom. This is especially important for teaching art, because the art room is one of few places where students of all ability levels learn together.

John Dewey

John Dewey’s (1938) ideas in *Experience and Education*, like constructivism, consider experiential growth an essential part of the learning process. Dewey expresses concern that children learn adult subject matter taught from an adult mindset; this is still the case today. It also discounts Piaget’s assertions that children can only know what they have experienced or constructed for themselves. Dewey proposes a progressive effort that emphasizes expression, individuality, free activity, learning through experience, and learning skills that have immediate practical use. In chapter three, Dewey focuses on the democratic ideal in education, and proposes that schools should employ more “democratic and humane arrangements… [as opposed to schools] that are autocratic and harsh” (Dewey, 1938, p.34). This chapter also makes a case for more fair, balanced learning; when teachers do not consider the individual experiences of children, when they do not adapt for different students, the learners suffer. Dewey suggested, “Those to whom the provided conditions were suitable managed to learn. Others got on as best they could” (Dewey, 1938, p. 45). Dewey asserts that traditional methods of education do not work, and only by learning through “…experience [that] arouses curiosity, strengthens initiative, and sets up desires and purposes that are sufficiently intense to carry a person over dead places in the future…” (Dewey, 1938, p. 38) can a
learner experience the dynamic education that Dewey sees as essential. *Experience and Education*, as a whole, is a powerful, very early call for constructive, experiential, student-conducted learning that, by nature of what it proposes, accounts for many types of learning.

*Lev Vygotsky*

The Zones of Proximal Development (ZPD) proposed by Lev Vygotsky (1978) in *Mind and Society* also address the importance of constructivism in learning, as well as peer learning through guided participation. ZPD is defined as “…the distance between the actual developmental level as determined by independent problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 24). Using a student’s ZPD as a guide, a teacher can frame instruction; the instructor, with knowledge of the student’s abilities, can teach in a way that provides the appropriate level of support to the child’s current level of knowledge. Vygotsky’s inclusion of more capable peers among potential teachers is important, as this is a key support for peer learning. Vygotsky asserts that working within the ZPD allows students to make discoveries and connections that they would not have formed on their own:

*We propose that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal development processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. Once these processes are internalized, they become part of the child’s independent developmental achievement.* (Vygotsky, 1978, p. 90)
Mind and Society also stresses the importance of play as a part of every child’s development. Children use play as a means of discovering and inquiring about the world around them, and make connections and discoveries about the working world that could not be made by rote instruction alone. Play is an important part of constructivist methods, since it allows children to construct knowledge that pertains to their own interests, and at their own pace. The form of play as defined by Vygotsky is particularly important for how children construct meaning and concepts.

In play a child spontaneously makes use of his ability to separate meaning from an object without knowing he is doing it, just as he does not know he is speaking in prose but talks without paying attention to the words. Thus, through play the child achieves a functional definition of concepts or objects, and words become parts of a thing. (Vygotsky, 1978, p. 99)

Technology and Constructivism

If constructivist learning is active, constructive, collaborative, inquiry-based, evolving, and reflective, then all well-led technology classes today can be considered constructivist-learning environments. In order to fully understand most computer programs, teachers need to scaffold instruction, and students need to be able to construct their knowledge.

Logo

Well before the era of the personal computer, computer technology and constructivism had already been used together in schools. LOGO, a programming
language developed in 1967 by Daniel G. Bobrow, Wally Feurzeig, Seymour Papert, and Cynthia Solomon, was specifically developed for constructivist teaching, and was intended for use at any age level. LOGO was based on “turtle graphics,” an even earlier programming system where users input commands for an actual robot (so called “turtle” for its slow, deliberate movement) to travel forward, backward, left, or right. LOGO took turtle graphics to the computer screen, implemented the use of easy-to-understand word (rather than number) commands, and allowed the user to develop simulations and create black and white computer animations by using these simple line commands. Later versions allowed the user to incorporate color, sound, text, and user interactivity features to make for a multimedia, interdisciplinary experience. The main objective of LOGO was to allow even the most novice user to learn the basics within minutes, but be open-ended enough for students to make their own discoveries and create complex programs using simple tools. Teachers who used LOGO in class were encouraged to emulate the guide mentality of a constructivist teacher, assisting when asked, but otherwise act as a facilitator rather than a teacher. This allowed students to experience a sort of “sandbox mode” that many technology educators support today; in this mode of learning, students learn the basics of a program, and use their knowledge to make further inquiries and discoveries about what the program can do. The program was used in math, science, language arts, music, art, robotics, and telecommunications classes (Logo Foundation, 2010).

*Crickets and Scratch*
LOGO was just the beginning for constructivist teaching and technology.

Recently, the MIT Media Lab developed two technologies “...with the explicit goal of helping people develop as creative thinkers” (Resnick, 2007/2008, p. 18). Crickets and Scratch are, respectively, educational hardware and software, and are used as part of Michael Resnick’s “creative thinking spiral” (p. 18).

In this process, people imagine what they want to do, create a project based on their ideas, play with their creations, share their ideas and creations with others, and reflect on their experiences – all of which leads them to imagine new ideas and new projects. (Resnick 2007/2008, p. 18)

The Cricket is a set of simple devices comprised of light, touch, sound, and resistance sensors as well as light, sound, numeric, and motor outputs. Students have used these parts to create interactive objects that help them understand and interact with the world around them as well as think critically; the Cricket kit even comes with arts-and-crafts materials to encourage students to make their creations attractive as well as functional. Young students have created everything from alarm clocks that pester a sleeping victim with a rotating feather, to boots with lights that flash different colors depending on how fast the wearer is running. Scratch, on the other hand, is an online program that allows students to create their own interactive content and animations in a unique, simple-to-learn but difficult-to-master programming language that uses virtual “blocks” that the user snaps together to create command sequences. Because Scratch incorporates a large online community, constructivist teaching is prevalent, as students learn from each other’s creations, create their own variations on established creations, and bring in knowledge from class demonstrations. Resnick establishes Cricket and Scratch as tools
for learning in “Creative Society,” and goes on to say that technologies like these help students “think creatively, plan systematically, analyze critically, work collaboratively, communicate clearly, design iteratively, and learn continuously” (Resnick 2007/2008, p.22). Clearly, some of the most recognized educational technologies have already established a link between constructivist teaching and technology.

**Issues Surrounding Technology Integration**

While there have been significant strides in creative technology, there remains a large question: is teaching with technology effective? There is a plethora of criticism about how students are inundated with technology in their daily lives, and that using technology in school only feeds bad habits. *The New York Times* recently ran a series of articles entitled “Your Brain on Computers;” this series examined the effect of the digital world on the human brain. One of the articles, “Growing Up Digital, Wired for Distraction” specifically focused on how student achievement is hampered by technology. The article focuses on Vishal Singh, a high school student nearly failing out of his academic classes because he so often chooses to browse the Internet and edit film over doing schoolwork. While the teachers quoted in the article directly blame students’ excessive “screen time” as the reason for their distractibility, they also attest “It’s in their DNA to look at screens… If I’m not using technology, I lose [the students] completely” (Ritchel, 2010, p. A3). There is science to back the teachers’ claims; a German study cited in the article found that young boys who play video games have concentration issues in other aspects of their lives, and that video games “led to a significant decline in the boys’ ability to remember vocabulary words.” (Ritchel, 2010, p. A2)
determined that playing video games allowed for less vital recovery time during sleep, and that the brain favors emotionally stimulating content; meaning that the brain is more likely to remember an intense game experience than a mundane list of vocabulary words. Vishal Singh, like many students, is not oblivious to this.  

"If it weren’t for the Internet, I’d focus more on school and be doing better academically," he says. But thanks to the Internet, he says, he has discovered and pursued his passion: filmmaking. Without the Internet, “I also wouldn’t know what I want to do with my life.” (Ritchel, 2010, p. A1)  

Where is the line between distractibility and productivity? Should students who know exactly what they want to do be allowed to fail what they deem non-necessary classes? This has become a significant issue, and many schools do not know whether to completely forbid any technology use in classrooms, wholly embrace the use of technology in all aspects of the classroom, or to attempt a middle ground between the two. An article written by the International Society for Technology in Education (ISTE) tells a different story from the New York Times article. The oft-cited “How Does Technology Influence Student Learning?” lavishes praise on computer-assisted instructional applications, and credits technology-integrated classes with increased:

- SAT scores
- Test scores in math and reading
- Research Skills
- Ability to apply learning to real-world situations
- Organizational skills
- Interest in content
- Comparing and contrasting skills
- Synthesizing skills
- Analyzing skills
- Evaluating skills
- Presentation skills
While these findings seem antithetical to the evidence presented in “Growing Up Digital, Wired for Distraction,” the ISTE article cites a key factor: implementation of higher-order thinking skills, and significant teacher preparedness.

It is important to note, however, that students may manipulate simulation and presentation software to create a visual artifact without really understanding or applying sound conceptual thinking. The role of teachers is paramount in guiding the development of students’ higher-order thinking skills during learning activities involving technology tools. (Cradler et. al., 2002, p. 48)

The central question has now shifted – we know that technology for technology’s sake in education is not beneficial and can, in fact, lead to distractedness and lack of productivity. But technology as an instrument for constructivist teaching is a powerful tool, and we must now ask, “How do we prepare teachers to integrate technology and higher-order thinking skills into their lessons?”

**Teacher Preparation: Technology**

Because of technology’s expanding prevalence in education, there is a considerable amount of literature concerning teacher preparation in technology, used in colleges of education during the preservice period and in professional development seminars during actual teaching. While the majority of the studies concern more traditional classroom settings rather than an art room or computer lab, this information is still important to the field of education as a whole.
Preservice Preparation

*Educational Technology Research and Development* has published many articles addressing the issue of preservice teacher preparation in the field of technology, and two of the more influential and widely-regarded articles are Peggy Ertmer’s “Transforming Teacher Education: Visions and Strategies” (2003), and Neal Strudler and Keith Wetzel’s “Lessons From Exemplary Colleges of Education: Factors Affecting Technology Integration in Preservice Programs” (1999). The essential argument of both of these articles is that current levels of preservice teacher preparation are not sufficient for the modern classroom, and that colleges of education need to not only require more technology courses, but also have professors demonstrate using technology in methods classes. Ertmer cites a report from 2000 stating that only 44% of new teachers feel well-prepared to use technology in their teaching; Strudler and Wetzel cited an earlier article claiming that “…one required educational technology course was not sufficient to impact technology use [during teaching]…” (Strudler & Wetzel, 1999, p. 68). It is repeatedly stressed in these articles that professors of education must model technology use in their methods and theory classes; Strudler and Wetzel clearly state “…if college of education faculty do not model the integration of technology, then teachers will be less inclined to use technology in their own classrooms” (1999, p. 63). Ertmer elaborates on this, saying that all teachers of any levels of technological proficiency “…will benefit from observing varying degrees of expert performance as they move toward more advanced levels of technology themselves” (2003, p. 126). Another important aspect of preservice teacher education mentioned in both of these articles is student teaching placement. Strudler and Wetzel cite an earlier study in their literature review, where it was determined that
One of the common problems cited in the report [about effective technology integration] was the lack of student-teaching placements in technology-rich classrooms with teachers who actively model effective use of technology tools. The researchers concluded that this would likely remain a problem for some time. (1999, p. 65)

The Strudler and Wetzel study would go on to demonstrate the need for strong, technology-savvy leadership both in colleges of education (as previously mentioned) and in student teaching placements. Without this leadership, effective technology integration will be overlooked, and never implemented well. The Ertmer study determined that it takes at least five years of professional development for in-service teachers to become “accomplished technology users” (p. 125), thus asserting the importance of making the most of the four years students are preservice and student teachers.

Professional Development

...children from most, if not all, social and economic strata will ultimately come to have reasonable levels of access to communications and information technologies in their schools... Less clear, however, is the likelihood that they will have access to teachers who know how to use that technology to support 21st century learning and teaching. (Lawless & Pellegrino, 2007, p. 578)

There have been many studies concerning professional development focused on technology use, since this is typically where in-service teachers get most, if not all, of their technology instruction. Lawless and Pellegrino's article “Professional Development in Integrating Technology Into Teaching and Learning: Knowns, Unknowns, and Ways
to Pursue Better Questions and Answers” (2007) stresses the importance of professional
development seminars that address critical thinking, separate teachers by subject area to
address specific issues in each field, and have different seminars for how to use
technology and how to integrate technology into lessons. Currently, the vast majority of
teachers and students use computers solely for word processing and basic skills practice,
even if analytical thinking or problem solving programs are available. The study asserts
that teachers must feel confidence in the effectiveness of technology integration in order
for them to successfully make the transition to using technology in the classroom
(Lawless & Pellegrino, 2007, p.580-584). This is also established in Wepner and Tao’s
article “From Master Teacher to Master Novice: Shifting Responsibilities in Technology-
Infused Classrooms” (2002). This article established that teachers’ capabilities and
willingness concerning technology are the ultimate factors that determine how successful
technology implementations are in the classroom. The fickle nature of technology is
emphasized in this particular article, which calls for ultimate flexibility on the part of a
teacher who uses technology. Like the Strudler and Wetzel study, this article also calls
for student teaching placements in settings where technology is implemented in the
supervising teachers’ curriculum. The main foci of the article are how teachers must be
prepared to plan for worst-case scenarios when using technology, integrate critical
thinking into technology-infused lesson plans, be able to do at least some basic computer
maintenance and troubleshooting, know when and how to learn about technology from
other people (including students), and ultimately give up a little control to allow students
to explore technology in their own way (Wepner & Tao, 2002, p. 645-648). Of course, in
order for teachers to carry out these feats, not only is better professional development
needed, but also additional planning time that is devoted solely to technology integration, particularly if technology is not already part of the curriculum (p. 648). The willingness of individual teachers to achieve this level of technology integration is a key factor, and explored further (and with specific regard to the art classroom) in Elizabeth Delacruz’s “Teachers’ Working Conditions and the Unmet Promise of Technology” (2004). This article specifically addresses art teachers and their issues with implementing technology in the art classroom. While art teachers are slowly using more technology, 39% infrequently, rarely, or never use technology in the art room (Delacruz, 2004, p. 8); the main reason cited for this is that many art teachers do not feel that they get enough administrative support for art-specific professional development, and feel that technology will dictate what they can and can’t do in class. Most art teachers who do use technology rarely use it for anything other than as a means of displaying images, rather than using technology as a means for developing and delivering instruction, or even creating art (Delacruz, 2004, p. 7-10). Older art teachers, in particular, find technology to be “...a source of frustration, anxiety, and a feeling of being left behind, made obsolete” (Delacruz, 2004, p. 8). Frustration is a frequent word used to describe art teachers’ thoughts on technology in the classroom; as previously stated, if teachers are not confident in their own abilities with technology, they will not implement it in the classroom. However, as administrations create more mandates to use technology in the classroom, teachers become more and more resilient to changes being forced on them. And, as with all of these articles, Delacruz asserts that changes must be made at the preservice level:
Our challenge is to convincingly demonstrate how to engage new technologies in authentic ways that accommodate teachers’ values, work conditions, time constraints, and school cultures. Until these kinds of things happen both in our academic discourse and in our own practice of teaching teachers, many of our claims about the potential of technology will remain an unmet promise.

(Delacruz, 2004, p. 17)

Bet and Technology

As demonstrated by the previous articles, art teachers are particularly wary when it comes to implementing technology. Part of the reason for this is a long-standing distrust of digital art within the art community. Li-Fen Lilly Lu’s “Pre-Service Art Teacher Negative Attitudes and Perceptions of Computer-Generated Art Imagery: Recommendations for Pre-Service Art Education Programs” (2005) examines the catalyst for this trend, and traces it to preservice art education programs. The study examined a preservice art educator art appreciation class, recording student perceptions both before and after a digital art lesson. While all of the participants were interested in digital art, most of them did not regard computer graphics as the same quality art as more traditional forms:

The predominant concern expressed by all eight participants was that a machine, not a human, controlled the art creation. Another main finding is that all the participants recognized the importance of teaching computer art and they expressed intentions to teach it in their classrooms. Yet they expressed concerns about teaching [computer graphics], particularly their lack of computer art
experience, pedagogical training, and access to resources in curriculum preparation. (Lu, 2005, p. 92)

All of the participants intended to include digital art in their own teaching, but not because of personal interest, but because they recognized that they would need to include that instruction to be competitive when interviewing for jobs, and to keep art relevant to modern students. The students reported that their preservice classes focused “...on using technology as presentational tools and strategies for instruction, rather than technology as an art medium,” (Lu, 2005, p. 98) and that the technology they had learned did not venture much past Microsoft Office. Lu’s major complaint with preservice programs, however, was that all of these students intended to teach digital art, but because they didn’t have experience making digital art, none of them respected it as a medium. Some of the words included in the pre-survey to describe computer art included: dehumanized, manipulative, artificial, virtual, synthetic, cold, and inhuman. How can art teachers fairly instruct something that they do not respect and in which they have no experience?

Thompson, Schmidt, and Davis’ “Technology Collaboratives for Simultaneous Renewal in Teacher Education” (2003) succinctly addresses many of the concerns expressed so far. The article asserts that preservice art programs do not specifically address technology in the art classroom nearly enough, teachers must use technology in meaningful ways, and that student teaching placements with teachers who use technology are essential. “Simultaneous renewal” is called for, where K-12 schools and colleges must collaborate and instruct all art teachers in technology integration methods at the same time: preservice, in service, and college faculty. Making technology something worthy of instruction is emphasized throughout the article, both “Because meaningful
uses of technology in the classroom tend to support constructivist learning paradigms, many teachers must change how they teach if they are to use technology effectively” (Thompson, Schmidt, & Davis, 2003, p. 74) and “...in most teacher education programs, technology is considered an addendum to curriculum and not a cognitive learning tool that is infused throughout the entire teacher education program” (p. 74-75).

Technology preparation is not the only field with which preservice teachers are concerned. Kuster, Bain, Newton, and Milbrandt’s “Novice Art Teachers: Navigating Through the First Year” (2010) was an analysis of first-year teacher surveys, and among the grievances listed by the teachers was feeling overwhelmed and under-prepared, citing a “lack of specialized training (such as technology or for children with special needs), and meeting the expectations of administrator and/or colleagues” as some of the sources for stress (Kuster et. al, 2010, p. 48). Special education is another important aspect of preservice education, especially in art.

Teacher Preparation: Differentiation

Preparing preservice teachers to instruct students with disabilities has been an established concern longer than technology integration, but deserves no less attention. The art room in particular has long been a place where students of all ability levels are instructed together, making differentiation of instruction crucial. Currently, nearly 10% of public school students are diagnosed with at least one disability; art teachers, as instructors of learners at all levels of ability, must be able to differentiate instruction for all students (Hallahan & Kauffman, 2008).
Preservice Preparation

Besides the above-mentioned study, there have been relatively few articles concerning preservice preparation of art teachers for students with disabilities. Two studies from 1994 are still the premier sources of information for anything relating to art education for students with disabilities; Doug Blandy’s “Assuming Responsibility: Disability Rights and the Preparation of Art Educators” and Doris Guay’s “Students with Disabilities in the Art Classroom: How Prepared Are We?” Guay’s research focuses on how new art teachers in particular felt uncomfortable teaching (in 1994) the newly integrated classes that included students with disabilities. In 1994, 84.8% of the teachers surveyed taught students with disabilities, and 70% of all of the teachers felt unprepared for teaching in an integrated special education/regular education setting. Guay emphasizes the need for preservice art education classes to specifically address students with disabilities, since

[the findings] indicate inadequate preparation to teach art to students with disabilities in integrated classes after experiencing a special education course...

The study also finds that an increasing number of teacher education programs are using non-art courses to provide the sole coverage of special education curricula for preservice art teachers, a reportedly inadequate solution. (Guay, 1994, p. 54)

Even though this was written in 1994, preservice curriculum has not changed – the vast majority of colleges of education only require a single special education survey course. Since this study, there has not been another similarly exhaustive survey of art educators to assess their preparation, but clearly, as found in the Kuster et. al. 2010 survey, new teachers still feel unprepared for teaching students with disabilities. Blandy’s article
comes to a similar conclusion, and offers sound advice. Much like the preservice technology articles that called for better student teaching placements, Blandy states:

Preservice art educators should be required to do field work in sites where people with disabilities are served... The result should be an ability to adapt art environments, adapt art tools and materials, implement appropriate teaching strategies, adapt curriculum, determine accessibility, and work on policy development. *Adaptations should be based on individual student needs* rather than on vague *prescriptions related to broad categories of disability*. (emphasis mine) (Blandy, 1994, p. 186)

**Practical Considerations**

As Blandy's article so bluntly stated, there is only so much that can be learned about making adaptations for students with disabilities without experience. However, he does offer some sound advice in this often quoted sentence in art education literature pertaining to disabilities: "There can no longer be one type of art education for those who are disabled and another type for those who are not" (Blandy, 1994, p.184). Since this article, there have been very few scholarly articles purporting to offer all-encompassing information regarding specific disabilities. However, there is prior research that has turned out to contain extremely worthy general advice. Pamela and Sidney Miller's "The Relationship of Task Difficulty to Mentally Retarded Students' Interest in Art" (1982) is perhaps the most useful study I have encountered that pertains to students with disabilities in an art setting. Prior to this study, there had been quite a lot of literature protesting art teachers giving students with disabilities easy, pre-made art projects well
below their ability levels. This study is based on a once-weekly, 9-week art program for high school aged students with disabilities. Each week, the students were given a new project, and each project was increasingly more difficult, starting with finger-painting and ending with screen-printing. What was discovered was that, although students had the easiest time following directions for the more simple activities, they took little interest in their own art and were easily distracted. The difficult projects garnered the most attention, and all the students took pride in what they created, no matter how the end product turned out. Miller and Miller hypothesized that, if art teachers continue giving students with disabilities projects below their ability level, these students will in turn lose interest and even begin to disrespect art. They close the article recommending giving these students harder tasks without overworking them, and to make sure to teach useful things to all students (Miller & Miller, 1982, p. 23-25).

Information Design and Accessibility

Part of differentiating instruction is making the very material you are teaching accessible and relevant to students of all levels of ability. Mace, Hardie, and Place’s “Accessible Environments: Toward Universal Design” (1990), appears to be simply a pre-Americans with Disabilities Act guide for how public buildings could incorporate alternate designs for citizens with disabilities. However, this article also delves into more philosophical prose about what it means to be disabled, and how designers of all types have the power to make the world a more accessible place for all people. This article is also the beginning of Ron Mace’s concept of Universal Design, a movement that calls for architects, graphic designers, interior designers, engineers, civic planners, teachers, and
others to consider the whole spectrum of potential users of their spaces, or consumers of their products (Mace, Hardie, & Place, 1990, p. 7-9). While I am more concerned with making learning accessible to students in schools, it is nonetheless important to note that by making as many aspects of life accessible to as many people as possible, nothing is wasted:

The designer, then, has a responsibility to consider the entire life span of the individual… Designing for accessibility can arrest the vicious cycle between denial of need and lack of use, providing flexibility for users, thereby increasing or strengthening the market and more than likely improving the client’s profit margin. (Mace, Hardie, & Place, 1990, p.6)

Because this book was written before the Americans with Disabilities Act, many of the adaptations mentioned in the book were not commonly implemented like they are now, such as Braille on signs, toilets lower to the ground, and grabbing bars in standard tubs (Mace, Hardie, & Place, 1990, p. 7-15). Now, we as a society have trended toward Universal Design in our physical spaces, but there is still room for improvement in all aspects of life.

“Accessible Environments” certainly makes a stand for how we can adapt physical spaces to better suit everyone who could possibly encounter those spaces, but what of learning environments? The concept of Universal Design has since been adapted for this very reason, and is titled Universal Design for Learning (UDL). UDL applies “…the idea of built-in flexibility to the educational curriculum [by pushing] Universal Design one step further by supporting not only improved access to information within
classrooms, but also improved access to learning” (Rose & Meyers, 2002, online text).

The principles laid out by Rose and Meyers are as follows:

- To support recognition learning, provide multiple, flexible methods of presentation.
- To support strategic learning, provide multiple, flexible methods of expression and apprenticeship.
- To support affective learning, provide multiple, flexible options for engagement.

The ultimate goal of these principles is “to provide students with a wider variety of options” (Rose & Meyers, 2002, online text). This means that, by making these adaptations, instruction is not only opened up for students with disabilities, but all students share the benefits of better opportunities as afforded by Universal Design for Learning (UDL). While it is recognized that the degree of adaptability UDL calls for is nearly impossible in a traditional classroom, UDL looks to digital media and the potential of constructive, networked technology as the ultimate teaching tool for reaching students of all ability levels.

Conclusion

In short, art teachers need further, and more thorough, preparation for the adaptations demanded by the modern art classroom; teacher education must include instruction for both differentiating instruction to learners of all abilities as well as responsible and effective technology integration. This instruction needs to be specifically targeted toward each teacher’s area of expertise, and include extensive work with in-service teachers who have been successful in making these adaptations. Using concepts of constructivism, collaborative learning, Universal Design for Learning, and the creative thinking established by previous technology infusions, I have attempted to create a well-
informed solution to the issues I have presented so far. The products I developed include packets that address the programs Adobe InDesign, Illustrator, and Photoshop, as well as a graphic design unit that uses these packets as an assistive device in a constructive manner.
Chapter Three
Development of the Packets

Initial Construction

As described in my introduction, initial development of my learning packets began with my preparation for teaching a pre-college graphic design course. The course, offered through the University of Georgia Center for Continuing Education, offered local high school students the chance to explore potential college majors through an intensive, weeklong course. My course, *Graphic Design*, covered the Adobe Creative Suite 4 programs InDesign, Illustrator, and Photoshop. Because the students who enrolled for this class were supposed to have some computer knowledge and an inherent interest in graphic design, I was able to target my instructional supports for computer-savvy teenagers who did not need motivation to learn design. My program orientation page included a screenshot of the main toolbar for each program, with notes indicating what each tool was and its corresponding keyboard shortcut. I also had screenshots with informative labels for the primary function of each program: the text panel from InDesign, the live trace toolbar from Illustrator, and the image adjustments menu from Photoshop. Additionally, I had written very specific step-by-step instructions for program functions, such as making a live paint selection in Illustrator, or removing an object’s background in Photoshop. Instructions were almost entirely text with keywords and tools in bold letters, with perhaps a couple of accompanying screenshots. Because my students were very motivated to learn the programs, already comfortable with computers, and not afraid to ask questions, the instructional supports I made were sufficient for their needs. What I achieved was a “sandbox-mode” form of instruction: I gave the students just
enough information to figure out the basic program functions, and further discoveries in the programs were from their own explorations or direct questions to me. Both my mode of teaching and my instructional material supported inquiry-based learning; students felt comfortable making their own discoveries about new processes and tools within the programs, and shared their findings with the class.

Figure 1: The original incarnation of the Photoshop packet's basic information
Student Teaching: Revisions

From my very first observation at Oconee County High School, I knew that teaching these students was going to be very different from my summer class. The software they had was much older (CS2 – the version I used as a high school student), there were a lot more of them (over 30 in each class), and the class was considered a “soft” course that counted as both a technology credit and a fine arts credit – meaning that many students were only there for the “easy A,” and had very little computer experience. From a classroom management perspective, these classes were a major challenge: besides being large classes of students seated in front of computers with internet access, the classes were mostly comprised of freshmen, seniors, athletes, boys, and students with disabilities. Two of the classes also contained a handful of students from the yearbook class; they worked on yearbook layouts during class time, making for a large and fairly consistent distraction for curious students.

I wanted my information packets for these students to contain more than simple rote directions, and wished to keep some degree of the inquiry-based “sandbox mode” that I established with my summer class; these students did not deserve a less stimulating learning experience just because they weren’t as attuned to technology. Therefore, my packets became much more image-heavy, and focused on step-by-step directions that broke down every nuance of each task. The packets were available to the students from my very first day of instruction as an Adobe Reader document on the shared drive space. The packets accommodated different learning styles; while most students used them, a handful opted to not use them for reference. Some of these students were tech-savvy enough to remember instructions from my demonstrations; other students were simply
much more co-dependent workers who wanted to use their classmates (and me) for assistance. While it was frustrating to have students who were completely lost because they weren’t using the resources I gave to them, I was glad to be able to accommodate different learning styles; and students who did use the packets were able to create amazing images and solutions to my projects. I even had one student in my commercial design class, where they were only learning about Photoshop, open the InDesign packet from my yearbook class and make a pretty decent layout entirely on his own.

By the time I finished my instruction/information packets, there was a basic structure consistent to both the InDesign and Illustrator materials:

- Introduction
- Overview of the essential tools and processes with images of where they are
- Step-by-step directions on how to use basic tools
- Step-by-step directions on how to execute more complex tasks
- Tips
- Vocabulary

Figure 2: Student teaching version of Layer Properties and Lighting Effects.

Layer Properties, Lighting Effects
There's a lot more to layer effects than just transparency.

Layer Properties, Lighting Effects
There's a lot more to layer effects than just transparency.

1. The original image. I'm going to use the magic wand tool to select the background, then the lasso tool (while holding down shift or alt) to add or subtract from the selection so I just have the sky selected.

2. I deleted the sky selected in step 1, cleaned up some things like extra plants and wires, and placed an image of a sky with similar light direction on a layer behind the building.

3. Time to make this building look like it goes with the sky. I cut-clicked the building layer in the layers palette, then made a new layer with my selection still up. I chose a light orange from the new sky using my eyedropper tool (4), and then used the paint bucket to fill the shape of the building in with that color. I made another layer, and duplicated the same process, but this time selecting a purple from my background as the fill color.

4-5. Here is where layer properties come into play. Right under “Layers,” there is a pulldown menu that says “Normal.” We’re going to change it to “Multiply” (a) for both of the layers with the blocks of color, then adjust the overall layer transparencies (b) on both of those layers; I have my orange at 50% and purple at 85%.

6. Now, I went back to the color layers with a soft eraser tool, and erased away the very edges of the right side of the building - you can kind of see this if you look at step 5 - that which glow on the right side. This is to make the light hitting the building look stronger.

7. Now this isn’t layer properties, but it is something I like to use. Under “Filter,” go to “Render,” then “Lighting Effects.” You’ll get this menu - play with the size and intensity of the light (A) using both the sliding bars and by dragging the corners of the actual light in the example, and make sure it makes sense with the lighting in the image.

8. I did some dodging and burning on the original image to make the lighting look better, and step 9 is my final product!
Applied Project: Revisions

Before I even took my packets to my committee, I knew that I would need to do some significant work on my Adobe Illustrator packet. Because I did not use Illustrator during my student teaching, I did not have a large, streamlined packet for the program like I did for InDesign and Photoshop; I only had the few pages I developed for the pre-college course. I also knew that I would need to make adjustments to make these packets function more independently; in their post-student teaching form, the Photoshop and InDesign packets each relied on information contained in the other packet for full understanding of my unit. Additionally, I knew that I needed to add information and disclaimers concerning the various versions of the programs; the extract tool that I devoted a lot of time teaching to my high school students does not even exist in more recent versions of Photoshop, and many of the effects my summer class students could use in Illustrator CS4 were not available in versions older than CS3. Lastly, I learned from the time I spent in the classroom using these packets as instructional support, that they needed more visual illustrations, in the form of screenshots, which would more clearly show where items are located in the programs.

Basic Edits and Cleaning

After consulting with Professor Julie Spivey, my graphic-design oriented thesis committee member, I began making design changes to my packets that would make the packets more cohesive, as well as better facilitators for understanding. I added a table of contents, page numbers, and made all of my titles left justified to make referring to specific content easier. I also specifically addressed program version differences,
particularly in the Photoshop packet, since Photoshop is by far the program that has changed the most in the last ten years. And, of course, there were many small edits and changes – shrinking text size, changing fonts, nudging pictures, fixing typos, removing double spaces after periods, and all of the other small modifications that made the packets more streamlined and neat.

Adaptability

When I made these packets, I only had to keep two versions of the Adobe Suite in mind – CS2, which was on the school computers, and CS3, which I had on my personal computer. Because I am thoroughly versed in both versions of these programs, creating the packets for an earlier version of the software was not much of a challenge. However, for my applied project, I knew that I would need to include instructions for versions of the software up to CS5 – which I had never had the opportunity to use, at that point. After considerable time in the graphic design computer lab, I got a good idea of what major changes I needed to address in later versions of the programs. While InDesign and Illustrator were essentially the same (except for having more, better, and faster effects than the older versions), Photoshop definitely needed a couple of pages dedicated to the massive improvements seen in CS5, as well as disclaimers on earlier pages about what had been removed from the program. I included pages on the healing brush tool and the famously powerful content-aware fill. Of course, my major concern now is how to keep these packets relevant for future updates; an issue I will more thoroughly address in the conclusion. Another issue with adaptability was making these packets usable for the independent learner. When I taught these programs, I was always on hand for
troubleshooting and figuring out problems. Clearly, this isn’t an option for teachers trying to learn these packets on their own. So, to address this, I included a “Troubleshooting” page after my “Tips” page. I used this space to address common issues that came up when I was teaching, as well as issues I have personally encountered in my eight years of experience with these programs.

**Accessibility**

As frequently stated in the packets, InDesign, Illustrator, and Photoshop can often be intimidating programs. The packets I created are key to bridging the gap between “threatening” and “doable.” While making the previously mentioned design adjustments certainly helps the readability of the packets, I knew that there was a lot more I could do to make the content easier to understand. For example, see my Layer Properties and Lighting Effects page from the previous student teaching section, and then look at the same page below (p. 16-17). While I left justified the type and added page numbers for overall easier reading, I also made some major changes to help the user. Brighter, bolder numbers help the reader look back and forth between the two pages with more ease; readability is also improved with more obvious sub-letters A-C. Also, as with all the other packets, I went through my instructional text and put key tools and processes in bold; I even included small images of what individual tools look like next to their words, so that users of the packet do not have to go back and reference the introduction. While these were all small changes, ultimately, they are changes that help everyone understand these programs more efficiently and with greater confidence.
Figure 3: Post-revisions Layer Properties and Lighting Effects page, with key words bolded, images of tools, and more obvious number and picture labels.

This was my final basic structure for all of the packets:

- Introduction
- Table of contents
- Overview of the essential tools and processes with images of where they are
- Basic tools and how to use them
- Basic processes and how to access them
- Longer, more complicated processes with step-by-step instructions
- Helpful hints
- Vocabulary
- Troubleshooting
Chapter Four
Development of the Unit

Student Teaching: Initial Construction

My unit, Exploring Careers Through the Adobe Creative Suite, began with my high school student teaching placement. One of my primary concerns with teaching art is making art applicable and intriguing for even the most apathetic students, a large group in secondary education. While graphic design inherently appears to have more immediate practical value than studio art, students who do not want to be in art class are still a tough audience. I knew from my own experience of being a student that I would have to give these students a lot of time to get comfortable with the programs, and give them lots of flexibility and room for creativity on the projects. My student teaching lessons covered Photoshop in the commercial/graphic design classes, and a little bit of both InDesign and Photoshop with the yearbook class. Yearbook contained students who had already had at least the introduction to commercial/graphic design class, and the students were fairly knowledgeable about using the Adobe programs. Because of this, I was able to focus instruction much more on page design, and less on program mechanics. The introduction to commercial/graphic design classes, however, contained almost entirely students who were completely unfamiliar with the programs. As previously mentioned, this class had no prerequisites, was considered an “easy A,” and counted as both a technology and fine arts credit; the class had many students only attending the class for the credit. For these classes, I had to make sure that program instruction was thorough enough for students to understand how to independently use and navigate the programs, but still interesting enough that the students wouldn’t completely disregard the lessons.
I wrote my unit in the most practical way I could— I took a list of the graphic
design standards, pulled out everything that applied to the projects I wanted to execute,
wrote a list of words and processes students would need to know in order to complete
these projects, and figured out the most logical course of learning through Photoshop.
From there, I was able to determine what students would need to know, what they would
learn, what they would understand, and how they would come to these understandings.
Having projects in mind was key, because I needed to make sure I was giving projects
with which I was completely comfortable and confident, lest I end up constantly
troubleshooting and never teaching. Of course, I made huge changes to my unit as I
taught, mostly because I was incorporating fantastic suggestions from my students—
everything from putting the mechanical monsters on video game packaging to turning the
extra credit project into a “create your own I-Spy game.”

Instruction

My main instructional support was my teaching packets, as previously explored in
greater detail. The packets contained the most essential information about how to use
Photoshop and InDesign, and were available to every student in both yearbook and
commercial/graphic design in a digital format on the school’s shared drive. Additionally,
my rubrics and lesson outlines were available on the shared drive for students to use as
checklists for projects. A few students’ Individual Education Plan (I.E.P.) required that
they have rubrics printed out for them, but finances prevented me from being able to
provide a physical packet and printed rubrics for every student.
During my student teaching, each lesson I taught for my unit focused on learning a handful of tools and processes to make two different projects. There were twelve lessons, for a total of six projects. I began instruction of each lesson with slideshows of professional work that used the same techniques the students were about to learn for themselves. A demonstration followed the slideshow, where I had a digital version of the packet open to the appropriate tool, and then slowly went through the whole process of using the new tool or process on the front-of-the-classroom projector. Speed was a key in doing demonstrations; going too slow would lose the students’ interest, but going too fast left far too many of them baffled about how to execute certain procedures. After the demonstration, the students would begin working on their projects, and I would walk around the room, helping as requested or when someone looked lost. Walking around the classroom also kept illicit internet use to a minimum, and made classroom management less of an issue. Then, every day for the rest of that particular lesson, I would begin the class by reviewing what we had learned, and going over anything that students were repeatedly having difficulties with executing. Reviewing anything that was giving the students problems was key, and if I ever forgot to do it, I would typically have about fifty more questions that period than if I had remembered to review. At the end of the project, students saved their work to the shared drive, and I would begin the next project the same way. On my last day of student teaching, we had a class-wide positive critique of everything the students had done in Photoshop. There were great comments and suggestions for different ways to do things, as well as hilarious “before and after” moments, where students put their first Photoshop project next to the last one.
Projects

My main objective with the unit was to provide flexibility for the students, and keep them engaged and interested in their art. Each “section” of instruction had two projects; one project required more technical skill with Photoshop, and the other more creative, artistic approach. While there were two projects per group of lessons, I had at least four products due at the end of each group. Students had to do a minimum of one piece for each of the two projects, and then got to choose which project they would like to do for the other two pieces. For example, my first major set of projects included using the transform tools to create a “mechanical monster” from pictures of machinery, and using adjustment layers to turn a daytime image into a nighttime scene. I had a student who loved using the transform controls, but had difficulties using adjustment layers. He chose to create three “mechanical monsters” and only one day-to-night scene, which allowed him to play to his strengths, and therefore be more comfortable in his art making, since he knew his endeavors would be more successful. The projects my students completed were as follows:

**Introduction to Photoshop: Four Pieces Due**
- Lessons: Basics, adjustments clone stamp, extractions
- Projects: Fix photos with clone stamp (removing flaws or modern elements) Extract items from photos (people or animals)

**Bigger Manipulations: Four Pieces Due**
- Lessons: Transform, liquefy, burn and dodge, adjustment layers
- Projects: Day to night image, mechanical monster

**Putting it Together: Eight Pieces Due**
- Lessons: Filters, layer properties, healing brush, paintbrush
- Projects: Imaginary currency, “fixing” people
I really wanted students to have the option of working on more than one project at a time. I can assert, from personal experience, that there is nothing worse in the world of computer imaging (or traditional art, for that matter) than knowing that you only have one thing to work on, and it’s not really something you want to do at the moment. I borrowed the idea of having multiple project assignments at the same time from my high school studio art teacher, who would typically give her classes a list of four projects she wanted done within the month. This method allows students to learn effective time management, as well as keep the students from getting bogged down in a single project. I felt confident about the projects I selected, mostly because I had experienced some version of all these projects as an undergraduate student in my electronic design, digital photography, image editing, and illustration classes. Having prior experience with these projects gave me the advantage of knowing what could go wrong in the programs, as well as knowledge about alternate methods of executing processes.

Assessment

Students had access to the rubrics that I used to grade their projects from the very beginning of my student teaching. As previously mentioned, some students required that these rubrics be made available to them in paper format as part of their I.E.P., but all students had access to the digital version of the rubrics. These were not traditional rubrics; they functioned as both introduction sheets for the projects and as grading criteria guidelines. Each rubric contained a description of the project, “dos and don’ts” for executing the project, and design-related vocabulary words to keep in mind when working on the project. I feel that it is important that students know what is expected of
them and what they are being graded on before they even begin work on a project. The content of the rubrics varied greatly depending on the content of the project, but points for creativity, effort, and neatness were almost always available, so students did not feel huge pressure to make "perfect masterpieces." Below is a sample of a rubric from one of the larger Photoshop projects.

**Photoshop**

**Project 3: Day to Night**

Choose an image taken in daylight that has the sky visible, then choose an image of a sky at sunset or dusk, with at least some color to it other than navy blue/black. The image can contain just about anything, but if you want to rack up some bonus points, a picture of a house or anything else with lamps (street lights, billboards, etc.) gives some really great opportunities for making the image look like it's night by turning on lots of lights.

- You must do at least one day to night image for your four pieces for Project 3
- You can use any images so long as they are large images that aren’t copyrighted
- You must have a consistent light source that effects the fore and background
- There must be something other than the sky that shows that this is at night
- The Images must look like they belong together, using:
  - Brightness/contrast
  - Hue/value/saturation
  - Extraction
  - Free Transform
  - Clone Stamp
  - Burn/Dodge
  - Drop Shadow
  - Layer Properties
  - Lighting Effects

**Rubric**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Foreground and background are fully integrated and believably at night</td>
</tr>
<tr>
<td>10</td>
<td>Foreground and background have the same light source</td>
</tr>
<tr>
<td>10</td>
<td>Something other than the sky indicates that this photo is at night</td>
</tr>
<tr>
<td>10</td>
<td>Foreground has been properly extracted</td>
</tr>
<tr>
<td>10</td>
<td>Hue, contrast, light, etc. is consistent between foreground and background</td>
</tr>
<tr>
<td>5</td>
<td>Neatness</td>
</tr>
<tr>
<td>5</td>
<td>Effort</td>
</tr>
</tbody>
</table>

| 50 | Overall |

**Figure 4:** Rubric for the first major Photoshop project.
Applied Project: Revisions

When readdressing my unit for my applied project, my first objective was to extend my unit beyond Photoshop, and write lessons and projects for InDesign and Illustrator. I also wanted to include group projects as an introduction for each project, not only to promote constructivist teaching methods, but because the students were already doing this of their own accord during the first two weeks of teaching Photoshop at the high school. I used my Photoshop lessons as a template, and came up with a rough outline of each program’s lesson structure:

- Introduction to program, basic program navigation
- “Play” time, let students navigate and explore program with either no objective or to make a simple, open-ended project
- Demonstration of main tools and functions, group project
- Further demonstration of more specific tools and functions, main projects

While Photoshop does not have a group project, I felt that, by having it as the third of the three programs taught, students would have fallen into a habit by then, and use their “play” day to share and construct knowledge.

While I had a couple of Illustrator and InDesign projects that I used when teaching the summer class, coming up with projects for the other programs was a challenge. However, I ended up doing what I did with Photoshop – drawing from my experience as a graphic design student, asking students what they would want to do with these programs, and choosing my favorite projects to adapt for a high school class. The final list of projects is as follows:
InDesign

Introduction project: Your Name - Student’s name label for computer with proper kerning, line spacing, and text effects.

Group project: Alternate Band/Artist/Musician Logo – Students take a band and give their name a type treatment that does not match the band’s sound.

Big Project 1: Typographic Portrait – Students use nothing but black letters, numbers, and glyphs to create a self-portrait.

Big Project 2: Lyrics/Quote – Students use typography, layout, and design skills to give a quote or lyrics an interesting type treatment.

Illustrator

Introduction project: The Pen Tool (Far Mightier Than the Sword Tool) – Students complete a worksheet that tests their pen tool skills.

Group project: Company Logos – Students create three logos for three very different types of companies, i.e. a balloon company, a lawyer, and a sports equipment store.

Big Project 1: Patterns – Students create a fabric, computer, or clothing pattern using the pen tool and brush effects.

Big Project 2: Tag/Symbol – Students create a graffiti tag for themselves using the pen tool, Illustrator effects, and text effects.

Photoshop

Introduction projects: The Clone Stamp, Extractions, and Drop Shadows – Students use the clone stamps to cover people in photos, and use the extract tool to remove people from backgrounds. They then put these extracted people in a new setting, and add a believable drop shadow.

Big Project 1: Day to Night – Students take a daytime photograph, and use layer adjustments and properties to make the image look like a night photograph.

Big Project 2: Mechanical Monster – Students use transform tools and images of mechanical parts to assemble a monster.

Big Project 3: Currency – Students use all previous skills from all programs to make imaginary paper money, both front and back.

Big Project 4: Your Face is a Collage – Students enhance photos of people, either making normal people hideous, regularly enhancing people, overly enhancing people to “over-Photoshop-ed,” or making normal people bizarre (aliens, monsters, etc.).

Extra Credit Project: Image Collaboration – Students take at least three disparate objects and make them look like they belong in the same space.
Unit as Part of a Larger Curriculum

Like all other aspects of this project, I wanted my unit to be as pragmatic and useful as possible. Depending on what equipment and software a school has, these lessons can be used separately; for example, if a school only has Photoshop, a studio art teacher could use the Photoshop lessons as part of a digital art unit. But I like to take the idea one step further, and suggest that these lessons could fit into a variety of art curriculums, including visual culture, discipline-based, and vocational.

Visual Culture

Kerry Freedman’s “The Importance of Student Artistic Production to Teaching Visual Culture” (2003) stresses the value of visual culture art education, and particularly emphasizes the potential of visual culture art education (VCAE) as a means of helping students construct their own identities and develop ideas and skills through cultural critique and art production. Many of these lessons are easily adaptable for a teacher who focuses on a visual culture curriculum. Because most students will use reference images from the internet, there are many ways to interpret these images as students incorporate them into projects. For example, without even intending it, my last two Photoshop projects turned into a critique of visual culture and visual culture/social reconstructivism, respectively. One of the projects was obvious – students were taking images of people and “fixing” them, removing blemishes, airbrushing skin, tucking in fat, and using the multitude of processes professional art directors regularly rely on for print photos. Of course, this led to a huge debate about what constitutes “real pretty,” or who is just “botched plastic surgery, Photoshop fake” (these are actual quotes from students). I
gently nudged this conversation in the direction of how media controls how we perceive ourselves. Students were eager to not only discuss this, but to carry out action by “fixing” previously airbrushed images (see Figure 5). The other project unexpectedly turned into a visual culture critique and a reconstructivist examination. Students were creating paper money for countries; my example image was money for Tibet, which does not have its own system of currency. From there, the class had a discussion about cultures and money (or lack thereof), and because I made students research their countries, we ended up with interesting results. By the end of the project, I had quite a lot of North Korean, Sudanese, Laotian, and Cuban money, as well as a wealth of information about these countries’ treatment of their citizens. Some students even went down a completely different path, and created money for nonexistent countries, giving me Middle Earth money from Lord of the Rings, Vulcan money from Star Trek, and even Antarctic money.

In a more strict definition of VCAE, the photo enhancement project offered many opportunities for students to critique visual culture. At the beginning of the lesson, I showed the students a now-famous commercial for Dove soap that emphasizes the unreality of photo enhancements, and how distorted our vision of beauty has become. The video depicts the face of an average woman as she undergoes hours of hair and makeup treatment, a photo shoot, and then the eventual major revisions made in a photo editing program to make her magazine cover worthy. Not only did this video help show how programs like Photoshop are used in the professional world, it also caused the students to question the validity of every image they have ever seen. Students became obsessed with finding high-resolution photos of celebrities, and, armed with their knowledge of
Photoshop, pointed out all of the areas that had been changed in the program. Of course, the discovery of misleading photos lead to more discussions, such as Iran’s infamous use of Photoshop in depicting the country’s missile launch, where missiles were duplicated to make the firing look far more intimidating.

Figure 5: “Pretty to Ugly,” student-titled piece; the student found a picture that already made heavy use of Photoshop, and “fixed” it
Figure 6: “Enhancement,” a student took a normal girl and made her “magazine pretty” by plumping her lips, changing her eye color, and tanning her.

DBAE

Discipline-based art education (DBAE) concentrates on creating a student’s art experience by creating art, critiquing art, learning art history, and understanding aesthetics. DBAE tends to focus on teaching art through the elements of art and principles of design, and typically uses more established production methods, such as painting and drawing. (Dobbs, 1993). The focus on traditional forms found in DBAE, in theory, almost seems antithetical to creating digital art. However, as expressed in Li-Fen Lilly Lu’s “Preservice Art Teacher Negative Attitudes and Perceptions of Computer Generated Art…” including digital art as a means of creating art in a studio class is extremely important (2005). While Photoshop is a difficult program with which to
convinced traditionalists about the merits of digital art, both my InDesign and Illustrator lessons contain projects that even the most anti-computer art teachers would agree is "real" art. I believe that the InDesign self-portrait project and Illustrator graffiti tag project contain many elements supported by DBAE. For the self-portrait, students must examine various forms of type, and art history knowledge about different type styles would help them in their selection. And, of course, the actual creating of the portrait is a digital version of collage, and therefore art-making. Creating a convincing graffiti tag in a computer program definitely requires that students not only research graffiti, but do sketches on paper by hand to get used to the forms before executing products on a computer. While this is not always considered a typical art form, I believe that, to an open-minded DBAE teacher, even graffiti can easily fit into categories of aesthetics, art criticism, art history, and art production.

**Vocational**

My original intention with my unit was to make it a part of a larger vocational art curriculum. Because the graphic design class was a part of Oconee County High School’s Career, Technical, and Agricultural Education (CTAE) program, directing the projects of one’s classes toward practical vocational use was highly encouraged. I made sure to emphasize the aspects of Photoshop that aren’t just used by graphic designers, and managed to touch on jobs like:

- Journalist
- Photo restorer/preservationist
- Photographer
- Fashion designer
- Architect
- Prepress operator
• Secretary
• Digital engineer
• Programmer

One of the most satisfying moments I had during my student teaching was when a student brought in a huge stack of very old photographs that his aunt wanted him to scan in and clean up. He had been talking to his family about what he was learning in class, and his aunt was willing to pay him for services. The entire class got very excited when I looked up the general per-photograph price that photo retouch professionals typically charge, and I saw a definite overall increase in class engagement after that small demonstration.

Discovering that skills one learns in school are useful in the outside world, where the student can actually earn money, is a good way to engage apathetic students, and I believe an excellent reinforcement of the curriculum.
Chapter Five
Conclusion

Limitations: Development of Further Learning Packets

The first thing anyone knows about technology is that it is in a constant state of change. In order for these packets to remain relevant, they would have to be continually updated to reflect the technology available in classrooms. While it may seem odd that I wrote these packets to be usable with programs over ten years old, the fact remains that many schools simply do not have the funds to upgrade their software, and may not have the money to do so for quite some time, if ever. To keep costs down, upgrades for new software could be posted on a central website for these packets, and teachers could print out what they need.

My original intention with this project was to make a much larger range of packets that would cover the entire Adobe Creative Suite and Web Premium, but time constraints, as well as the depth of my own skills, limited me to creating packets just for the standard programs of graphic design. Taken in a similar direction, more packets could be made for:

- Adobe Dreamweaver (web page design)
- Adobe Flash (animation and motion graphics)
- Adobe Premiere (video editing)
- Adobe After Effects (video post-production and motion graphics)

Even more packets could go beyond just the Adobe programs, and be useful for teachers other than art teachers. Packets on the many ways to use interactive whiteboards would be useful for any teacher with access to this technology, and perhaps give them new ways to approach lessons. Most teachers have, and can use, a computer, but are lost when it comes to fixing problems. A packet in basic computer maintenance and problem
solving could help; many people do not know that most computer issues can be solved with a well-worded search online. And there would certainly be potential for non-art focused technology packets, like biology, physics, music, history, etc., but these would have to be developed by professionals in those particular fields.

Additional packets could also be made that strictly addressed accessibility in the classroom. These could either focus on one disability per packet, with suggestions for how to make adaptations for these individuals, or focus on specific classroom settings (laboratory, music room, kindergarten, etc.) and adaptations for the most common disabilities one would find. I partially addressed this in my unit addendum, but the idea could be expanded much further, and include disabilities that I did not personally encounter during my student teaching experience.

Reflections on Student Teaching

Although it was an informal setting that I did not expect to use as a basis for my thesis, my student teaching experience at Oconee County High School really solidified a lot of concepts I only knew in theory before teaching. Before I started, I was not sure if my constructive methods were going to work, wasn’t too confident that students would enjoy the projects, and certainly was worried about students who were apathetic, or just not trying. I taught my lessons, but concentrated more on making sure I developed a comfortable rapport with my students, where they weren’t afraid to tell me anything about issues they were having or what they did or didn’t like. The level of familiarity I gained with the students certainly helped the students learn better, but I was also able to learn a lot from the students. With each project I assigned, students would give me
amazing ideas for different takes on each project. One student I remember in particular was obsessed with all things car and truck, and clearly enjoyed the project where he got to manipulate mechanical parts to create something. He had created a sizable army of mechanical monsters from engine parts, some even with glowing eyes and wings. At the end of the lesson, he made a fantastic recommendation to combine this project with the day to night project, and create a video game cover or movie poster with the mechanical monster in some sort of night setting. As previously mentioned, many of my InDesign and Illustrator lesson ideas came from student suggestions, particularly the graffiti, patterns, and band logo projects. Students said that they wanted to make things that they could use, whether as a cellphone background pattern or a logo for a friend’s band.

A pivotal “a-ha!” moment in realizing the effectiveness of constructive methods happened during the photo enhancement project. In the previous project, students had learned how to manipulate layer properties in Photoshop to subtly change individual objects’ colors; they used this method to turn a daytime photograph into a nighttime photograph. In experimenting with making modifications to people, two girls used their prior experience in layer properties, and knowledge from much earlier in the class on the brush tool, to change hair color in Photoshop. I had planned on teaching students how to change hair color, but actually had never used the method these girls figured out – which was faster, and with certain colors, far more effective than the way I knew. Students quickly crowded these girl’s workstations to see how they accomplished such a neat and convincing hair color change, and immediately rushed to their computers to do it themselves. While I already was feeling pretty good about what I assumed was an isolated incident, other classes saw the hair color change, and begged me to show them
how it was done. I told the students that I didn’t instruct anyone on hair color, and that they had all the knowledge they needed to figure it out on their own. Students went back to the packets to see what I could possibly be referring to, and some students immediately made the connection. Each class then had at least one student figure out how to execute this method, and then, in turn, teach the whole class how to do it. By the end of the unit, each of my four classes had figured out a unique, and very effective, way to change hair color in Photoshop, and it didn’t end there. Students sort of rallied around this “hair moment,” and began sharing alternate ways to get rid of zits, change skin color, change hair styles, and a whole bevy of other techniques that led to some truly unique and creative final projects. Getting to see constructivism work in such a definitive manner, and in such an atypical setting really made me feel as though I had chosen well in how I taught these students.

Recommendations

If anyone were to execute a similar project to what I have done here, this is the advice I would give:

• Make sure that you’re comfortable spending many, many hours a day on the computer. Even during my student teaching, every single class was spent in front of a monitor, even if I was also behind a student’s workstation chair.

• Have access to the latest technology. This was a challenge for me because I have an older computer, so I spent a lot of time taking screenshots in a computer lab in order to do my packet pages for CS5.
• Revise your unit after you teach. While you should definitely know what you’re going to teach before you start, if you’re new to teaching graphic design (like I was), you’re not going to have any idea about how long particular students will need to learn the programs, how interested they are in assignments; or how fast they execute projects. By revising your unit, you can make adjustments as needed for duration or types of projects.

• Ask students what they want to learn. They often have wonderfully creative ideas and get excited when they see that their contributions are valued. Several of my Illustrator and InDesign lessons came from recommendations from my students!

• Ask students what you can do to help them learn better. This is where your most vocal students can really come in handy with suggestions for the entire class, while your more shy students, or students with disabilities might be more forthcoming about how you can help them individually.

• Keep up with the literature. Because the field of technology is constantly changing, you may not want to rely only on peer-reviewed studies and books; by the time they’re published, the technology they cover could already be outdated! Make use of articles and blogs online, and make sure they’re recent.

• Get to know your supervising teacher well. Conversely, if you have student teachers, get to know them well. Ms. Susan Burger was my greatest support in developing this unit, and her thirty years of experience as an art educator and graphic designer was invaluable.

• As I repeatedly stated in my packets: save often, save well. If you’re creating packets similar to the ones I made, you’re going to have hundreds of screen captures that you
need to keep track of, and dozens of files and folders. Constantly back up your work – I learned that the hard way.

The Future of Technology and Art Education

It seemed oddly appropriate that, as I was struggling to find a way to aptly conclude this project, I came across an exceedingly appropriate (and optimistic) column in the education section of the Huffington Post by one of my idols, director and founder of the George Lucas Educational Foundation, the eponymous George Lucas.

...much of our system of education is locked in a time capsule that dates back to the Industrial Revolution, when learning became an exercise in pumping as much information into kids as possible. At the end of this education assembly line comes a diploma - if the student can spit back the facts correctly. But in an era where technology can deliver most of the world's information on demand and knowledge is changing so rapidly, the model doesn't work. Why spend $150 on textbooks that students use for only 15 weeks with information that soon becomes obsolete?

What we need today and in the future are citizens who can wield the tools of technology to solve complex problems. Which means we need students who can:

- Find information
- Rigorously analyze the quality and accuracy of information
- Creatively and effectively use information to accomplish a goal

The good news is that in pockets across our country, schools and districts are unleashing contemporary technology - combined with classic methods of
inquiry-based learning that date back to Plato and Socrates - to transform the learning process into a rigorous and more relevant experience. (Lucas, 2011, para. 3-4)

While George Lucas may have more experience with a galaxy far, far, away than he does the field of education, he aptly calls for a more constructivist learning environment, effective use of technology in schools, and creative thinking. My project may be a graduate student’s applied project, but I believe that it is a good step toward promoting art, whether in a computer lab or a studio, as something that can fulfill all three of these requirements.
References


Exploring Careers
Through the Adobe Creative Suite
Unit By Darcy Hancock
Rationale:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation. Works created in this class will still use the same elements of art and principles of design used in a traditional art classroom; students will learn that digital art is an art form, not just a computer process. The skills learned within these programs and projects have many applications outside the art classroom, such as in journalism, graphic design, advertising/marketing, business, fashion design, photography, and many others.
Daily Outline – InDesign

Day 1
Introduction to InDesign – Basics
- Program basics (opening, saving, navigating)
- Menu bars and pull down menus
- Basic type and shape creation
- Begin 15-Point Assignment – Student Name for computer terminal

Day 2
Introduction to InDesign – Type
- Typography basics – fonts, typefaces, kerning, line spacing
- Manipulating type in InDesign
- Finish 15-Point Assignment – Student Name for computer terminal

Day 3
Typography – Creating effects
- Color
- Transparency
- Effects panels in InDesign
- Introduce 30-Point Group Project, begin finding reference images

Day 4-8
30-Point Group Project: Alternate Band/Artist/Musician Logos
- Use typography knowledge and skills up to this point
- Groups of 2
- Create 4 logos for a band/artist/musician – except the logo must look completely different from that band/artist/musician’s musical style

Day 9
Layout
- Layout basics
- Glyphs, character palette
- Introduce 50-Point Projects, demonstration, begin finding reference images, sketches

Day 10-19
50-Point Projects – students will be assigned these projects simultaneously, and work on them at their own pace. At the end, three pieces will be due – at least one typographic portrait and one lyric/quote, then free choice of either as a third piece.

Typographic Portrait
- Use typography and layout knowledge up to this point
- Students use a photograph as reference to create a portrait of themselves using only letters, numbers, and glyphs

Lyrics/Quote
- Use typography and layout knowledge up to this point
- Students use words and images (optional) in combination to create a typographic presentation of song lyrics or a quote
Day 20
Critique
- Each student sequentially lines up his or her two main projects
- Group projects will be placed together
- Positive critique of progress from first to last project

Daily Outline – Illustrator

Day 1
Introduction to Illustrator – Basics
- Program basics (opening, saving, navigating)
- Menu bars and pull down menus
- Pen tool and color basics
- Illustration basics

Day 2
Introduction to Illustrator – Vectors
- More complicated forms with pen tool
- Effects and shapes
- Live trace, live paint
- Introduce 30-Point Group Project, begin finding reference images

Day 3-10
Group Project: Company Logos
- Use typography and vector illustration skills up to this point
- Groups of 2
- Create three simple logos for three very different companies with a combination of type and imagery. Example: Balloon Company, library, lawyer. Each should look very different for its industry.

Day 11-19
- Introduce and begin new projects: patterns and tag/name
- Demonstration, reference images, sketches

50-Point Projects – students will be assigned these projects simultaneously, and work on them at their own pace. At the end, four pieces will be due – at least one pattern and one tag/symbol, then free choice of either as the third and fourth pieces.

Patterns
- Use illustration and color skills up to this point
- Create simple, repeated wallpaper or fabric patterns

Tag/Symbol
- Use illustration, typography, color, illustration, and effects skills
- Create graffiti “tag” of your personal name or symbol
Day 20
Critique
-Each student sequentially lines up his or her two main projects
-Group projects will be placed together
-Positive critique of progress from first to last project

Daily Outline - Photoshop

Day 1
Introduction to Photoshop - Basics
-Program basics (opening, saving, navigating)
-Menu bars and pull down menus
-Basic photo adjustments (brightness/contrast, hue/saturation, etc.)
-Introduce Magic Wand tool, Lasso tool
-Free-form program day

Day 2
Introduction to Photoshop – Clone Stamp
-Review basics and adjustments
-Introduce Clone Stamp tool
-Begin 15-Point Assignment – 5 photos fixed with the clone stamp

Day 3
Introduction to Photoshop – Extractions
-Review Clone Stamp
-Introduce Extraction tool
-Begin 10-Point Assignment – 2 Photo Extractions

Day 4
Bigger Manipulations - Transform
-Review selections
-Introduce Free Transform, Drop Shadow
-Introduce Liquefy
-Add drop shadows to extracted images, experiment with Free Transform
-5-Point Assignment – 2 Drop Shadows added to extracted pictures

Day 5
Bigger Manipulations - Lighting
-Review free transform and drop shadow
-Introduce burn and dodge tool
-Introduce layer properties, adjustment layers, and rendering
-Experiment with lighting on images
-Begin finding images for first major project

Day 6-14
Day To Night
-Introduce and begin project – taking a daytime picture and making it look like it was taken in the evening/night


- Use all previous knowledge, especially about adjustments, selections, adjustment layers, and lighting to create convincing dark space
- Begin finding images for next project

Mechanical Monster
- Introduce and begin project – use high-resolution images engines or car parts to create a face or mask
- Use all previous knowledge, especially about adjustments, selections, clone stamp, free transform, drop shadows, and adjustment layers
- Begin finding images for next project

Extra Project For Students Who Finish Early:
Image Collaboration
- Use various high-resolution images and collage them into a single convincing photo collaboration, or “hide” objects in photos, a la find the difference-style photos

Day 15-24
Currency
- Introduce and begin project – use various high-resolution images that relate to a country, and collage them to create convincing currency
- Use all previous knowledge to execute project

People
- Introduce and begin project – use non-retouched, high-resolution images of people, and use manipulations within Photoshop and additional collaged images to completely change their appearances

Extra Project For Students Who Finish Early:
Coins or Additional People
- Create coins to accompany your paper currency, or create more images of altered people

Day 27
Critique
- Each student sequentially lines up his or her four major projects
- Positive critique of progress from first to last project
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Introduction to InDesign
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

These lessons serve as an introduction to the most basic functions and tools in Adobe InDesign, skills taught are necessary to creating any kind of page layout or typography in InDesign. By creating type, kerning, and exploring type and font options, students will become acquainted with the most basic elements of InDesign, and gain the fundamentals for any Adobe program.

Day 1

Introduction to InDesign – Basics
- Program basics (opening, saving, navigating)
- Menu bars and pull down menus
- Basic type and shape creation
- Begin 15-Point Assignment – Student Name for computer terminal

Day 2

Introduction to InDesign – Type
- Typography basics – fonts, typefaces, kerning, line spacing
- Manipulating type in InDesign
- Finish 15-Point Assignment – Student Name for computer terminal

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-1. Students will explore the different careers available in the field of graphic communications and the design industry.

ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.

ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.
ACCT-IGD-11. Students will identify and apply typographic and design concepts.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-16. Students will identify and demonstrate page layout terminology and tools.

ACCT-IGD-17. Students will identify and understand the differences in page layout, raster based photo manipulation, and vector based graphic software applications.

ACCT-IGD-18. Students will explore the origins of type by examining the evolution of letterforms.

ACCT-IGD-19. Students will evaluate the function of typeface design in supporting legibility in a variety of media applications.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

**Understandings:**

- Type is created in InDesign using the type tool – clicking and dragging creates different sized boxes, and holding down shift will create squares
- Shapes can be created using the shape tool or the pen tool
- Type is changed by highlighting the text and using the type menu screens to change typeface, font, size, style, kerning, etc.
- Adjusting the kerning changes the amount of space between individual letters
- Adjusting the line spacing changes the amount of space between lines of text
- Using the “create outlines” function can make major changes to letterforms
- Importing documents can be done either by copy and pasting the content into an InDesign document, or by going to File, Import
- Letterforms have different names for different styles, including italic, bold, blackletter, script, etc.
- Serifs are embellishments on type, and an important anatomical piece of type, they determine whether a typeface is sans-serif or serifed

**Essential Questions:**

**Day 1**
- How do we create and change type in InDesign?
- What are the basic tools and navigation methods used in InDesign?

**Day 2**
- What does changing the kerning do to type? Line spacing?
- How do we make major changes to letterforms?
Other Questions:

-How do we import documents?
-What is the difference between a font and a typeface?
-What is the basic anatomy of a letter?

Students will need to know...

-Basic computer functions – opening/closing documents, navigation, etc.
-Some knowledge of basic word processing programs

Students will be able to...

-Make basic changes to type, including kerning, sizing, line spacing, color, fonts, and vector changes
-Identify different kinds of type
-Use the type tool to make different sizes of text fields and letters
-Make decisions about how much and how far to take type changes

Stage Two

Performance Tasks, Projects

Students will complete a mini-project that will demonstrate their working knowledge of these new skills.

-Create a nametag for your computer that has your name, properly kerned, with some sort of interesting type treatment, using interesting fonts, colors, or outright manipulating the type.

Other evidence, observations, work samples, student self-assessment:

-In-progress critiques

By what criteria will performances of understanding be judged?

Point-based checklists:

15 Point Assignment: Nametag for Computer

\[
\begin{array}{ll}
/5 & \text{Proper kerning and spacing has been applied to letters} \\
/5 & \text{Type has some kind of interesting treatment} \\
/5 & \text{Effort} \\
\end{array}
\]
Stage Three

Learning Activities:

Hook – Show students projects that have been created in InDesign, and discuss “good” versus “bad” typefaces.

Day 1 – Basic navigation of InDesign, anatomy of type. Introduce typefaces, fonts, size adjustments, kerning, line spacing. This is basically a navigation day; individually explain anything they discover, but don’t try to go over every aspect of the program – just creating type and documents. Introduce 15-Point assignment, but don’t give much time to do it, since new skills will be taught in next class.

Day 2 – Review type. Introduce type manipulation through create outlines, skewing, and warping. Go over type effects, if time allows. Finish 15-Point assignment.

Important Vocabulary and Definitions:

Typography: The art of creating, arranging, and setting type

Typeface: A particular design of type; Helvetica and Garamond are typefaces.

Font: A subcategory of type within a typeface; Garamond Italic, Bold, or Regular are all fonts within Garamond.

Serif: The embellishment or stroke on the ends of some typefaces.

Script: A typeface made to look like handwriting or cursive.

Italic: A specific font within a typeface with swashed, slanted letters used to emphasize certain words.

Display Text/Decorative Type: Type designed to enlarge well, or type that has a very specific look and is only suitable for a very specific context.

Body Text: Areas of text that are larger than a headline, caption, or subtitle; typically in paragraphs.

Headline: The title, and first thing you read in a layout. Typically at the top, or at least much larger than everything else.

Subhead: Either a longer, less important reiteration of the title under the headline, or a means of breaking up body text into sections.
Kerning: Adjusting the spacing between letters or characters in a word.

Leading: The amount of blank space between lines of print.

Skewing: In typography, stretching or squashing the actual structure of the letter forms.

Resources:

Class learning packet

Materials:

Computers
Shared drive storage
Example images – historic type examples, typography-heavy posters
Flash drive
Mouse
Adobe CS2 or later

Clean-up Procedures:

Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Type and Layout
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

These lessons continue on the basics taught in Introduction to InDesign, and require that students make design decisions both as a team and for their own projects. Students will demonstrate their type and layout knowledge by creating musician logos, a typographic portrait, and a type-centered layout of a quote or lyrics from a song.

Day 4-8
30-Point Group Project: Alternate Band/Artist/Musician Logos
- Use typography knowledge and skills up to this point
- Groups of 2
- Create 4 logos for a band/artist/musician – except the logo must look completely different from that band/artist/musician’s musical style

Day 9
Layout
- Layout basics
- Glyphs, character palette
- Introduce layers
- Introduce 50-Point Projects, demonstration, begin finding reference images, sketches

Day 10-19
50-Point Projects – students will be assigned these projects simultaneously, and work on them at their own pace. At the end, three pieces will be due – at least one typographic portrait and one lyric/quote, then free choice of either as a third piece.

Typographic Portrait
- Use typography and layout knowledge up to this point
- Students use a photograph as reference to create a portrait of themselves using only letters, numbers, and glyphs

Lyrics/Quote
- Use typography and layout knowledge up to this point
- Students use words and images (optional) in combination to create a typographic presentation of song lyrics or a quote
Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-1. Students will explore the different careers available in the field of graphic communications and the design industry.

ACCT-IGD-3. Students will examine the professional and ethical issues involved in the graphics and design industry.

ACCT-IGD-5. Students will demonstrate interpersonal and employability skills required for employability and job retention in the work place.

ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.

ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.

ACCT-IGD-11. Students will identify and apply typographic and design concepts.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-16. Students will identify and demonstrate page layout terminology and tools.

ACCT-IGD-17. Students will identify and understand the differences in page layout, raster based photo manipulation, and vector based graphic software applications.

ACCT-IGD-18. Students will explore the origins of type by examining the evolution of letterforms.

ACCT-IGD-19. Students will evaluate the function of typeface design in supporting legibility in a variety of media applications.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

Understandings:

- The way type is presented greatly affects the way we perceive things – something in a loopy script is seen as elegant, something in bold all-caps is angry, something curly and loopy is childish, etc.
- Mood can be established through the color, spacing, and placement of type
- Glyphs are characters or symbols that are not considered letters or numbers, but are still part of a typeface - @#$%^, etc.
- Space can be established through the size and thickness of letters — small, thin letters appear to be distant, while thick, large letters appear close.
- Layout can greatly alter the meaning of words by giving emphasis to some words and negating others through use of space.
- For expressive purposes, font choice is entirely personal.
- Shapes can help arrange space by giving some areas priority, or by helping the eye move around the page.

**Essential Questions:**

**Days 4-8**
- How does type affect the way we perceive things?
- How can we create different moods with type?
- How can color, both in type and surrounding it, affect type?

**Day 9**
- What are some “dos and don’ts” of layout?
- What are glyphs?

**Day 10-19**
- How can we use different fonts and sizes to create the illusion of depth?
- How can spacing and layout change meaning in a lyric or quote?
- What do our font choices say about us?
- How can shapes help us arrange space?

**Other Questions:**
- What makes some type treatments iconic?
- What can we use, besides letters, as type?

**Students will need to know...**
- Basic computer functions — opening/closing documents, navigation, etc.
- Some knowledge of basic word processing programs.
- How to make basic changes to type, including kerning, sizing, line spacing, color, fonts, and vector changes.
- Identify different kinds of type.
- Use the type tool to make different sizes of text fields and letters.
- Make decisions about how much and how far to take type changes.

**Students will be able to...**
- Use color and effects options in InDesign to enhance type and layout.
- Use basic layout principles to create a design.
- Explain how type effects our perceptions of things.
- Use color and shapes to enhance type.
- Use space to create flow within a layout, and meaning in type.
- Create the illusion of depth using type.
Stage Two

Performance Tasks, Projects

30-Point Group Project: Alternate Band/Artist/Musician Logos
- Use typography knowledge and skills up to this point
- Groups of 2
- Create 4 logos for a band/artist/musician – except the logo must look completely different from that band/artist/musician’s musical style

50-Point Projects – students will be assigned these projects simultaneously, and work on them at their own pace. At the end, three pieces will be due – at least one typographic portrait and one lyric/quote, then free choice of either as a third piece.

Typographic Portrait
- Use typography and layout knowledge up to this point
- Students use a photograph as reference to create a portrait of themselves using only letters, numbers, and glyphs

Lyrics/Quote
- Use typography and layout knowledge up to this point
- Students use words and images (optional) in combination to create a typographic presentation of song lyrics or a quote

Other evidence, observations, work samples, student self-assessment:

- In-progress critiques

By what criteria will performances of understanding be judged?
Rubrics: see attached

Stage Three

Learning Activities:

Hook – Students receive a random name and picture that is one half of a famous duo or pair. They must find their match, who will be their partner for the group projects. The following are examples; adjust to fit your students’ cultural knowledge.

Spongebob and Patrick (Spongebob Squarepants)
Woody and Buzz (Toy Story)
Han Solo and Chewbacca (Star Wars)
C-3PO and R2-D2 (Star Wars)
Mickey and Donald (Disney)
Bugs Bunny and Daffy Duck (Warner Brothers)
The Roadrunner and Wiley E. Coyote (Warner Brothers)
Sylvester and Tweety (Warner Brothers)
Shrek and Donkey (Shrek)
Harry Potter and Ron Weasley (Harry Potter)
Bert and Ernie (Sesame Street)
Kermit and Fozzie (Muppet Show)
Thing 1 and Thing 2 (Dr. Seuss)
Agent K and Agent J (Men in Black)
Batman and Robin (Batman)
Iron Man and War Machine (Iron Man)
Mario and Luigi (Nintendo)
Group of three: Powerpuff Girls or Harry/Ron/Hermione

Once students are in their pairs, the group project will be introduced. Example images of album art and band name type treatments will be shown by musical category – rock, rap, R&B, metal, country, pop, etc. Students will be asked to identify what about the type treatments identify artists as part of a particular group, and which ones stand out or are particularly iconic.

Day 4-8
Review essential components of InDesign, go over text effects if it did not get covered previously.

30-Point Group Project: Alternate Band/Artist/Musician Logos
- Use typography knowledge and skills up to this point
- Groups of 2
  - Create 4 logos for a band/artist/musician – except the logo must look completely different from that band/artist/musician’s musical style

Students must work in pairs to create four logos. They will assist and critique each other in the design process; these logos are not to be developed independently then mashed together at the end.

Day 9
Brief critique session of group projects, then introduce new material: layout

Layout
- Layout basics
- Glyphs, character palette
- Introduce layers
  - Introduce 50-Point Projects, demonstration, begin finding reference images, sketches

Day 10-19
Work on “big” projects.

50-Point Projects – students will be assigned these projects simultaneously, and work on them at their own pace. At the end, three pieces will be due – at least one typographic portrait and one lyric/quote, then free choice of either as a third piece.
Typographic Portrait
- Use typography and layout knowledge up to this point
- Students use a photograph as reference to create a portrait of themselves using only letters, numbers, and glyphs

Lyrics/Quote
- Use typography and layout knowledge up to this point
- Students use words and images (optional) in combination to create a typographic presentation of song lyrics or a quote

Important Vocabulary and Definitions:

**Typeface**: A particular design of type; Helvetica and Garamond are typefaces.

**Font**: A subcategory of type within a typeface; Garamond Italic, Bold, or Regular are all fonts within Garamond.

**Serif**: The embellishment or stroke on the ends of some typefaces.

**Script**: A typeface made to look like handwriting or cursive.

**Italic**: A specific font within a typeface with swashed, slanted letters used to emphasize certain words.

**Display Text/Decorative Type**: Type designed to enlarge well, or type that has a very specific look and is only suitable for a very specific context.

**Body Text**: Areas of text that are larger than a headline, caption, or subtitle; typically in paragraphs.

**Headline**: The title, and first thing you read in a layout. Typically at the top, or at least much larger than everything else.

**Subhead**: Either a longer, less important reiteration of the title under the headline, or a means of breaking up body text into sections.

**Kerning**: Adjusting the spacing between letters or characters in a word.

**Leading**: The amount of blank space between lines of print.

**Skewing**: In typography, stretching or squashing the actual structure of the letter forms.
Tint: Adding white to a color to make it lighter; will coordinate with the original, white-less color.

Shade: Adding black to a color to make it darker; will coordinate with the original, black-less color.

Hue: Adding one color to another color to make a blend of the two colors.

Margin: The edge or border of the page, typically blank or free of features.

Gutter: The amount of space between two columns of text; the blank area in the middle of this page is the gutter.

Widow: A single, isolated word at the end of a block of text. It's a "widow" because it has its whole "life" (the text) behind it, "in the past."

Orphan: A single, isolated word at the beginning of a block of text. It's an "orphan" because it has its whole "life" (the text) ahead of it, and it's all alone.

Resources:

Class learning packet
Example images of band logos and type treatments

Materials:

Computers
Shared drive storage
Example images of band logos and type treatments
Flash drive
Mouse
Adobe CS2 or later

Clean-up Procedures:

Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Critique: InDesign
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

Students will print (if available) and hang up their nametag, typographic portrait, and lyrics/quote, and participate in a class-wide critique of all of the projects. Group projects will be hung together, and the pairs will be critiqued as a group, and not for individual efforts. If printing methods are not available, then a projector will be used, and the images turned into the shared storage drive will be critiqued one at a time.

Day 20

Critique
- Each student sequentially lines up his or her two main projects
- Group projects will be placed together
- Positive critique of progress from first to last project

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-3. Students will examine the professional and ethical issues involved in the graphics and design industry.

ACCT-IGD-5. Students will demonstrate interpersonal and employability skills required for employability and job retention in the work place.

ACCT-IGD-9. Students will recognize and utilize paper and assorted substrates for commercial output.

ACCT-IGD-10. Students will generate and manipulate various graphic imaging processes.

ACCT-IGD-12. Students will analyze pre-press and output operations.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.
ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-20. Students will explore the different print processes.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

Understandings:

- Critiquing is an essential part of the graphic and commercial design process
- By viewing each others' art, we can draw inspiration and help teach each other
- We can improve our own art by re-adjusting parts of the image, taking into account what we heard during the critique
- A printed digital image is often smaller, more pixilated, darker, and less colorful than it appears on the screen. It is essential to work at least 300 dpi, keep your image bright, and hues strong.
- Glossy paper takes ink the best, and an inkjet printer delivers the best results for printing photographs.
- Using pantone color swatches in InDesign helps printed color stay true to how it appears as screen color.

Essential Questions:

- What can we learn about our own art from viewing everyone else's art?
- How can critiques help us improve our own art?
- Basic critiquing questions:
  - Which image is most intriguing? What made you notice it first?
  - Which piece looks like it was the most difficult, or took the longest?
  - Which image is your favorite, and why?
  - Any additional comments, including if they wanted to change anything, or pointing out particular technical expertise/flaws.
- How can we improve our art?
- What issues are there in printing a digital image?
- What kind of paper works best for printing photographs? Printer?

Other Questions:

- What can we help each other improve as designers through critique?

Students will need to know...

- All of the processes involved in creating these projects
- Professional typography, layout examples to use as comparison
- Basic elements of art, principles of design

Students will be able to...

- Participate in and benefit from a constructive critique session
- Make changes to their own projects as a result of the critique
- Learn about the printing process, and the many obstacles faced in printing a digital image – including darkening, size issues, screen calibration, etc.

**Stage Two**

**Performance Tasks, Projects**

**Critique**
- Each student sequentially lines up his or her two main projects
- Group projects will be placed together
- Positive critique of progress from first to last project

- Side-project, if materials are available – printing of class work

**Other evidence, observations, work samples, student self-assessment:**

- Group critique

**By what criteria will performances of understanding be judged?**

- Participation in critique will be tallied by teacher – each student must at least contribute their assigned critique, and additional points will be given if they participate in critique of additional images.

**Stage Three**

**Learning Activities:**

1. Beginning of class – all students randomly draw a name of another student.
2. Using printouts or the projection screen, each student's body of work is displayed in front of the whole class, one at a time, alphabetically.
3. The student who drew the name of the student whose art is displayed discusses the art, answering the following:
   - Which image is most intriguing? What made you notice it first?
   - Which piece looks like it was the most difficult, or took the longest?
   - Which image is your favorite, and why?
   - Any additional comments, including if they wanted to change anything, or pointing out particular technical expertise/flaws.

**Important Vocabulary and Definitions:**

**Critique** – a session of mutual discussion of images, with both positive and negative statements – negative criticism should only come accompanied with constructive suggestions, and positive comments should be specific, and not just a general "I like it" statement.
DPI — "dots per inch," refers to the resolution of an image. 72 dpi is the typical resolution for web art, and 300 is usually what is necessary for printing.

Glossy — paper that is covered with a kaolin or calcium carbonate coating to give a smooth or shiny appearance. Typically used for photo paper, and in magazines. Comes in various "pounds," indicating the thickness of the paper.

Matte — paper that does not have any kind of coating. Comes in various "pounds," indicating the thickness of the paper, and in many different surfaces that can greatly change the way the paper takes on ink.

Inkjet printer — a printer that uses cartridges of ink and a printer head to press the ink onto paper

Laser printer — a printer that uses xerography — a laser technique — to transfer image data to the paper

Resources:

Class learning packet

Materials:

Computers
Shared drive storage
Flash drive
Mouse
Adobe CS2 or later

If available:
Inkjet printer
Glossy photo paper

Clean-up Procedures:

Save document to appropriate location on shared drive
Back up on flash drive
Last class — turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Introduction to Illustrator
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

These lessons serve as an introduction to the most basic functions and tools in Adobe Illustrator, skills taught are necessary to creating any kind of pen tracing or vector illustration in Illustrator. Students will explore the world of vector imaging, and create their own basic abstract illustrations as well as use program functions to create dynamic image and type traces and coloring changes.

Day 1
Introduction to Illustrator – Basics
- Program basics (opening, saving, navigating)
- Menu bars and pull down menus
- Pen tool and color basics
- Illustration basics

Day 2
Introduction to Illustrator – Vectors
- More complicated forms with pen tool
- Effects and shapes
- Live trace, live paint
- Introduce 30-Point Group Project, begin finding reference images

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-1. Students will explore the different careers available in the field of graphic communications and the design industry.

ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.

ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.
ACCT-IGD-11. Students will identify and apply typographic and design concepts.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-17. Students will identify and understand the differences in page layout, raster based photo manipulation, and vector based graphic software applications.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

**Understandings:**

-Vector graphics are images made with vectors: a type of graphical representation using straight lines to construct the outlines of objects.
-The most basic tool of Illustrator is the pen tool. Using the pen tool, you create paths, which you can either leave open, and stroke them with the brush tool, or you can close, creating shapes.
-Effects can be achieved with the brush tools, the gradient tool, and the blend tool.
-Live paint is a process that finds the closed shapes created by a pen tool, and allows you to use a paint bucket tool that is linked to the color palette to easily color in shapes.
-The different file formats, and their advantages/disadvantages are as follows:

  **.JPEG:** A file format used for photographs or images that have gradients. JPEGs do not support transparency, unlike GIF and PNG, and cannot be animated, unlike GIF.

  **.GIF:** A file format used in web graphics best for images that are made of solid colors, like logos. GIFs support transparency and they can be animated. GIFs are also considered a lossless format—meaning they do not suffer compression artifacts.

  **.PDF:** Portable Document Format. This file type is often used to send print materials to a print shop.

  **.PNG:** Portable Network Graphics are the ideal web graphic file types. They are completely lossless and they support alpha transparency.

**Essential Questions:**

**Day 1**
-What are vector graphics, and what makes them special?
-What are the basic tools and navigation methods used in Illustrator?
-What are the different file formats we can use to save in Illustrator, and what are their advantages/disadvantages?
Day 2
-How can we create different effects with the pen tool and brushes?
-What is Live Paint, and how does it work?

Other Questions:
-How do we import documents?
-How do we save vector graphics to retain their properties?

Students will need to know...

- Basic computer functions – opening/closing documents, navigation, etc.
- Some knowledge of manual tracing

Students will be able to...

- Make basic vector graphics using the pen tool
- Use color swatches, live trace, and live paint to recolor vector images

Stage Two

Performance Tasks, Projects

Students will complete a worksheet that tests pen tool skills (see attached)

Other evidence, observations, work samples, student self-assessment:

- In-progress assessment and help with worksheet

By what criteria will performances of understanding be judged?

Point-based checklists:

15 Point Assignment: The Pen Tool (Far Mightier Than the Sword Tool)

/5  The pen tool has been used to neatly trace the lines
/5  The shape tool has been used to trace the basic shapes
/5  An attempt has been made to trace the more complicated shapes

Stage Three

Learning Activities:

Hook – Show students vector illustrations, and explain the concept of vectors as a means of creating line art illustration.
Day 1 – Basic navigation of Illustrator, and introduction to the pen tool. Show panels, and live trace to those interested. This is basically a navigation day; individually explain anything they discover, but don’t try to go over every aspect of the program – just using the pen tool and color. Introduce 15-Point assignment, but don’t give much time to do it, since new skills will be taught in next class. Toward end of class – go over file format save types.

Day 2 – Review navigation. More specific instructions on pen tool. Go over brushes, if time allows. Finish 15-Point assignment. Introduce group project, discuss logos and examples of logos.

Important Vocabulary and Definitions:

Vector: A type of graphical representation using straight lines to construct the outlines of objects.

Anchor Point: Points connecting the segments of a path. Anchor points on curved paths have direction lines and points associated with them which determine the shape of the segments adjoining the anchor points.

Closed Path: A path with its first and last anchor points connected.

Open Path: A path with its first and last anchor points unconnected.

.JPEG: A file format used for photographs or images that have gradients. JPEGs do not support transparency, unlike GIF and PNG, and cannot be animated, unlike GIF.

.GIF: A file format used in web graphics best for images that are made of solid colors, like logos. GIFs support transparency and they can be animated. GIFs are also considered a lossless format—meaning they do not suffer compression artifacts.

.PDF: Portable Document Format. This file type is often used to send print materials to a print shop.

.PNG: Portable Network Graphics are the ideal web graphic file types. They are completely lossless and they support alpha transparency.

Resources:

Class learning packet
http://avmctraining.blogspot.com/2010/03/adobe-illustrator-glossary.html
Materials:

Computers
Shared drive storage
Example images – historic type examples, typography-heavy posters
Flash drive
Mouse
Adobe CS2 or later

Clean-up Procedures:

Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Vector Illustrations
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

These lessons continue on the basics taught in Introduction to Illustrator, and require that students make design decisions both as a team and for their own projects. Students will demonstrate their program and illustration knowledge by creating a company logo, an abstract logo, and a graffiti tag.

Day 3-10

Group Project: Company Logos
- Use typography and vector illustration skills up to this point
- Groups of 2
- Create three simple logos for three very different companies with a combination of type and imagery. Example: Balloon Company, library, lawyer. Each should look very different for its industry.

Day 11-19

- Introduce and begin new projects: patterns and tag/name
- Demonstration, reference images, sketches

50-Point Projects — students will be assigned these projects simultaneously, and work on them at their own pace. At the end, four pieces will be due — at least one pattern and one tag/symbol, then free choice of either as the third and fourth pieces.

Patterns
- Use illustration and color skills up to this point
- Create simple, repeated wallpaper or fabric patterns

Tag/Symbol
- Use illustration, typography, color, illustration, and effects skills
- Create graffiti "tag" of your personal name or symbol

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design
ACCT-IGD-1. Students will explore the different careers available in the field of graphic communications and the design industry.

ACCT-IGD-3. Students will examine the professional and ethical issues involved in the graphics and design industry.

ACCT-IGD-5. Students will demonstrate interpersonal and employability skills required for employability and job retention in the work place.

ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.

ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.

ACCT-IGD-11. Students will identify and apply typographic and design concepts.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-17. Students will identify and understand the differences in page layout, raster based photo manipulation, and vector based graphic software applications.

ACCT-IGD-18. Students will explore the origins of type by examining the evolution of letterforms.

ACCT-IGD-19. Students will evaluate the function of typeface design in supporting legibility in a variety of media applications.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

**Understandings:**
- A logo is a symbol or design that a company uses to identify itself, and it typically accompanies the company name
- A logo is simple, and does not have too many extraneous elements
- Different type treatments affect the way we perceive the words they spell out – you wouldn’t advertise a daycare center with Helvetica, or a lawyer with Cooper
- The many brushes in Illustrator can be used to create patterns and effects. Changing the size or type of stroke varies the effect greatly
- A gradient is the fading of one color to another
- The blending tool creates a gradient between one color shape and another
- Caution should be used with the many brushes and effects in Illustrator – you can overload a design very quickly by going overboard
- Simple patterns have a great many uses, including furniture design, fabric and fashion designs, backgrounds for websites, computer desktops, etc.
Essential Questions:

Days 3-10:
What is a logo?
What is the difference between logo design and poster design?
How can different type treatments effect how we perceive logos?

Day 11-19
How can we use the brush tools to create patterns and effects?
What is a gradient?
What does the blending tool do?

Students will need to know...

- Basic computer functions – opening/closing documents, navigation, etc.
- How to make basic changes to type, including kerning, sizing, line spacing, color, fonts, and vector changes
- Make decisions about how much and how far to take type changes

Students will be able to...

- Use color and effects options in Illustrator to enhance type and graphics
- Use basic layout principles to create a design
- Use color and shapes to enhance type
- Use brushes to create different textures and patterns
- Use effects to create interesting and dynamic patterns and shapes

Stage Two

Performance Tasks, Projects

Group Project: Company Logos
  - Use typography and vector illustration skills up to this point
  - Groups of 2
  - Create three simple logos for three very different companies with a combination of type and imagery. Example: Balloon Company, library, lawyer. Each should look very different for its industry.

50-Point Projects – students will be assigned these projects simultaneously, and work on them at their own pace. At the end, four pieces will be due – at least one pattern and one tag/symbol, then free choice of either as the third and fourth pieces.

Patterns
  - Use illustration and color skills up to this point
  - Create simple, repeated wallpaper or fabric patterns

Tag/Symbol
  - Use illustration, typography, color, illustration, and effects skills
-Create graffiti "tag" of your personal name or symbol

Other evidence, observations, work samples, student self-assessment:

- In-progress critiques

By what criteria will performances of understanding be judged?

Rubrics: see attached

Stage Three

Learning Activities:

Hook – Students will get in the same groups they were in for the previous group project.

Once students are in their pairs, the group project and the individual projects will be introduced. Examples of company logos, patterns, and graffiti will be shown.

Day 4-8

Review essential components of Illustrator, and go over more effects (such as the Photoshop effects available in certain filters).

Group Project: Company Logos

- Use typography and vector illustration skills up to this point
- Groups of 2
- Create three simple logos for three very different companies with a combination of type and imagery. Example: Balloon Company, library, lawyer. Each should look very different for its industry.

Students must work in pairs to create three logos. They will assist and critique each other in the design process; these logos are not to be developed independently then mashed together at the end. The logo should consist of a type treatment for the company name, and a logo or symbol that accompanies the type in some way. Three logos will be created, and each logo should represent a very different industry or type of company/business.

Day 11-19

Introduce and begin new projects: patterns and tag/name
Demonstration, reference images, sketches

50-Point Projects – students will be assigned these projects simultaneously, and work on them at their own pace. At the end, four pieces will be due – at least one pattern and one tag/symbol, then free choice of either as the third and fourth pieces.

Patterns

- Use illustration and color skills up to this point
- Create simple, repeated wallpaper or fabric patterns

**Tag/Symbol**
- Use illustration, typography, color, illustration, and effects skills
- Create graffiti "tag" of your personal name or symbol

**Important Vocabulary and Definitions:**

**Vector:** A type of graphical representation using straight lines to construct the outlines of objects.

**Logo:** A company, partnership or corporate creation (design) that denotes a unique entity. A possible combination of letters and art work to create a "sole" entity symbol of that specific unit.

**Raster:** A raster or bitmap image is made out of pixels. Raster images are typically photos, but they can also be illustrations that have been turned from vectors into pixels.

**.JPEG:** A file format used for photographs or images that have gradients. JPEGs do not support transparency, unlike GIF and PNG, and cannot be animated, unlike GIF.

**.GIF:** A file format used in web graphics best for images that are made of solid colors, like logos. GIFs support transparency and they can be animated. GIFs are also considered a lossless format—meaning they do not suffer compression artifacts.

**.PDF:** Portable Document Format. This file type is often used to send print materials to a print shop.

**.PNG:** Portable Network Graphics are the ideal web graphic file types. They are completely lossless and they support alpha transparency.

**Compression:** The process of an algorithm making file sizes smaller by combining similar data. Most of the time this is a good thing, but it can also cause severe loss of quality, especially in regards to images.

**Lossless:** The opposite of lossy, lossless describes file types where there is no image data deleted or erased when that data is stored. Image formats like GIF, PNG and TIFF (without compression) are considered lossless.

**Lossy:** Describes file types where compression is applied and image data is deleted or erased in order to decrease the files size. JPG is a file format that is lossy.
**Gradient:** A fade from one color to another. There are many shapes a gradient can take, but generally it is either linear (straight) or radial (round, where it fades from the center outwards).

**Anchor Point:** Points connecting the segments of a path. Anchor points on curved paths have direction lines and points associated with them which determine the shape of the segments adjoining the anchor points.

**Closed Path:** A path with its first and last anchor points connected.

**Open Path:** A path with its first and last anchor points unconnected.

**Resources:**

- Class learning packet
- Example images of band logos and type treatments

**Materials:**

- Computers
- Shared drive storage
- Example images of band logos and type treatments
- Flash drive
- Mouse
- Adobe CS2 or later

**Clean-up Procedures:**

- Save document to appropriate location on shared drive
- Back up on flash drive
- Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Critique: Illustrator
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

Students will print (if available) and hang up their abstract pattern and graffiti tag, and participate in a class-wide critique of the projects. Group projects will be hung together, and the pairs will be critiqued as a group, and not for individual efforts. If printing methods are not available, then a projector will be used, and the images turned into the shared storage drive will be critiqued one at a time.

Day 20

Critique
- Each student sequentially lines up his or her two main projects
- Group projects will be placed together
- Positive critique of progress from first to last project

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-3. Students will examine the professional and ethical issues involved in the graphics and design industry.

ACCT-IGD-5. Students will demonstrate interpersonal and employability skills required for employability and job retention in the work place.

ACCT-IGD-9. Students will recognize and utilize paper and assorted substrates for commercial output.

ACCT-IGD-10. Students will generate and manipulate various graphic imaging processes.

ACCT-IGD-12. Students will analyze pre-press and output operations.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.
ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-20. Students will explore the different print processes.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

Understandings:

-Critiquing is an essential part of the graphic and commercial design process
-By viewing each others' art, we can draw inspiration and help teach each other
-We can improve our own art by re-adjusting parts of the image, taking into account what we heard during the critique
-A printed digital image is often smaller, more pixilated, darker, and less colorful than it appears on the screen. It is essential to work at least 300 dpi, keep your image bright, and hues strong.
-Glossy paper takes ink the best, and an inkjet printer delivers the best results for printing photographs.
-Using pantone color swatches in Illustrator helps printed color stay true to how it appears as screen color.

Essential Questions:

-What can we learn about our own art from viewing everyone else's art?
-How can critiques help us improve our own art?
-Basic critiquing questions:
  -Which image is most intriguing? What made you notice it first?
  -Which piece looks like it was the most difficult, or took the longest?
  -Which image is your favorite, and why?
  -Any additional comments, including if they wanted to change anything, or pointing out particular technical expertise/flaws.
-How can we improve our art?
-What issues are there in printing a digital image?
-What kind of paper works best for printing photographs? Printer?

Other Questions:

-What can we help each other improve as designers through critique?

Students will need to know...

-All of the processes involved in creating these projects
-Professional logos, fabric patterns, and graffiti tags to use as comparison
-Basic elements of art, principles of design

Students will be able to...

-Participate in and benefit from a constructive critique session
- Make changes to their own projects as a result of the critique
- Learn about the printing process, and the many obstacles faced in printing a digital image – including darkening, size issues, screen calibration, etc.

Stage Two

Performance Tasks, Projects

Critique
- Each student sequentially lines up his or her two main projects
- Group projects will be placed together
- Positive critique of progress from first to last project

- Side-project, if materials are available – printing of class work

Other evidence, observations, work samples, student self-assessment:

- Group critique

By what criteria will performances of understanding be judged?

- Participation in critique will be tallied by teacher – each student must at least contribute their assigned critique, and additional points will be given if they participate in critique of additional images.

Stage Three

Learning Activities:

1. Beginning of class – all students randomly draw a name of another student.
2. Using printouts or the projection screen, each student’s body of work is displayed in front of the whole class, one at a time, alphabetically.
3. The student who drew the name of the student whose art is displayed discusses the art, answering the following:
   - Which image is most intriguing? What made you notice it first?
   - Which image is your favorite, and why?
   - Any additional comments, including if they wanted to change anything, or pointing out particular technical expertise/flaws.

Important Vocabulary and Definitions:

Critique – a session of mutual discussion of images, with both positive and negative statements – negative criticism should only come accompanied with constructive suggestions, and positive comments should be specific, and not just a general “I like it” statement

DPI – “dots per inch,” refers to the resolution of an image. 72 dpi is the typical resolution for web art, and 300 is usually what is necessary for printing.
Glossy – paper that is covered with a kaolin or calcium carbonate coating to give a smooth or shiny appearance. Typically used for photo paper, and in magazines. Comes in various “pounds,” indicating the thickness of the paper.

Matte – paper that does not have any kind of coating. Comes in various “pounds,” indicating the thickness of the paper, and in many different surfaces that can greatly change the way the paper takes on ink.

Inkjet printer – a printer that uses cartridges of ink and a printer head to press the ink onto paper

Laser printer - a printer that uses xerography – a laser technique – to transfer image data to the paper

Resources:

Class learning packet

Materials:

Computers
Shared drive storage
Flash drive
Mouse
Adobe CS2 or later

If available:
Inkjet printer
Glossy photo paper

Clean-up Procedures:

Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Introduction to Photoshop
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

These lessons serve as an introduction to the most basic functions and tools in Adobe Photoshop, skills taught are necessary to creating any kind of image in Photoshop. By restoring old photographs, removing components from images, and extracting objects from images, students find the practical use of even the simplest processes and tools in Photoshop.

Day 1
Introduction to Photoshop - Basics
- Program basics (opening, saving, navigating)
- Menu bars and pull down menus
- Basic photo adjustments (brightness/contrast, hue/saturation, etc.)
- Introduce Magic Wand tool, Lasso tool, brush, eraser

Day 2
Introduction to Photoshop – Clone Stamp
- Review basics and adjustments
- Introduce Clone Stamp tool
- Begin 15-Point Assignment – 5 photos fixed with the clone stamp

Day 3-4
Introduction to Photoshop – Extractions
- Review Clone Stamp
- Introduce Extraction tool
- Begin 10-Point Assignment – 2 Yearbook Photo Extractions

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design
ACCT-IGD-1. Students will explore the different careers available in the field of graphic communications and the design industry.

ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.

ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

Understandings:

- Basic improvements can be made with brightness/contrast, hue/saturation, exposure, and several other options under Image, Adjustments
- Changing the contrast of a picture darkens the shadows and brightens highlights
- Changing the brightness of a picture increases the amount of overall white
- Changing the hue changes the colors in a photo
- Changing the saturation makes colors in a photo more or less intense
- You can select pieces of a photo with the marquee tool, the lasso and polygonal lasso tool, the magic wand tool, and Extract. Refine Edges can be used as well.
- The clone stamp tool selects one area of a photo, then paints another area with the selected area
- The clone stamp is used to cover up something in a photo
- You can make a photo look like you didn't use the clone stamp by selecting from many different areas to paint, using a soft brush, and following the shades of a photograph in the cloned area
- You can remove part of an image from a background by using the Extract tool
- When you paste an extracted object in another image, you should do image adjustments on it so that it looks like it belongs in the other image

Essential Questions:

Day 1
- How do we make basic improvements to photos?
- What does changing the contrast do? Brightness? Hue? Saturation?
- What are the various ways to select part of a picture, and how do you use them?

Day 2
- What is the clone stamp tool?
- What can you do with the clone stamp tool?
- How can you make a photo look like you didn't use the clone stamp tool?
Days 3-4
- How do you remove a part of an image from a background?
- How can you make a placed object look like it belongs in another environment?

Other Questions:
- What is exposure? How can you tell if an image is over/underexposed?
- What are lens filters? What effect do lenses have on photos?
- Why do you have to be careful about how far you adjust photos?

Students will need to know...
- Basic computer functions – opening/closing documents, navigation, etc.
- Some knowledge of basic photo editing (i.e. computer default photo resizing/cropping programs, Paint, etc.)

Students will be able to...
- Make basic changes to photographs, including brightness/contrast adjustments, hue/saturation adjustments, and general exposure issues
- Use the clone stamp to eliminate unwanted features from photographs
- Use the extraction tool and the lasso tool to extract objects from photographs for use in other images, and adjust them properly
- Make decisions about how much and how far to take photo adjustments

Stage Two
Performance Tasks, Projects

Students will complete two mini-projects that will demonstrate their working knowledge of these new skills.
- Fix 5 photos with the clone stamp – two getting rid of people or junk, two restoring old photographs, then one free choice
- Extract something from 2 photographs

Other evidence, observations, work samples, student self-assessment:
- In-progress critiques

By what criteria will performances of understanding be judged?

Point-based checklists:

15 Point Assignment: 5 Photos Fixed With the Clone Stamp
At least 2 removals, 2 restores, 1 free choice

/5 Clean, well-disguised clone stamping
/5 All flaws/people/technology/junk is removed
/5 Effort
10 Point Assignment: 2 Photo Extractions
At least 2 objects fully extracted from their backgrounds

/5 Fully extracted, with clean edges not removing parts of the image
/5 Effort

Extra credit - 1 point extra for doing yearbook photo extractions

Stage Three

Learning Activities:

Hook – Show students projects that have been created in Photoshop, and break down the simple processes that made these interesting images.

Day 1 – Basic navigation of Photoshop, introduce levers and adjustments. Introduce selections – magic wand tool and lasso tool. Give students “adjustments” folder, tell them to fix photos and generally orient them to Photoshop. Offer to help them with anything they discover, but don’t try to go over every aspect of the program – just adjustments and selections.

Day 2 – Review adjustments and selections. Introduce clone stamp, brief demonstration of both restoring an old photo and removing components from a regular photo. Give students “Clone Stamp” folder, tell them about first 15-point assignment.

15 Point Assignment: 5 Photos Fixed With the Clone Stamp
At least 2 removals, 2 restores, 1 free choice

/5 Clean, well-disguised clone stamping
/5 All flaws/people/technology/junk is removed
/5 Effort

Days 3-4 – Review all previous material. Introduce extraction tool, brief demonstration of extracting an object from a background. Give students “Extractions” folder, tell them about 10-point assignment. They will have the rest of this class and the next class to finish both the clone stamp project and the extraction project.

10 Point Assignment: 2 Photo Extractions
At least 2 objects fully extracted from their backgrounds

/5 Fully extracted, with clean edges not removing parts of the image
/5 Effort

Extra credit - 1 point extra for doing yearbook photo extractions
Important Vocabulary and Definitions:

**Brightness** – the relative lightness of an image. Adding too much will make a photo appear overexposed and bleached, having too little obscures details and makes the photo look dark.

**Contrast** - the *chiaroscuro*, or light/dark balance of an image. High contrast images have sharp shadows and strong highlights, low contrast images look relatively gray. Adjusting the contrast too high might make the image pixillated or too dark or bright; adjusting the contrast too low makes the image gray and blurry.

**Hue** - the relative color of an image. Adjusting the hue can help some poorly exposed photos from looking too green/yellow, or can make a highly abstract and totally different color palette.

**Saturation** - the amount and intensity of color in an image. High saturation makes an image look surreal and *Wizard of Oz*-esque (with the cost of pixilation), low saturation is close to (or is) black and white.

**Pixilation/Noise** - Enlarging an image too much or sharpening an image too much creates pixilation or noise - when you can see the individual, chunky pixels of an image; often much brighter and stranger colors than what you wanted.

**Lasso Tool** – A selection tool where you manually draw a border around an area in order to select it

**Magic Wand Tool** – A tool that selects all similar pixels to the area clicked on

**Marching Ants** - the dotted line around a selected layer or object, so named for looking like a long row of moving ants.

**Contiguous** - sharing a common border, or touching - having this selected means it (the magic wand tool) will only select pixels of a same color that are touching each other. Deselecting this will select *all* pixels of a similar color.

**Soft Brush** - A brush style used as both a paint brush and an eraser, it fully paints or erases only in the middle, then gradually fades out toward the edges. Generally what you use for trying to make something blend, i.e. clone stamp, or if you’re mixing two images together.
**Hard Brush** - A brush style used as both a paint brush and an eraser, it fully paints or erases the entire area it covers. Generally what you use if you want to make a hard edge or line, i.e. extracting an image, or drawing.

**Resources:**

Class learning packet

**Materials:**

Computers
Shared drive storage
Example images – old photographs, photographs with people/objects that can be removed, photographs of people, especially in front of ugly backgrounds
Flash drive
Mouse
Adobe CS2 or later

**Clean-up Procedures:**

Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Bigger Manipulations
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

Using the basic skills taught previously, students will learn some of the more advanced functions within Adobe Photoshop, particularly dealing with lighting and skewing images. By creating drop shadows, students put both of these skills into play.

Day 4
Bigger Manipulations - Transform
- Review selections
- Introduce Free Transform, Drop Shadow
- Introduce Liquify
- Add drop shadows to extracted images, experiment with Free Transform
- 5-Point Assignment – 2 Drop Shadows added to yearbook pictures

Day 5
Bigger Manipulations - Lighting
- Review free transform and drop shadow
- Introduce burn and dodge tool
- Introduce layer properties, adjustment layers, and rendering
- Experiment with lighting on images
- Begin finding images for first major project

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-1. Students will explore the different careers available in the field of graphic communications and the design industry.
ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.
ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.
ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

Understandings:

-The transform controls are scale, warp, skew, perspective, and a few others that allow you to make major, twisting changes to images
-If you have something selected with a marquee, you can run transform functions on the selected area alone
-The liquefy tool is located under filter; it loads a mesh of the whole image, and allows you to "sculpt" the picture by pulling, pushing, and twisting the image
-To create a drop shadow, you select the object you want the shadow from, copy it, select the copied image, paint it black, use transform tools to flip it under the original object and warp it to proper perspective, change opacity of the shadow layer enough to be convincing, then Filter, Blur, Gaussian blur to clean the edges
-The burn and dodge tools were actual darkroom photo techniques that serve the same function in Photoshop. Burn makes the brushed area darker, simulating when you would expose part of a photo for longer than the others. Dodge makes the brushed area lighter, simulating when you would cover part of a photo during the exposure process.
-Layer properties change the way that pixels react to the layers around them. Multiply allows for a type of transparency, screen makes that layer highlight parts of the layers below it, color burn pulls colors out, etc.
-Major lighting changes can be made with Filter, Render, Lighting Effects. This opens up a separate menu that allows you to simulate spotlights and directional light. Under Render is also lens flare, an infamously tacky Photoshop technique

Essential Questions:
-What are the transform controls? What can you do with them?
-How can you transform pieces of something?
-What is the liquefy tool? What can you do with it?
-How do you create a convincing drop shadow?
-What are the burn and dodge tools? How were they originally used?
-What are layer properties, and how can you use them?
-How can you create major lighting changes?

Other Questions:
-How does brush opacity help with burning and dodging?
-What do the different layer properties do?
-What are the advantages of warp over liquefy, and vice versa?

Students will need to know...

-Basic computer functions – opening/closing documents, navigation, etc.
-Some knowledge of basic photo editing (i.e. computer default photo resizing/cropping programs, Paint, etc.)
-Basic Photoshop navigating, cloning, extraction, and adjustments, as covered in previous lesson

Students will be able to...

- Make lighting changes to photographs
- Create drop shadows
- Use layer properties and rendering to create effects

Stage Two

Performance Tasks, Projects

Students will complete a mini-project that will demonstrate their working knowledge of these new skills.
- Extract at least two images, and place them in new images.
- Create two drop shadows in order to make the inserted images look like they belong in the new photograph
- Use the burn/dodge tool to further enhance the inserted image

Other evidence, observations, work samples, student self-assessment:

- In-progress critiques

By what criteria will performances of understanding be judged?

Point-based checklist:

10 Point Assignment: 2 Drop Shadows

At least 2 objects fully extracted from their backgrounds and put in a new image, with drop shadows/lighting changes to match

/5 Drop shadow is clean and believable
/5 Other lighting changes have been made

Stage Three

Learning Activities:

Hook: Show students images where objects have been convincingly inserted, and lighting changes have been made. Demonstration of warp tool, liquify tool – particularly for slimming down people in photos, making noses smaller, eyes bigger, etc.
Day 4

**Bigger Manipulations - Transform**
- Review selections
- Introduce Free Transform, Drop Shadow
- Introduce Liquify
- Add drop shadows to extracted images, experiment with Free Transform
- 5-Point Assignment – 2 Drop Shadows added to yearbook pictures

Day 5

**Bigger Manipulations - Lighting**
- Review free transform and drop shadow
- Introduce burn and dodge tool
- Introduce layer properties, adjustment layers, and rendering
- Experiment with lighting on images
- Begin finding images for first major project

**Important Vocabulary and Definitions:**

**Transform** - Photoshop tool that allows you to make major shape changes to an image or a selected area of an image. Includes warp, distort, perspective, scale, skew, etc.

**Liquify** – Photoshop filter that allows the user to move around parts of an image by loading a mesh of the image, and then allowing the user to push, pull, and twist the image with a brush

**Burn** – Photoshop tool that makes the brushed area darker, simulating when you would expose part of a photo for longer than the others

**Dodge** – Photoshop tool that makes the brushed area lighter, simulating when you would cover part of a photo during the exposure process.

**Opacity** – the relative transparency of a tool or layer. Using a tool with a low opacity allows the user to make softer, more subtle adjustments. Many of the layer properties are effected by layer opacity.

**Resources:**

Class learning packet
Reference images

**Materials:**

Computers
Shared drive storage
Example images – students can use one of the people they extracted in the previous image, or use another example image to create their drop shadows
Flash drive
Mouse
Adobe CS2 or later

Clean-up Procedures:

Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Day to Night and Mechanical Monsters
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

Students will complete two projects, but may begin with either one. Four images must be turned in at the end of this lesson: at least one mechanical monster and one day to night image, and then two of either one.

Using all previous skills, particularly adjustment layer and lighting techniques, students will turn a daytime photo into a night or evening image.

Using all previous skills, particularly extraction and transforming techniques, students will use high-resolution photos of mechanical parts to create a collaged mechanical monster head; body is optional.

Day 6-14
Day To Night
  - Introduce and begin project – taking a daytime picture and making it look like it was taken in the evening/night
  - Use all previous knowledge, especially about adjustments, selections, adjustment layers, and lighting to create convincing dark space
  - Begin finding images for next project

Mechanical Monster
  - Introduce and begin project – use high-resolution images engines or car parts to create a face or mask
  - Use all previous knowledge, especially about adjustments, selections, clone stamp, free transform, drop shadows, and adjustment layers
  - Begin finding images for next project

Extra Project For Students Who Finish Early:
Image Collaboration
  - Use various high-resolution images and collage them into a single convincing photo collaboration, or “hide” objects in photos, a la find the difference-style photos

Stage One
Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-3. Students will examine the professional and ethical issues involved in the graphics and design industry.

ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.

ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.

ACCT-IGD-11. Students will identify and apply typographic and design concepts.

ACCT-IGD-12. Students will analyze pre-press and output operations.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-19. Students will evaluate the function of typeface design in supporting legibility in a variety of media applications.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

Understandings:

-By painting a color on a separate layer, setting it to Multiply, and lowering the opacity, you can greatly change the overriding hues of an image.
-The eyedropper tool allows you to sample any visible color, and sets it to your foreground color for use with the brush or paint bucket tool.
-Holding ctrl and clicking the small picture of a layer’s contents in the layers panel allows you to make a marquee around just what is on that layer.
-Using the dodge tool on a photo layer and then erasing on the painted layers (or creating a new layer and brushing yellow or white), you can simulate light glowing from parts if an image.
-The warp tool and liquefy allow you to make major changes to an object, particularly twisting them into a certain shape.
-Using liquefy or the warp tool too much results in a loss of data, and therefore pixilizing of an image.
-To condense layers for smaller file size and better navigation, hold shift and click the layers you wish to combine, right click on the word “Layer __”, then select “Merge Layers.” DO NOT USE FLATTEN IMAGE
-If you still wish to work on an image, flatten any layers together that you are finished working with, then save as a .psd. If you are done with an image, save it as a .jpeg.
Essential Questions:

- How do you use painting, layer properties, and opacity to change the color appearance of layers?
- What is the eyedropper tool, and how can it help us paint?
- What is the best way to make a marquee selection of an object on a layer?
- How can you use erasing and the dodge tool to create light?
- What are the advantages of the warp tool and liquefy in altering an image?
- Why do you not want to transform or liquefy an image too much?
- How do you condense layers?
- What is the best way to save a large file?

Other Questions:

- How do different backgrounds affect what colors you use for your day to night image?
- Can you use the same car parts to make completely different images?

Students will need to know...

- Basic Photoshop skills as taught in introduction lessons: selections, clone stamping, adjustments, transformation, lighting, extraction, etc.

Students will be able to...

- Use layer adjustments, opacity, and painting to turn a daytime image into a nighttime image.
- Create convincing light within a nighttime image
- Create a collage of mechanical parts to make a head, face, or body

Stage Two

Performance Tasks, Projects

Students will complete two projects, but may begin with either one. Four images are due at the end of the project: at least one day to night image and one mechanical monster, and then two of either one.

Day to Night: At least 1x
- Different sky added
- Lights rendered

Mechanical Monster: At least 1x
- Uses at least 5 different mechanical parts

Other evidence, observations, work samples, student self-assessment:

- In-progress critiques
- Group critique
By what criteria will performances of understanding be judged?

- Checklist/rubric: see attached

Stage Three

Learning Activities:

Hook: Show example images of Day to Night and Mechanical Monster projects, and brief demonstration of creating each kind of image.

Day 6-14
Day To Night
- Introduce and begin project — taking a daytime picture and making it look like it was taken in the evening/night
- Use all previous knowledge, especially about adjustments, selections, adjustment layers, and lighting to create convincing dark space
- Process: find daytime image, and image of sunset or evening sky
- Remove sky from daytime image; put new sky on layer beneath
- Ctrl-click the non-sky layer to select it, make a new layer
- Use the eyedropper tool to select the darkest color in the sky background
- Use the paintbrush tool to paint the color on the new layer
- Repeat the same process with another new layer, but selecting and painting a light color instead
- Change the painted layers mode to Multiply, and adjust the opacity to suit the appearance of the sky
- To turn on headlights, street lights, lamps, etc. — use the dodge tool on the photo layer, then a soft eraser on the painted layers for spots of light
- Begin finding images for next project

Mechanical Monster
- Introduce and begin project — use high-resolution images engines or car parts to create a face or mask
- Use all previous knowledge, especially about adjustments, selections, clone stamp, free transform, drop shadows, and adjustment layers
- Find a variety of photos of mechanical parts, use extraction and erasing to isolate the parts you wish to use
- Much like a collage, assemble these parts into a new document to create a half of a head, body, or face
- When half is assembled, duplicate the layers and reflect them to create a whole head, body, or face
- Tip — if students are having difficulty coming up with a face, have them search an animal face, paste the picture on to their document, then assemble the pieces on top in the shape of the face
- Begin finding images for next project
Extra Project For Students Who Finish Early: Image Collaboration
-Insert random objects into another image, but make it look convincing. Can either be viewed as an opportunity to make an extremely abstract image, or a “find the difference” style image

Important Vocabulary and Definitions:

Opacity – the relative transparency of a tool or layer. Using a tool with a low opacity allows the user to make softer, more subtle adjustments. Many of the layer properties are affected by layer opacity.

Layer Properties – settings menu under layers that change the way that pixels react to the layers around them. Multiply allows for a type of transparency, screen makes that layer highlight parts

Transform - Photoshop tool that allows you to make major shape changes to an image or a selected area of an image. Includes warp, distort, perspective, scale, skew, etc.

Resources:

Class learning packet

Materials:

Computers
Shared drive storage
Flash drive
Internet access, or students bring in their own images
Mouse
Adobe CS2 or later

Clean-up Procedures:

Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Currency and Your Face is a Collage
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

Students will complete two projects, but may begin with either one. Ten images are due at the end of the project: two denominations of bills, front and back, and six face images.

Using all previous skills, students will create new paper currency for a country of their choosing (mythical/fictional countries are optional if appropriate images can be found). Two denominations of bills, front and back, will be created.

Using all previous skills, students will take non-retouched, high-resolution images of people, and make major changes to how they look. Students will produce at least two of each of the following images: ugly to pretty, pretty to ugly, and normal to bizarre.

Day 15-24

Currency
- Introduce and begin project – use various high-resolution images that relate to a country, and collage them to create convincing currency
- Use all previous knowledge to execute project

People
- Introduce and begin project – use non-retouched, high-resolution images of people, and use manipulations within Photoshop and additional collaged images to completely change their appearances

Extra Project For Students Who Finish Early:
Coins or Additional People
- Create coins to accompany your paper currency, or create more images of altered people

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design
ACCT-IGD-1. Students will explore the different careers available in the field of graphic communications and the design industry.

ACCT-IGD-3. Students will examine the professional and ethical issues involved in the graphics and design industry.

ACCT-IGD-6. Students will explain and demonstrate how to operate equipment in a safe manner.

ACCT-IGD-10. Students will generate and manipulate various graphic-imaging processes.

ACCT-IGD-11. Students will identify and apply typographic and design concepts.

ACCT-IGD-12. Students will analyze pre-press and output operations.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-19. Students will evaluate the function of typeface design in supporting legibility in a variety of media applications.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

Understandings:

- High-resolution images are necessary in order to make quality images – smaller images tend to show evidence of being tampered with
- Fades, watermarks, intricate patterns, and many other fine features are commonly used in currency to prevent forgeries – they are what make money look like money
- Keeping colors and patterns consistent between front, back, and different denominations of bills makes them appear to be part of a set
- You can change colors by adding a layer on top, painting on it, then setting it to multiply, screen, or whatever layer mode it needs
- Making tasteful changes to people takes a patient, practiced hand

Essential Questions:

- Why is it important to use high-resolution images?
- How do we use extraction, cloning, transformation, and adjustments to create interesting patterns and features for currency?
- Is layout important to creating money?
- How do we use cloning, transformation, liquefy, adjustments, and extractions to make convincing changes to people’s faces and bodies?
- How can you add features to someone without it looking fake?
- How can you change something’s color without using hue/saturation?
Other Questions:

- How do different brushes affect coloring, shading, and fades?
- How can filters affect texture?
- What are some alternate methods for fixing/destroying skin?

Students will need to know...

- Basic Photoshop skills: selections, clone stamping, adjustments, transformation, lighting, extraction, liquefying, etc.
- Layout and structure of currency
- Basic human anatomy/structure

Students will be able to...

- Create convincing-looking currency, utilizing layer properties and blending methods to create a unified image
- Manipulate human faces and bodies, in both tasteful and extreme ways

Stage Two

Performance Tasks, Projects

Students will complete two projects, but may begin with either one. Ten images are due at the end of the project: two denominations of bills, front and back, and six face images.

Faces: 2x of Each
- Normal to ugly
- Ugly to normal
- Normal to bizarre

Currency:
- Front and Back
- Two Denominations or Two Countries

Other evidence, observations, work samples, student self-assessment:

- In-progress critiques
- Group critique

By what criteria will performances of understanding be judged?

- Checklist/rubric: see attached
Stage Three

Learning Activities:

Hook: Show example images of real currency, then created currency, before and after shots on people who have had Photoshop liberally applied to them. Brief demonstration of creating money background, creating zombie from a normal image, airbrushing away details on a wrinkled face.

Day 15-24

Currency
- Introduce and begin project – use various high-resolution images that relate to a country, and collage them to create convincing currency
- Use all previous knowledge to execute project

People
- Introduce and begin project – use non-retouched, high-resolution images of people, and use manipulations within Photoshop and additional collaged images to completely change their appearances

Extra Project For Students Who Finish Early:

Coins or Additional People
- Create coins to accompany your paper currency, or create more images of altered people

Concepts to Introduce:
- Using marquee tool/lasso tool as part of painting process
- Stroking paths
- Filters
- Layer opacities/transparent erasing
- Basic painting, brushes

Important Vocabulary and Definitions:

Stroke – With a brush tool selected and a marquee defined, go to Edit, Stroke. This will brush your line with a paintbrush color and thickness of your choice. Great for making borders and outlining.

Liquify [sic] - A tool that loads a mesh over your whole image that you can push, squeeze, twist, etc; standard procedure for moving facial and body features. General tip – turn down the brush intensity.

Resources:

Class learning packet
http://naldzgraphics.net/tutorials/45-horrifying-photoshop-tutorials-for-halloween-season/
http://www.psdisasters.com/
http://photoshopfacelift.com/
http://www.banknotes.com/images.htm

Materials:

Computers  
Shared drive storage  
Flash drive  
Internet access, or students bring in their own images  
Mouse  
Adobe CS2 or later  

Clean-up Procedures:

Save document to appropriate location on shared drive  
Back up on flash drive  
Last class – turn off computers
Unit Title: Exploring Careers Through the Adobe Creative Suite
Lesson Theme: Critique: Photoshop
Grade Level: 9-12
Teacher: Darcy Hancock

Unit Overview:

For this unit, students will begin learning the most basic components, processes, and tools within Adobe InDesign, Illustrator, and Photoshop. Students will use the skills they learn within these programs to create digital art and designs, including work in the areas of typography, layout, illustration, and image manipulation.

Lesson Overview:

Students will choose their best single image from each project for a total of four final images. Depending on materials available, students will either print out their projects, or they will create a separate Photoshop document with all of their final images on it that can be placed on the shared drive and projected on the screen. Using a positive critique, each student’s body of work will be discussed.

Day 27

Critique
- Each student sequentially lines up his or her four major projects
- Positive critique of progress from first to last project

Stage One

Established Goals:

Georgia GPS For Introduction to Graphic and Commercial Design

ACCT-IGD-3. Students will examine the professional and ethical issues involved in the graphics and design industry.

ACCT-IGD-5. Students will demonstrate interpersonal and employability skills required for employability and job retention in the work place.

ACCT-IGD-9. Students will recognize and utilize paper and assorted substrates for commercial output.

ACCT-IGD-10. Students will generate and manipulate various graphic imaging processes.

ACCT-IGD-12. Students will analyze pre-press and output operations.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.
ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-20. Students will explore the different print processes.

ACCT-IGD-21. Students will explore the different electronic imaging processes.

**Understandings:**

- Critiquing is an essential part of the graphic and commercial design process
- By viewing each others’ art, we can draw inspiration and help teach each other
- We can improve our own art by re-adjusting parts of the image, taking into account what we heard during the critique
- A printed digital image is often smaller, more pixilated, darker, and less colorful than it appears on the screen. It is essential to work at least 300 dpi, keep your image bright, and hues strong.
- Glossy paper takes ink the best, and an inkjet printer delivers the best results for printing photographs.

**Essential Questions:**

- What can we learn about our own art from viewing everyone else’s art?
- How can critiques help us improve our own art?
- Basic critiquing questions:
  - Which image is most intriguing? What made you notice it first?
  - Which piece looks like it was the most difficult, or took the longest?
  - Which image is your favorite, and why?
  - Any additional comments, including if they wanted to change anything, or pointing out particular technical expertise/flaws.
- How can we improve our art?
- What issues are there in printing a digital image?
- What kind of paper works best for printing photographs? Printer?

**Other Questions:**

- What can we help each other improve as designers through critique?

**Students will need to know...**

- All of the processes involved in creating these images
- What clean execution using these processes and tools looks like
- Basic elements of art, principles of design

**Students will be able to...**

- Participate in and benefit from a constructive critique session
- Make changes to their own images as a result of the critique
- Learn about the printing process, and the many obstacles faced in printing a digital image – including darkening, size issues, screen calibration, etc.
Stage Two

Performance Tasks, Projects

Critique
- Each student sequentially lines up his or her four major projects
- Positive critique of progress from first to last project

-Side-project, if materials are available – printing of class work

Other evidence, observations, work samples, student self-assessment:

- Group critique

By what criteria will performances of understanding be judged?

- Participation in critique will be tallied by teacher – each student must at least contribute their assigned critique, and additional points will be given if they participate in critique of additional images.

Stage Three

Learning Activities:

1. Beginning of class – all students randomly draw a name of another student.
2. Using printouts or the projection screen, each student’s body of work is displayed in front of the whole class, one at a time, alphabetically.
3. The student who drew the name of the student whose art is displayed discusses the art, answering the following:
   - Which image is most intriguing? What made you notice it first?
   - Which piece looks like it was the most difficult, or took the longest?
   - Which image is your favorite, and why?
   - Any additional comments, including if they wanted to change anything, or pointing out particular technical expertise/flaws.

Important Vocabulary and Definitions:

Critique – a session of mutual discussion of images, with both positive and negative statements – negative criticism should only come accompanied with constructive suggestions, and positive comments should be specific, and not just a general “I like it” statement

DPI – “dots per inch,” refers to the resolution of an image. 72 dpi is the typical resolution for web art, and 300 is usually what is necessary for printing.
Glossy – paper that is covered with a kaolin or calcium carbonate coating to give a smooth or shiny appearance. Typically used for photo paper, and in magazines. Comes in various “pounds,” indicating the thickness of the paper.

Matte – paper that does not have any kind of coating. Comes in various “pounds,” indicating the thickness of the paper, and in many different surfaces that can greatly change the way the paper takes on ink.

Inkjet printer – a printer that uses cartridges of ink and a printer head to press the ink onto paper

Laser printer - a printer that uses xerography – a laser technique – to transfer image data to the paper

Resources:
Class learning packet – V drive, CTAE, Burger, Outbox, Photoshop, Photoshop.pdf

Materials:
Computers
Shared drive storage
Flash drive
Mouse
Adobe CS2 or later

If available:
Inkjet printer
Glossy photo paper

Clean-up Procedures:
Save document to appropriate location on shared drive
Back up on flash drive
Last class – turn off computers
Recommended Adaptations for Students With Disabilities

The computer lab is a very different setting for teaching art, and the Adobe Creative Suite programs are very different programs for teaching in a computer lab. The following notes are adjustments I made in my own class for my students with disabilities.

-First and foremost, if you have students with disabilities, ask them how you can help them on an individual basis. No two students are the same, and no two disabilities are the same. These students are often experts on their own disability by the time they're this age, and will probably tell you exactly what you need to do for them.

-Students with hearing impairments who have a hearing aid, cochlear implant, or other sound amplification device should take caution in a computer lab, particularly a carpeted one, as they will build up static shock strong enough to damage their device when they touch a computer. To discharge static electricity, a box of drier sheets next to their keyboard can act as a shock absorber.

-Students with wheelchairs may need a working surface at a more comfortable height for their eyes and arms. Most industrial tables have adjustable heights; figure out what works for your student and your classroom.

-All students should look away from their computers every 15-20 minutes to prevent eyestrain. Students who wear glasses for distance correction may want to, if possible, remove their glasses when working on the computer. The glare causes eyestrain and headaches.

-Some students' IEP may require that rubrics, class rules, and instructional supports be printed out for them individually.

-Students with ADD/ADHD, EBD, or other learning disabilities may have difficulties paying attention during instructional time, particularly with a computer in front of them. If you have the administrative controls to lock the students' computers, do this before you start lecturing. Otherwise, require that your students turn off their monitors when you are instructing.

-Students with ADD/ADHD, EBD, or other learning disabilities may have difficulties staying on task when they have access to the Internet. Depending on your discipline structure, you can require that these students:
  -Use sample or stock images on the shared drive (make sure you have a wide library of stock images available)
  -Bring in images from home on a flash drive or photo card

Personally, I found that merely threatening cutting off internet and restricting students to only stock images kept them away from off-topic internet sites. If you have an administrator account that allows you, I would strongly suggest blocking all websites on all class computers that are not appended with an images.google.com tag, or an approved photography site.

Free stock photograph websites:
  istockphoto.com
-If you have the permission, I would also suggest **removing all games from the student computers.** Apple computers do not typically have anything preinstalled other than Chess, which can be removed by simply dragging it to the trash. Windows computers are typically preinstalled with several easily accessible games. Games can be removed on most Windows computers by doing the following:

1. With the Windows install disc in the CD-ROM drive, click **Start,** and then click **Control Panel.**
2. Double-click **Add or Remove Programs.**
3. Click **Add/Remove Windows Components.**
4. In the Windows Components Wizard, click **Accessories and Utilities** (the words, not the check box), and then click **Details.**
5. Use the appropriate method.
6. If the **Games** check box is checked and the background of the check box is white (all games are installed), and you want to uninstall all of the games, click to clear the **Games** check box, click **OK,** and then click **Next.** If the **Games** check box is checked and the background of the check box is gray (one or more games are installed), and you want to uninstall all of the games, click to clear the **Games** check box, click **OK,** and then click **Next.**

-If you have the funds available, **printing the learning packets for each student** is ideal, because this will encourage them to take notes during lectures and have the packet out alongside their computer during work time, cutting down on questions.

-**Seating arrangements are key to managing a computer lab.** After you get a feel for your class, and know your "route" that you walk through the class, I suggest putting students who are more likely to be off-task in an area where you can see their monitor more often than not.
Introduction to InDesign
Program basics
Menu bars
Basic type creation

Type
Fonts, typefaces, kerning, line spacing
Manipulating type, type effects

15 Point Assignment: Your Name

/5 Proper kerning and spacing has been applied to letters
/5 Type has some kind of interesting treatment
/5 Effort

30 Point Group Project: Alternate Band/Artist/Musician Logos

Using your knowledge of typography and layout, you and a partner will create four type treatments for a band, an artist, or a musician - except this type must not look like ANYTHING this artist would normally do. You may either do four different treatments for one artist, or do four different artists.

-Four pieces are due at the end of this project
-All pieces must be properly kerned and spaced
-Color must be used (unless you are making an artistic decision by not using it)
-Effects and changes to type must work with the theme of your treatment

Rubric

/5 Proper kerning and line spacing
/5 Good/logical use of color
/5 Original and creative type treatments
/5 Use of effects/major type change
/5 Neatness
/5 Effort

/30 Overall
InDesign

Project 1A: Typographic Portrait

For this project, you will be using your knowledge of basic InDesign type functions, and a little bit of creativity, to create a self-portrait using only letters, numbers, and glyphs. You may either bring in a picture of yourself, or you will use an image taken in class as reference for this project.

- You must do at least one typographic portrait for your three pieces for Project 1.
- You may use any typeface or font, and any letters, numbers, or glyphs in it.
- You do not have to use type, numbers, and glyphs - you can choose what to use.
- The portrait should convey some sort of depth - your face isn’t flat!
- Use only one color of type for this project - but you may use tints of that color.
- Keep the following elements of art and principles of design in mind:
  - Form
  - Line
  - Color
  - Texture
  - Space
  - Emphasis
  - Balance
  - Variety
  - Movement
  - Proportion

Rubric

/20 Letters, numbers, and/or glyphs have been arranged in space to convincingly resemble a human face

/20 Creative use of letters, numbers, and/or glyphs

/5 Neatness

/5 Effort

/50 Overall
InDesign

Project 1B: Lyrics/Quote

Using your knowledge of InDesign, typography, and layout, you will choose a quote or song lyric to give a typographic and layout treatment. The length of the quote or song lyrics does not matter, so long as the treatment of type is thoughtful and creative.

- You must do at least one quote or song lyrics for your three pieces for Project 1
- The quote or song lyrics must be school appropriate
- The quote or song lyrics must use layout and type to express the meaning of that particular quote or lyric
- Color and text effects may be used, but tastefully
- Background colors and shapes can be used decoratively, or as emphasis
- You will need to bring the quote or lyrics to class - no “researching” in class
- Sketching this out on paper first is mandatory!
- Keep the following elements of art and principles of design in mind:
  - Form
  - Line
  - Color
  - Texture
  - Space
  - Emphasis
  - Balance
  - Variety
  - Movement
  - Proportion

Rubric

/20 Creative use of layout and type to express meaning
/10 Proper kerning and line spacing
/10 The entire page has flow, and is tasteful
/5 Neatness
/5 Effort

/50 Overall
Illustrator

Introduction to Illustrator
- Program basics
- Menu bars
- Basic graphics

The Pen Tool
- Paths
- Strokes

15 Point Assignment: The Pen Tool (Far Mightier Than the Sword Tool)

/5 The pen tool has been used to neatly trace the lines
/5 The shape tool has been used to trace the basic shapes
/5 An attempt has been made to trace the more complicated shapes

30 Point Group Project: Company Logos

Using your knowledge of typography and vector graphics, create three very different logos for three very different companies with a combination of type and imagery. For example, one logo for a balloon company, one logo for a lawyer, and one logo for a sports equipment company.

- Three pieces are due at the end of this project
- All pieces must be properly kernalled and spaced
- Color must be used (unless you are making an artistic decision by not using it)
- Effects and changes to type must work with the theme of your treatment
- At least one vector graphic must accompany each logo

Rubric

/15 Logo is clean, makes sense, and has an accompanying graphic
/5 Proper kerning and line spacing
/5 Good/logical use of color
/5 Effort

/30 Overall
Project 2A: Patterns

For this project, you will be using your knowledge of basic Illustrator pen tool functions, brushes, and colors to create a simple, repeated pattern. You must have a purpose in mind for this pattern - is it a fabric pattern for a dress or a sofa? Is it a computer desktop wallpaper, or is it for a cell phone? By keeping a purpose in mind, this will help you determine an appropriate size or color palette for your pattern.

- You must do at least one pattern for your four pieces for Project 2
- You may use any brushes in Illustrator to create your patterns
- You must have a purpose in mind for this pattern - where is it going to go?
- Colors should work well with each other, remember the color advice in InDesign
- Keep the following elements of art and principles of design in mind:
  Form
  Line
  Color
  Texture
  Space
  Emphasis
  Balance
  Variety
  Movement
  Proportion

Rubric

/20 Pattern is pleasing, and works for its intended purpose
/20 Dynamic color choices in foreground and background
/5 Neatness
/5 Effort

/50 Overall
Illustrator

Project 2B: Tag/Symbol

Using your knowledge of Illustrator, particularly the pen tool, brushes, and effects, you will be creating a graffiti tag or symbol. Think about “good” versus “bad” graffiti - what can you do to make yours readable, symbolic, or really memorable? Use the effects and brushes, but make sure you’re not making a mess.

- You must do at least one tag or symbol for your four pieces for Project 2
- Use effects and brushes - just make sure it doesn’t get too busy
- The pen tool can be used, but try out the pencil tool for smoother lines
- Background colors and shapes can be used decoratively, or as emphasis
- There will be example images on the share drive - no “researching”!
- Sketching this out on paper first is mandatory!
- Keep the following elements of art and principles of design in mind:
  - Form
  - Line
  - Color
  - Texture
  - Space
  - Emphasis
  - Balance
  - Variety
  - Movement
  - Proportion

Rubric

/20 Creative, iconic tag or symbol
/10 Use of Illustrator effects - brushes, blending, gradients, etc.
/10 Dynamic color choice
/5 Neatness
/5 Effort

/50 Overall
Photoshop

Introduction to Photoshop

Program basics
Menu bars
Basic photo adjustments

The Clone Stamp

People, “junk,” and technology removal
Fixing damaged photos

15 Point Assignment: 5 Photos Fixed With the Clone Stamp
At least 2 removals, 2 restores, 1 free choice

/5 Clean, well-disguised clone stamping
/5 All flaws/people/technology/junk is removed
/5 Effort

Extractions

Magic wand tool
Lasso tool
Extraction tool

10 Point Assignment: 2 Photo Extractions
At least 2 objects fully extracted from their backgrounds

/5 Fully extracted, with clean edges without removing parts of the image
/5 Effort

Bigger Manipulations

Free transform
Drop shadow
Burn, dodge
Layer properties
Render
Adjustment Layers

5 Point Assignment: 2 Drop Shadows
At least 2 extracted images with drop shadows added

/5 Drop shadows logical and well-rendered
Photoshop

Project 3A: Day to Night

Choose an image taken in daylight that has the sky visible, then choose an image of a sky at sunset or dusk, with at least some color to it other than navy blue/black. The image can contain just about anything, but if you want to rack up some bonus points, a picture of a house or anything else with lamps (street lights, billboards, etc.) gives some really great opportunities for making the image look like it’s night by turning on lots of lights.

- You must do at least one day to night image for your four pieces for Project 3
- You can use any images so long as they are large images that aren’t copyrighted
- You must have a consistent light source that effects the fore and background
- There must be something other than the sky that shows that this is at night
- The images must look like they belong together, using:
  - Brightness/contrast
  - Hue/value/saturation
  - Extraction
  - Free Transform
  - Clone Stamp
  - Burn/Dodge
  - Drop Shadow
  - Layer Properties
  - Lighting Effects

Rubric

/20 Foreground and background are fully integrated and believably at night
/10 Foreground and background have the same light source
/10 Something other than the sky indicates that this photo is at night
/10 Foreground has been properly extracted
/10 Hue, contrast, light, etc. is consistent between foreground and background
/5 Neatness
/5 Effort

/50 Overall
Photoshop

Project 3B: Mechanical Monster

- Using high-resolution photos of engines or car parts, create a half of a face or mask resembling a mechanical monster. Sketch out a few ideas first, or think about animals that would look awesome done with mechanical parts. Use the free transform tool and liquify to warp the parts to fit what you want your image to look like, but don't change the pieces past the point that they no longer resemble car parts! We will then reflect the image to make a whole mask or face.

- You must do at least one mechanical monster for your four pieces for Project 3
- You can use any images so long as they are you change them a lot
- The images must be cleanly extracted from their original source
- The images must be altered so they look like they are parts of the same whole
- There must be a drop shadow behind the mask or head
- The images must look like they belong together, using:
  - Brightness/contrast
  - Hue/value/saturation
  - Extraction
  - Free Transform
  - Clone Stamp
  - Burn/Dodge
  - Drop Shadow
  - Layer Properties
  - Lighting Effects

Rubric

/10 Car parts have been neatly extracted
/10 Parts have been shaped into a face or mask
/10 Parts have been adjusted to look like they belong together; drop shadow
/10 Creativity
/5 Neatness
/5 Effort

/50 Overall
Extra Credit Assignment: Image Collaboration

Choose a background and at least three objects to bring together in a convincing photo collaboration. "Convincing" does not mean this needs to be realistic - you can put a T-Rex in Times Square for all I care, but the images must convincingly exist in the same space, and use all of the Photoshop techniques we have learned so far.

- You can use any images so long as they are large images that aren't copyrighted.
- You must have a consistent light source that effects the background and objects
- The images must look like they belong together, using:
  - Brightness/contrast
  - Hue/value/saturation
  - Extraction
  - Free Transform
  - Clone Stamp
  - Burn/Dodge
  - Drop Shadow
  - Layer Properties
  - Lighting Effects

Rubric

/15  At least 4 images collaborated, including background
/5   Objects interact with each other
/5   Objects and background have the same light source
/5   Objects have drop shadows, or impact the background
/5   All objects have been properly extracted and adjusted
/5   Hue, contrast, light, etc. is consistent between objects and background
/5   Interesting and dynamic composition
/5   Creativity
/5   Neatness
/5   Effort

/60  Overall
Photoshop

Project 4A: Currency

Look at images of the currency of many countries, both historical and current. Either choose a country, or choose a country that desperately needs a currency makeover, then research this country. Currency typically contains famous people, monuments, geographical features, flags, symbols, etc. from that country, so make sure what you're finding is accurate to the country.

-You can use any images so long as they have been altered (layer a texture over it)
-There must be at least 5 objects blending with each other and the background
-The images must look like they belong together, using:
  -Brightness/contrast
  -Hue/value/saturation
  -Extraction
  -Free Transform
  -Clone Stamp
  -Burn/Dodge
  -Drop Shadow
  -Layer Properties
  -Lighting Effects

Rubric

/30 At least 5 images collaborated, including background
/10 Objects blend, or appear to belong together
/10 Some objects have texture or patterns overlayed
/10 Contrast - some objects stand out more than others
/10 All objects have been properly extracted
/10 All images have been properly adjusted
/10 Appropriate money information - Country, year, legal tender, etc.
/10 Interesting and dynamic composition
/10 Creativity
/10 Neatness
/10 Effort

/100 Overall
Photoshop

Project 4B: Your Face is a Collage

Browse the internet for basically any pictures of celebrities, models, etc, especially those featured in print magazines. Now that you’re a little more familiar with Photoshop, you can probably see just how hokey some of these images are! For this project, you will be making dramatic changes to photographs of people.

- 2x Normal to Ugly
- 2x Ugly to Normal/Normal to Overphotoshopped
- 2x Normal to Bizarre

- You can use any images so long as they are large and have been altered
- You should have a grand total of six images
- The images must look at least somewhat convincing, using:
  - Brightness/contrast
  - Hue/value/saturation
  - Extraction
  - Free Transform
  - Clone Stamp
  - Burn/Dodge
  - Liquify

Rubric

/30 At least 6 altered photographs
/10 Overall normal to ugly
/10 Overall ugly to normal
/10 Overall normal to bizarre
/10 All objects have clean edges, both in extracting and coloring
/10 All images have been properly adjusted
/10 Images are convincing, and wholly different from their original state
/10 Interesting and dynamic changes to people
/10 Creativity
/10 Neatness
/10 Effort

/100 Overall