

Cinderella, Darwin, and Plato...Oh My!

Using text as Inspiration for Student Art

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English Language Arts Standards » Anchor Standards » College and Career Readiness Anchor Standards for Reading¹

Key Ideas and Details

- **CCSS.ELA-Literacy.CCRA.R.1** Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- **CCSS.ELA-Literacy.CCRA.R.2** Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- **CCSS.ELA-Literacy.CCRA.R.3** Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

Craft and Structure

- **CCSS.ELA-Literacy.CCRA.R.4** Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- **CCSS.ELA-Literacy.CCRA.R.5** Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- **CCSS.ELA-Literacy.CCRA.R.6** Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

- **CCSS.ELA-Literacy.CCRA.R.7** Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹
- **CCSS.ELA-Literacy.CCRA.R.8** Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- **CCSS.ELA-Literacy.CCRA.R.9** Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

- **CCSS.ELA-Literacy.CCRA.R.10** Read and comprehend complex literary and informational texts independently and proficiently.

¹ Information taken from www.corestandards.org

Note on range and content of student reading

To build a foundation for college and career readiness, students must read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements. By reading texts in history/social studies, science, and other disciplines, students build a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. Students also acquire the habits of reading independently and closely, which are essential to their future success.

Common Core Vocabulary Posters for the Visual Arts – Middle School

<http://artfulartsyamy.blogspot.com/2012/02/common-core-vocabulary-for-middle.html>

Stage 1 – Desired Results

Established Goals:

- Standard 1: Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use

Standard 3: Students apply subjects, symbols, and ideas in their artworks and use the skills gained to solve problems in daily life

- Standard 4: Students analyze relationships of works of art to one another in terms of history, aesthetics, and culture, justifying conclusions made in the analysis and using such conclusions to inform their own art making

Standard 5: Students reflect analytically on various interpretations as a means for understanding and evaluating works of visual art

- Standard 6: Students synthesize the creative and analytical principles and techniques of the visual arts and selected other arts disciplines, the humanities, or the sciences

Understandings:

Students will understand that...

- Western cultures hold concepts of multiple realities.
- New technologies alter contemporary aesthetics and what we consider beautiful.
- Viewers of contemporary images need to critically examine the possibility of digital enhancement.

Essential Questions:

- What is reality? Does it shift or change depending on who you are?
- How does technology shape our perception of the world?
- Why are people drawn to the idea of a perfect world?

Students will know...

- Key facts about Plato's "The Cave"
- Key facts about the plot to the movie, "The Matrix"
- Issues of hyperreality versus reality
- Aesthetic style of HDR and hyperreal techniques

Students will be able to...

- Define major ideas in the selected texts.
- Compare and contrast ideas of "The Cave", "The Matrix", and hyperreality
- Create HDR images in Photoshop.
- Reflect on their own creation of hyperreal images
- Discuss how hyperreality affects Western image making (creation and viewing)

Stage 2 – Assessment Evidence

Performance Tasks

Hyperreal Portrait
HDR Landscape
Hyperreal Commentary artwork

Other Evidence

Written Student Reflections
Verbal class dialogues

Stage 3 – Learning Plan

Learning Activities:

- Read Plato's "The Cave", watch Youtube video of text, and discuss big ideas (student reflection in journal)
- Have students watch "The Matrix" for homework
- View director's interpretation of "The Matrix" on YouTube and discuss big ideas (student reflection in journal)
- Read text about hyperreality and discuss big ideas (student reflection in journal)
- Look at the work of Jill Greenberg and current advertisements that use HDR and hyperreal techniques (student reflection in journal)
- Have students create hyperreal portrait (teach Photoshop techniques)
- Have students create HDR landscape (teach Photoshop techniques)
- Have students create an artwork that comments on hyperreality in contemporary times
- Final Critique and Student Self-Reflection



AP Hyperreality Project

Readings:

- Wikipedia entry
 - Tutorial on Hyperreal portraits
 - Tutorial on HDR landscape
- Look at work of Jill Greenburg

Images:

You will turn in three images:

One image will be a landscape (urban, rural, or traditional landscape) using the HDR technique with bracketing.

One image will be a portrait using "A Photo Teacher's" tutorial (you can setup a studio at home or use our lights here if needed)

One image will be a comment on the *idea* of hyperreality (get some ideas through the wikipedia article). You may want to use one of the tutorial techniques or find a free plug-in.

Summary/Notes

Write at least one page of notes/summary in your sketchbook about hyperreality

Project is due:_____

Sketchbook Responses

Part One

1. Would you want to be released from the cave? Why or why not?
2. What is like the cave in our world?
3. How is the way you understand the world, your ideas and beliefs, shaped by the actions of others?
4. Who has the power to shape your ideas and beliefs? In what ways is this good and in what ways is it not so good?
5. Are there things you know to be true? What are they, and how do you know them?

Part Two

In his 1971 book *Anarchy, State, and Utopia*, Robert Nozick introduced a "thought experiment" that has become known as "the experience machine:" Suppose there were an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life's desires?. Of course, while in the tank you won't know that you're there; you'll think it's all actually happening. Others can also plug in to have the experiences they want, so there's no need to stay unplugged to serve them. (Ignore problems such as who will service the machines if everyone plugs in.) Would you plug in? What else can matter to us, other than how our lives feel from the inside?"

1. Should you hook up to the experience machine for life, pre-programming all of your life's desires? Why or why not?
2. Would it make any difference to you if you were actually doing these things?
3. If in every respect it seems to you that you're in a good situation, isn't it true, at least for you, that you are in a good situation?

Part Three

Do we care about certain things independent of the experiences they create for us? For example, is being in reality important even if the experience isn't pleasant? Is it better to live happily in the Matrix than miserably in reality? Why or why not? How do we know that we are not in an experience machine? Can we prove we are not? How do we know that what we perceive is real?

Beautiful Brains

Moody. Impulsive. Maddening. Why do teenagers act the way they do? Viewed through the eyes of evolution, their most exasperating traits may be the key to success as adults.

By David Dobbs

Photograph by Kitra Cahana

Although you know your teenager takes some chances, it can be a shock to hear about them.

One fine May morning not long ago my oldest son, 17 at the time, phoned to tell me that he had just spent a couple hours at the state police barracks. Apparently he had been driving "a little fast." What, I asked, was "a little fast"? Turns out this product of my genes and loving care, the boy-man I had swaddled, coddled, cooed at, and then pushed and pulled to the brink of manhood, had been flying down the highway at 113 miles an hour.

"That's more than a little fast," I said.

He agreed. In fact, he sounded somber and contrite. He did not object when I told him he'd have to pay the fines and probably for a lawyer. He did not argue when I pointed out that if anything happens at that speed—a dog in the road, a blown tire, a sneeze—he dies. He was in fact almost irritatingly reasonable. He even proffered that the cop did the right thing in stopping him, for, as he put it, "We can't all go around doing 113."

He did, however, object to one thing. He didn't like it that one of the several citations he received was for reckless driving.

"Well," I huffed, sensing an opportunity to finally yell at him, "what would you call it?"

"It's just not accurate," he said calmly. "'Reckless' sounds like you're not paying attention. But I was. I made a deliberate point of doing this on an empty stretch of dry interstate, in broad daylight, with good sight lines and no traffic. I mean, I wasn't just gunning the thing. I was driving."

"I guess that's what I want you to know. If it makes you feel any better, I was really focused."

Actually, it did make me feel better. That bothered me, for I didn't understand why. Now I do.

My son's high-speed adventure raised the question long asked by people who have pondered the class of humans we call teenagers: What on Earth was he doing? Parents often phrase this question more colorfully. Scientists put it more coolly. They ask, What can explain this behavior? But even that is just another way of wondering, What is wrong with these kids? Why do they act this way? The question passes judgment even as it inquires.

Through the ages, most answers have cited dark forces that uniquely affect the teen. Aristotle concluded more than 2,300 years ago that "the young are heated by Nature as drunken men by wine." A shepherd in William Shakespeare's *The Winter's Tale* wishes "there were no age between ten and three-and-twenty, or that youth would sleep out the rest; for there is nothing in the between but getting wenches with child, wronging the ancients, stealing, fighting." His lament colors most modern scientific inquiries as well. G. Stanley Hall, who formalized adolescent studies with his 1904 *Adolescence: Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education*, believed this period of "storm and stress" replicated earlier, less civilized stages of human development. Freud saw adolescence as an expression of torturous psychosexual conflict; Erik Erikson, as the most tumultuous of life's several identity crises. Adolescence: always a problem.

Such thinking carried into the late 20th century, when researchers developed brain-imaging technology that enabled them to see the teen brain in enough detail to track both its physical development and its patterns of activity. These imaging tools offered a new way to ask the same question—What's wrong with these

kids?—and revealed an answer that surprised almost everyone. Our brains, it turned out, take much longer to develop than we had thought. This revelation suggested both a simplistic, unflattering explanation for teens' maddening behavior—and a more complex, affirmative explanation as well.

The first full series of scans of the developing adolescent brain—a National Institutes of Health (NIH) project that studied over a hundred young people as they grew up during the 1990s—showed that our brains undergo a massive reorganization between our 12th and 25th years. The brain doesn't actually grow very much during this period. It has already reached 90 percent of its full size by the time a person is six, and a thickening skull accounts for most head growth afterward. But as we move through adolescence, the brain undergoes extensive remodeling, resembling a network and wiring upgrade.

For starters, the brain's axons—the long nerve fibers that neurons use to send signals to other neurons—become gradually more insulated with a fatty substance called myelin (the brain's white matter), eventually boosting the axons' transmission speed up to a hundred times. Meanwhile, dendrites, the branchlike extensions that neurons use to receive signals from nearby axons, grow twiggy, and the most heavily used synapses—the little chemical junctures across which axons and dendrites pass notes—grow richer and stronger. At the same time, synapses that see little use begin to wither. This synaptic pruning, as it is called, causes the brain's cortex—the outer layer of gray matter where we do much of our conscious and complicated thinking—to become thinner but more efficient. Taken together, these changes make the entire brain a much faster and more sophisticated organ.

This process of maturation, once thought to be largely finished by elementary school, continues throughout adolescence. Imaging work done since the 1990s shows that these physical changes move in a slow wave from the brain's rear to its front, from areas close to the brain stem that look after older and more behaviorally basic functions, such as vision, movement, and fundamental processing, to the evolutionarily newer and more complicated thinking areas up front. The corpus callosum, which connects the brain's left and right hemispheres and carries traffic essential to many advanced brain functions, steadily thickens. Stronger links also develop between the hippocampus, a sort of memory directory, and frontal areas that set goals and weigh different agendas; as a result, we get better at integrating memory and experience into our decisions. At the same time, the frontal areas develop greater speed and richer connections, allowing us to generate and weigh far more variables and agendas than before.

When this development proceeds normally, we get better at balancing impulse, desire, goals, self-interest, rules, ethics, and even altruism, generating behavior that is more complex and, sometimes at least, more sensible. But at times, and especially at first, the brain does this work clumsily. It's hard to get all those new cogs to mesh.

Beatriz Luna, a University of Pittsburgh professor of psychiatry who uses neuroimaging to study the teen brain, used a simple test that illustrates this learning curve. Luna scanned the brains of children, teens, and twentysomethings while they performed an antisaccade task, a sort of eyes-only video game where you have to stop yourself from looking at a suddenly appearing light. You view a screen on which the red crosshairs at the center occasionally disappear just as a light flickers elsewhere on the screen. Your instructions are to not look at the light and instead to look in the opposite direction. A sensor detects any eye movement. It's a tough assignment, since flickering lights naturally draw our attention. To succeed, you must override both a normal impulse to attend to new information and curiosity about something forbidden. Brain geeks call this response inhibition.

Ten-year-olds stink at it, failing about 45 percent of the time. Teens do much better. In fact, by age 15 they can score as well as adults if they're motivated, resisting temptation about 70 to 80 percent of the time. What Luna found most interesting, however, was not those scores. It was the brain scans she took while people took the test. Compared with adults, teens tended to make less use of brain regions that monitor performance, spot errors, plan, and stay focused—areas the adults seemed to bring online automatically. This let the adults use a variety of brain resources—and better resist temptation, while the teens used those areas less often and more readily gave in to the impulse to look at the flickering light—just as they're more likely to look away from the road to read a text message.

If offered an extra reward, however, teens showed they could push those executive regions to work harder, improving their scores. And by age 20, their brains respond to this task much as the adults' do. Luna suspects the improvement comes as richer networks and faster connections make the executive region more effective.

These studies help explain why teens behave with such vexing inconsistency: beguiling at breakfast, disgusting at dinner; masterful on Monday, sleepwalking on Saturday. Along with lacking experience generally, they're still learning to use their brain's new networks. Stress, fatigue, or challenges can cause a misfire. Abigail Baird, a Vassar psychologist who studies teens, calls this neural gawkiness—an equivalent to the physical awkwardness teens sometimes display while mastering their growing bodies.

The slow and uneven developmental arc revealed by these imaging studies offers an alluringly pithy explanation for why teens may do stupid things like drive at 113 miles an hour, aggrieve their ancestry, and get people (or get gotten) with child: They act that way because their brains aren't done! You can see it right there in the scans!

This view, as titles from the explosion of scientific papers and popular articles about the "teen brain" put it, presents adolescents as "works in progress" whose "immature brains" lead some to question whether they are in a state "akin to mental retardation."

The story you're reading right now, however, tells a different scientific tale about the teen brain. Over the past five years or so, even as the work-in-progress story spread into our culture, the discipline of adolescent brain studies learned to do some more-complex thinking of its own. A few researchers began to view recent brain and genetic findings in a brighter, more flattering light, one distinctly colored by evolutionary theory. The resulting account of the adolescent brain—call it the adaptive-adolescent story—casts the teen less as a rough draft than as an exquisitely sensitive, highly adaptable creature wired almost perfectly for the job of moving from the safety of home into the complicated world outside.

This view will likely sit better with teens. More important, it sits better with biology's most fundamental principle, that of natural selection. Selection is hell on dysfunctional traits. If adolescence is essentially a collection of them—angst, idiocy, and haste; impulsiveness, selfishness, and reckless bumbling—then how did those traits survive selection? They couldn't—not if they were the period's most fundamental or consequential features.

The answer is that those troublesome traits don't really characterize adolescence; they're just what we notice most because they annoy us or put our children in danger. As B. J. Casey, a neuroscientist at Weill Cornell Medical College who has spent nearly a decade applying brain and genetic studies to our understanding of adolescence, puts it, "We're so used to seeing adolescence as a problem. But the more we learn about what really makes this period unique, the more adolescence starts to seem like a highly functional, even adaptive period. It's exactly what you'd need to do the things you have to do then."

To see past the distracting, dopey teenager and glimpse the adaptive adolescent within, we should look not at specific, sometimes startling, behaviors, such as skateboarding down stairways or dating fast company, but at the broader traits that underlie those acts.

Let's start with the teen's love of the thrill. We all like new and exciting things, but we never value them more highly than we do during adolescence. Here we hit a high in what behavioral scientists call sensation seeking: the hunt for the neural buzz, the jolt of the unusual or unexpected.

Seeking sensation isn't necessarily impulsive. You might plan a sensation-seeking experience—a skydive or a fast drive—quite deliberately, as my son did. Impulsivity generally drops throughout life, starting at about age 10, but this love of the thrill peaks at around age 15. And although sensation seeking can lead to dangerous behaviors, it can also generate positive ones: The urge to meet more people, for instance, can create a wider circle of friends, which generally makes us healthier, happier, safer, and more successful. This upside probably explains why an openness to the new, though it can sometimes kill the cat, remains a highlight of adolescent development. A love of novelty leads directly to useful experience. More broadly,

the hunt for sensation provides the inspiration needed to "get you out of the house" and into new terrain, as Jay Giedd, a pioneering researcher in teen brain development at NIH, puts it.

Also peaking during adolescence (and perhaps aggrieving the ancients the most) is risk-taking. We court risk more avidly as teens than at any other time. This shows reliably in the lab, where teens take more chances in controlled experiments involving everything from card games to simulated driving. And it shows in real life, where the period from roughly 15 to 25 brings peaks in all sorts of risky ventures and ugly outcomes. This age group dies of accidents of almost every sort (other than work accidents) at high rates. Most long-term drug or alcohol abuse starts during adolescence, and even people who later drink responsibly often drink too much as teens. Especially in cultures where teenage driving is common, this takes a gory toll: In the U.S., one in three teen deaths is from car crashes, many involving alcohol. Are these kids just being stupid? That's the conventional explanation: They're not thinking, or by the work-in-progress model, their puny developing brains fail them.

Yet these explanations don't hold up. As Laurence Steinberg, a developmental psychologist specializing in adolescence at Temple University, points out, even 14- to 17-year-olds—the biggest risk takers—use the same basic cognitive strategies that adults do, and they usually reason their way through problems just as well as adults. Contrary to popular belief, they also fully recognize they're mortal. And, like adults, says Steinberg, "teens actually overestimate risk."

So if teens think as well as adults do and recognize risk just as well, why do they take more chances? Here, as elsewhere, the problem lies less in what teens lack compared with adults than in what they have more of. Teens take more risks not because they don't understand the dangers but because they weigh risk versus reward differently: In situations where risk can get them something they want, they value the reward more heavily than adults do.

A video game Steinberg uses draws this out nicely. In the game, you try to drive across town in as little time as possible. Along the way you encounter several traffic lights. As in real life, the traffic lights sometimes turn from green to yellow as you approach them, forcing a quick go-or-stop decision. You save time—and score more points—if you drive through before the light turns red. But if you try to drive through the red and don't beat it, you lose even more time than you would have if you had stopped for it. Thus the game rewards you for taking a certain amount of risk but punishes you for taking too much. When teens drive the course alone, in what Steinberg calls the emotionally "cool" situation of an empty room, they take risks at about the same rates that adults do. Add stakes that the teen cares about, however, and the situation changes. In this case Steinberg added friends: When he brought a teen's friends into the room to watch, the teen would take twice as many risks, trying to gun it through lights he'd stopped for before. The adults, meanwhile, drove no differently with a friend watching.

To Steinberg, this shows clearly that risk-taking rises not from puny thinking but from a higher regard for reward. "They didn't take more chances because they suddenly downgraded the risk," says Steinberg. "They did so because they gave more weight to the payoff."

Researchers such as Steinberg and Casey believe this risk-friendly weighing of cost versus reward has been selected for because, over the course of human evolution, the willingness to take risks during this period of life has granted an adaptive edge. Succeeding often requires moving out of the home and into less secure situations. "The more you seek novelty and take risks," says Baird, "the better you do." This responsiveness to reward thus works like the desire for new sensation: It gets you out of the house and into new turf. As Steinberg's driving game suggests, teens respond strongly to social rewards. Physiology and evolutionary theory alike offer explanations for this tendency. Physiologically, adolescence brings a peak in the brain's sensitivity to dopamine, a neurotransmitter that appears to prime and fire reward circuits and aids in learning patterns and making decisions. This helps explain the teen's quickness of learning and extraordinary receptivity to reward—and his keen, sometimes melodramatic reaction to success as well as defeat.

The teen brain is similarly attuned to oxytocin, another neural hormone, which (among other things) makes social connections in particular more rewarding. The neural networks and dynamics associated with general reward and social interactions overlap heavily. Engage one, and you often engage the other. Engage them during adolescence, and you light a fire.

This helps explain another trait that marks adolescence: Teens prefer the company of those their own age more than ever before or after. At one level, this passion for same-age peers merely expresses in the social realm the teen's general attraction to novelty: Teens offer teens far more novelty than familiar old family does.

Yet teens gravitate toward peers for another, more powerful reason: to invest in the future rather than the past. We enter a world made by our parents. But we will live most of our lives, and prosper (or not) in a world run and remade by our peers. Knowing, understanding, and building relationships with them bears critically on success. Socially savvy rats or monkeys, for instance, generally get the best nesting areas or territories, the most food and water, more allies, and more sex with better and fitter mates. And no species is more intricately and deeply social than humans are.

This supremely human characteristic makes peer relations not a sideshow but the main show. Some brain-scan studies, in fact, suggest that our brains react to peer exclusion much as they respond to threats to physical health or food supply. At a neural level, in other words, we perceive social rejection as a threat to existence. Knowing this might make it easier to abide the hysteria of a 13-year-old deceived by a friend or the gloom of a 15-year-old not invited to a party. These people! we lament. They react to social ups and downs as if their fates depended upon them! They're right. They do.

Excitement, novelty, risk, the company of peers. These traits may seem to add up to nothing more than doing foolish new stuff with friends. Look deeper, however, and you see that these traits that define adolescence make us more adaptive, both as individuals and as a species. That's doubtless why these traits, broadly defined, seem to show themselves in virtually all human cultures, modern or tribal. They may concentrate and express themselves more starkly in modern Western cultures, in which teens spend so much time with each other. But anthropologists have found that virtually all the world's cultures recognize adolescence as a distinct period in which adolescents prefer novelty, excitement, and peers. This near-universal recognition sinks the notion that it's a cultural construct.

Culture clearly shapes adolescence. It influences its expression and possibly its length. It can magnify its manifestations. Yet culture does not create adolescence. The period's uniqueness rises from genes and developmental processes that have been selected for over thousands of generations because they play an amplified role during this key transitional period: producing a creature optimally primed to leave a safe home and move into unfamiliar territory.

The move outward from home is the most difficult thing that humans do, as well as the most critical—not just for individuals but for a species that has shown an unmatched ability to master challenging new environments. In scientific terms, teenagers can be a pain in the ass. But they are quite possibly the most fully, crucially adaptive human beings around. Without them, humanity might not have so readily spread across the globe.

This adaptive-adolescence view, however accurate, can be tricky to come to terms with—the more so for parents dealing with teens in their most trying, contrary, or flat-out scary moments. It's reassuring to recast worrisome aspects as signs of an organism learning how to negotiate its surroundings. But natural selection swings a sharp edge, and the teen's sloppier moments can bring unbearable consequences. We may not run the risk of being killed in ritualistic battles or being eaten by leopards, but drugs, drinking, driving, and crime take a mighty toll. My son lives, and thrives, sans car, at college. Some of his high school friends, however, died during their driving experiments. Our children wield their adaptive plasticity amid small but horrific risks.

We parents, of course, often stumble too, as we try to walk the blurry line between helping and hindering our kids as they adapt to adulthood. The United States spends about a billion dollars a year on programs to counsel adolescents on violence, gangs, suicide, sex, substance abuse, and other potential pitfalls. Few of them work.

Yet we can and do help. We can ward off some of the world's worst hazards and nudge adolescents toward appropriate responses to the rest. Studies show that when parents engage and guide their teens with a light but steady hand, staying connected but allowing independence, their kids generally do much better in life. Adolescents want to learn primarily, but not entirely, from their friends. At some level and at some times (and it's the parent's job to spot when), the teen recognizes that the parent can offer certain kernels of wisdom—knowledge valued not because it comes from parental authority but because it comes from the parent's own struggles to learn how the world turns. The teen rightly perceives that she must understand not just her parents' world but also the one she is entering. Yet if allowed to, she can appreciate that her parents once faced the same problems and may remember a few things worth knowing.

Meanwhile, in times of doubt, take inspiration in one last distinction of the teen brain—a final key to both its clumsiness and its remarkable adaptability. This is the prolonged plasticity of those late-developing frontal areas as they slowly mature. As noted earlier, these areas are the last to lay down the fatty myelin insulation—the brain's white matter—that speeds transmission. And at first glance this seems like bad news: If we need these areas for the complex task of entering the world, why aren't they running at full speed when the challenges are most daunting?

The answer is that speed comes at the price of flexibility. While a myelin coating greatly accelerates an axon's bandwidth, it also inhibits the growth of new branches from the axon. According to Douglas Fields, an NIH neuroscientist who has spent years studying myelin, "This makes the period when a brain area lays down myelin a sort of crucial period of learning—the wiring is getting upgraded, but once that's done, it's harder to change."

The window in which experience can best rewire those connections is highly specific to each brain area. Thus the brain's language centers acquire their insulation most heavily in the first 13 years, when a child is learning language. The completed insulation consolidates those gains—but makes further gains, such as second languages, far harder to come by.

So it is with the forebrain's myelination during the late teens and early 20s. This delayed completion—a withholding of readiness—heightens flexibility just as we confront and enter the world that we will face as adults.

This long, slow, back-to-front developmental wave, completed only in the mid-20s, appears to be a uniquely human adaptation. It may be one of our most consequential. It can seem a bit crazy that we humans don't wise up a bit earlier in life. But if we smartened up sooner, we'd end up dumber.

The Better to Entertain You With, My Dear 'Mirror Mirror,' 'Grimm' and Hollywood Love for Fairy Tales



Julia Roberts and Armie Hammer in "Mirror Mirror."

By [TERRENCE RAFFERTY](#)
Published: March 21, 2012

Fairy tales can come true, the old song goes; it can happen to you, apparently, if you're young at heart. Whether one believes this hopeful sentiment, and regardless of the age of one's internal organs, there's no doubt that fairy tales have for the past couple of years — and into the foreseeable future — been coming pretty regularly to screens both big and small, achieving, you could say, at least the kind of quasi-truth that movies and television can concoct.

On March 30 Tarsem Singh's "[Mirror Mirror](#)," a zippy new version of the Snow White story, arrives, and yet another retelling, "[Snow White and the Huntsman](#)," is threatened for this year. "[Hansel and Gretel: Witch Hunters](#)" looms on the horizon too, scheduled for early 2013. And two of the livelier series of the current television season, "[Grimm](#)" and "[Once Upon a Time](#)," are based on tricky fairy-tale premises. Not all these movies and shows are destined to live happily ever after in the memories of their target audiences, but the entertainment industry, with its childlike trust in the powers of its own magic, clearly believes we'll be enchanted.

Maybe so, but the characteristic tone of fairy tales and folk tales, which is derived from oral storytelling traditions, is awfully difficult to replicate on screen. Just last year Catherine Hardwicke's "[Red Riding Hood](#)" and Daniel Barnz's "[Beastly](#)" (an updated "[Beauty and the Beast](#)") showed that there are many dangers for filmmakers who venture into these dark woods.

"[Red Riding Hood](#)" tries telling the familiar tale in a more or less traditional manner, setting the action in the usual medieval village and decking its actors out in the customary peasant garb. The big-eyed, big-eared wolf that menaces Red and her granny has been turned into a werewolf, and an alarming lycanthrope-hunting cleric (played by Gary Oldman at his most unfettered) has been added, but the basics of the story remain intact, and Ms. Hardwicke, of "[Twilight](#)" fame, keeps the mood properly somber and hushed. But the picture is terrible. There's no real conviction in it: the younger actors sound as if they're speaking Esperanto; the older ones look weary and dazed, as if they were struggling to awaken from a long, long spell.

"[Beastly](#)" takes a different tack, transporting an old story to our brave new world, and it's just about as unconvincing. The classic tale, whose most widely read literary version is the 18th-century story by Jeanne-Marie Leprince de Beaumont, has been adapted before, notably by [Jean Cocteau in 1946](#) and by Disney animators in 1991. Mr. Barnz sets the action in a Manhattan prep school, where an arrogant, good-looking rich kid is transformed by a witch into an ugly guy. He has to learn to be a good enough person for the sweet heroine to love him in spite of his looks.

The problem with Mr. Barnz's conceit is that, the film's title notwithstanding, the protagonist isn't a beast. Unlike the hairy animals of the previous movies, he's merely a not-very-sightly human: his "beastliness" looks like the work of a bad plastic surgeon and a seriously overzealous tattooist. The whole point of Cocteau's poetic romance is that the hero, for all his civility and courtly manners, is also an extremely deadly animal — a natural predator who when he falls in love with Belle has to muster every ounce of his willpower to refrain from killing and eating her.

The world from which fairy tales and folk tales emerged has largely vanished, and although it pleases us to think of these stark, simple, fantastic narratives as timeless, they aren't. Thanks to video games, computer graphics and the general awfulness of everyday life, fantasies of all kinds have had a resurgence in the past few years. But the social realities on which the original fairy tales depend are almost incomprehensibly alien to 21st-century sensibilities; they reek of feudalism. And the lessons they're supposed to teach our young don't have much force these days. Kids learn to be skeptical almost before they've been taught anything to be skeptical of.

["Mirror Mirror"](#) works hard to let the audience know that it's aware of its own silliness. Although the story is set in a vaguely medieval fairy-tale kingdom — easier to conjure now, with digital effects — the tone is cheerfully, unapologetically anachronistic. The mean queen seems to have stepped out of one of the riper episodes of *"Desperate Housewives,"* while practically every line in the picture is delivered like a sitcom zinger. (Was there really so much insult humor in the Middle Ages?) And the story has been altered to reflect more contemporary notions about the roles of men and women. Snow White is a much more can-do kind of princess than the passive heroine of yore, and this Prince Charming is quite a bit less masterful. He can't stop Snow from saving him, when he believes that he should be saving her. "It's been focus-grouped," he protests, to no avail.

Despite — or perhaps because of — its rigorous lack of seriousness, *"Mirror Mirror"* may please its focus-grouped audience of children and tweens. (At the youth-intensive screening I attended, the seven dwarfs, a bickering band of brigands, stole the show.) It doesn't tell us much about how we should think of fairy tales in our unenchanted present day, though.

The TV series *"Grimm"* and *"Once Upon a Time"* are, surprisingly, more thoughtful than any of the recent fairy-tale movies have dared to be. Maybe the succession of weekly episodes more closely approximates the regularity and one-thing-after-another quality of bedtime stories. ["Grimm,"](#) on NBC, is mostly a horror show, in which a Portland, Ore., detective tracks down and vanquishes a beast of the week. The monsters, all with German names, pass for human; only a *"Grimm,"* a hereditary monster hunter like the cop, can see them for what they actually are. This is a handy power to have in 2012.

["Once Upon a Time,"](#) on ABC, has a yet more elaborate concept. It seems that the evil queen of the Snow White story has put a curse on every other fairy-tale character: they've been transported to our time, to live in a small town, unaware of who they were in their previous, storybook existence. In its pulpy way the show evokes a sort of neither-here-nor-there feeling that seems widespread now in the developed world, a chronic sense of unreality. It isn't a profound show, but an undercurrent of melancholy runs through it, even as it jauntily updates, mashes up and revises the stories we all grew up on. At its best *"Once Upon a Time"* can make you feel both young and very, very old at heart.

Once Upon a Time Project Evaluation

Name _____

What story did you choose?

What part of the story did you focus on?

What visual clues did you include to help the viewer understand your intent?

How did you create your artwork? (Be specific).

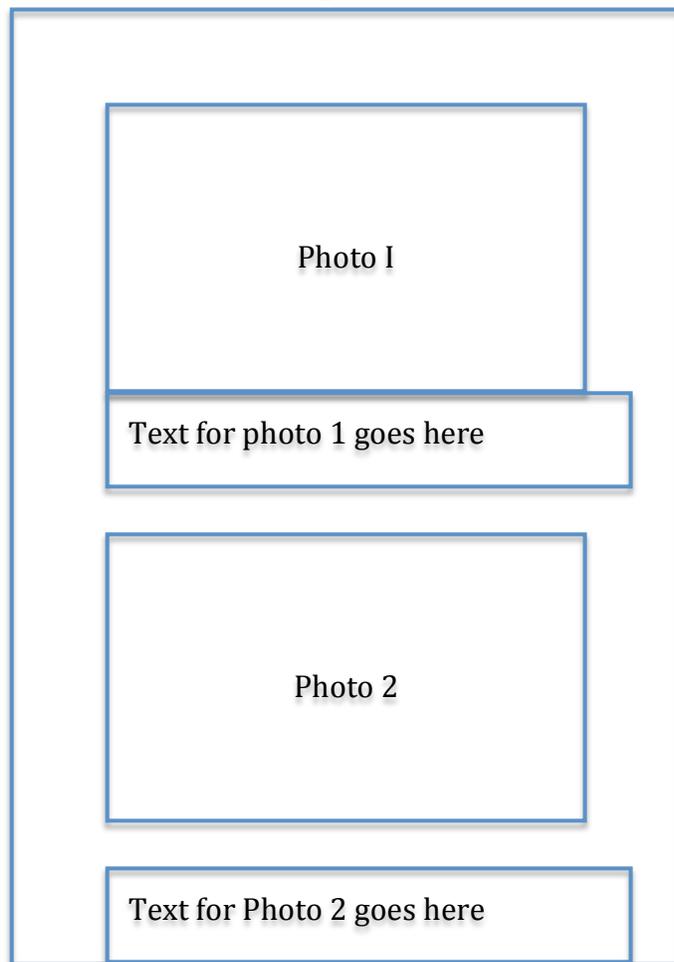
How do you feel you did on this project? Why?

Area	Points Possible	Student Points	Teacher Points
Format is a diptych, triptych, or grid	20		
Composition	30		
Creativity of Idea	40		
Camera Technique	20		
Photoshop/Darkroom Technique	20		
Overall Craftsmanship, File Name Correct	20		
TOTAL	150		

Flat Stanley Guidelines

- 5 to 7 photos per Flat Stanley
- 1 to 3 sentences per photograph
- Story must make sense – have a beginning, middle, and end
- Explain the context of the environment (i.e. this is a typical high school, this is gymnastics class, this is what we do on the weekends, etc.)

Photoshop Document - 8.5" x 11"



- 3 to 4 pages for each story
- Save Each story in it's own folder
- We will make the cover using the Flat Stanley character (don't throw them away!)

Flat Stanley Project Evaluation

Name _____

Grade yourself on the following areas:

Area	Points Possible	Student Points	Teacher Points
Quality of stories	30		
Exposure and Focus of Images	50		
Composition of Images	50		
Creativity of Book Layout and Pages	35		
Cover Designs	20		
Attention to Detail	15		
	200		

1. One aspect of the project that I did well on was

_____.

2. Next time, I would try to do better on:

_____.