

Visual Vocabulary:

The Impact of Visual Images on Learning Vocabulary

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Abstract

Focusing on the idea that reading comprehension is a vital intelligence indicator in standardized test-taking, and that a student's vocabulary is a major contributing element to their ability to read fluently and retain information, the following research has been done to support the use of visual imagery in combination with text when teaching new vocabulary. Utilizing the latest information on brain-based research, dual coding, mnemonic devices, and visual literacy, visual images are shown to enhance understanding and reinforce learning when learning new vocabulary. Based on studies done by Price and Finkelstein in 1994 that suggest students can improve their memory of Scholastic Aptitude Test vocabulary words by associating the words with corresponding pictures taken from magazines, this project created a set of "Visual Vocabulary" posters of the top 100 most commonly used vocabulary words on the ACT/SAT test and then combined them to create a "Visual Vocabulary" study guide for high school students to better prepare them for standardized test-taking.

Keywords: visual imagery, brain-based research, visual literacy, dual coding, mnemonic devices, art and literacy, multiple intelligences

TABLE OF CONTENTS

I.	ABSTRACT	2
II.	PROBLEM STATEMENT	4
III.	IMPORTANCE AND RATIONALE FOR PROJECT	4
IV.	BACKGROUND OF PROJECT	5
	THE HUMAN BRAIN	5
	DUAL CODING	8
	MNEMONIC DEVICES	9
	MULTIPLE INTELLIGENCES	10
	VISUAL LITERACY	11
V.	VISUAL VOCABULARY PROJECT	12
VI.	CONCLUSION	17
VII.	REFERENCES	19
VIII.	APPENDIX	22
	A. A STUDENT WORK: INCESSANT	21
	B. TOP 100 SAT VOCABULARY WORDS	22
	C. STUDY GUIDE EXAMPLE: LONGEVITY	26
	D. VISUAL VOCABULARY: CLAIRVOYANT	27
	E. VISUAL VOCABULARY: TRANSIENT	28
	F. VISUAL VOCABULARY: PROCRASTINATE	29
	G. VISUAL VOCABULARY: ABSTINENCE	30
	H. VISUAL VOCABULARY: ASYLUM	31

Problem Statement

Standardized tests such as the ACT and SAT often dictate whether or not a student will be able to gain admittance into a post-secondary program. Although these tests are supposed to assess students in a variety of content areas, students with low level reading comprehension abilities consistently test lower than their peers due to the amount of reading involved in these tests (Fisher 2008). Their inability to visualize what they are reading prevents them from fully understanding, even though they might very well know a concept or topic inside and out. This project is designed to help increase reading comprehension, more specifically, vocabulary knowledge, for high school students by combining the use of visual imagery and text to create a visual vocabulary study guide of the top 100 most commonly used vocabulary words for the ACT and SAT.

Importance and Rationale for the Project

A student's ability to read and actually understand what is being read is one of the most important skills acquired while in school. Not only do students with higher levels of reading comprehension tend to have more success in other content areas (especially at the secondary level), but also they also consistently score higher on standardized tests, such as the ACT and SAT (Fisher, 2008). There are many factors involved in reading comprehension and even more ways to try to improve it, but one of the largest predictors in a student's ability to fully understand written text, is their ability to learn and recognize new vocabulary (Fisher, 2008).

By reviewing research involving literacy and visual art, it is easy to see specific ways in which reading comprehension is enhanced by the use of visual imagery. Whether images are paired with a newly presented vocabulary word, or a student is asked to draw a picture along with a definition, the old saying "a picture is worth a thousand words" cannot be ignored. The

impact of visual imagery or the visual arts on a person's ability to retain new information is not a new idea, and it should be utilized more than what it is now. Manning states,

I don't think I could teach reading or writing without the visual arts. The visual arts are an important means by which students express their newly constructed knowledge as they read. Art is one of the most effective ways of sharing knowledge with others. We know there are students who have difficulties with oral and written language but are able to illustrate their ideas about the meaning of the text (Manning, 2004, p.1).

In the following sections, I will introduce the most recent studies on brain-based research, dual coding, mnemonic devices, and visual literacy, that support the idea that the best way to teach new vocabulary is to utilize visual imagery. These studies were narrowed to focus on information relevant at the secondary school level.

Background of the Project

In order to begin, studies and research done in brain-based research, dual coding, mnemonic devices, and visual literacy have been examined to create a better understanding of what has already been done. Each of these categories has been broken down and explained to help demonstrate their significance and support of the use of visual imagery in learning new vocabulary.

The Human Brain

A growing body of research in brain-based learning has been done in the past few decades and with this increase in knowledge comes a wider variety of methods and techniques to increase learning. The human brain is a fascinating thing. It is filled with a hundred trillion nerve cells (Christie, 2009). It consists of two hemispheres, the right and left, which are connected by a group of nerve fibers called the corpus callosum. Even though signals transverse, or cross over,

the corpus callosum from one hemisphere to the other, they are still very separate. Each hemisphere performs different tasks than its opposite hemisphere (Christie, 2009). The left hemisphere tends to be more dominant in expressive and receptive language, reasoning, and sequencing, whereas the right hemisphere is more dominant in geometric figures, visual forms, and facial identity. This does not mean that the right side is always completely nonverbal, because the brain is incredibly “plastic” and can adapt when necessary, but after age twelve, the brain begins to lose this plasticity (Christie, 2009). The older the brain gets, the more difficult it is for certain areas to take over jobs other than what it is currently doing, which can often leave the right side of the brain very non-verbal (Jensen, 2005).

According to Christie of the many parts of the brain, it is the cerebral cortex that separates man from animals (2009). The cerebral cortex is the area which is responsible for cognitive functioning. And is also known as the upper brain. This is the most recently evolved part of the human brain and all reasoning is interpreted and processed here. It is divided into four lobal regions, the frontal lobe, the temporal lobe, the occipital lobe, and the parietal lobe areas. According to research done using neuroimaging, which shows the brain actively processing information, each region is responsible for specific functions (Willis, 2007). The frontal lobe is associated with reasoning, planning, parts of speech, movement, emotions, problem solving, and even smell. The occipital lobe is responsible for visual processing. The temporal lobe controls memory, and is associated with perception and recognition of auditory stimuli, and speech. The parietal lobe is associated with movement, orientation, recognition, and perception of stimuli (Christie, 2009).

Neural pathways connect these lobes and allow information to be processed and stored throughout the brain. The ears are connected to the left temporal lobe and the eyes to the

occipital lobe. Once information reaches the occipital lobe , stimuli are sent to the hippocampus, where memories are stored. It is then the hippocampus, which analyzes the input and determines whether or not it's worth keeping (Caroselli, 2009). Willis relates,

Brain-based research in learning has given educational researchers the means to translate neuroimaging data into classroom strategies that are designed to stimulate parts of the brain seen to be metabolically activated during the stages of information processing, memory, and recall. And what has emerged from the neuroscience of learning over the past two decades is a body of highly suggestive evidence that successful strategies teach for meaning and understanding, that learning-conducive classrooms are low in threat and high in reasonable challenge, and that students who are actively engaged and motivated devote more brain activity (as measured by metabolic processes) to learning (2009, p.2).

Caroselli states that in order for an experience to be encoded in your memory, multiple neurons need to fire often and strongly (2009). By using visual images in combination with the vocabulary text, one is more likely to store that information in not only the temporal lobe, but the occipital lobe as well. Using a visual aid with text addresses two different areas of memory storage in the brain. This essentially gives the individual two paths instead of one to follow in an attempt to recall the information. This means that the more senses that can be stimulated, the more places a memory is stored, and it in turn will make that memory more accessible to recall in the future.

According to brain research by Christie the brain takes in an enormous wealth of associations and imprints these thoughts by something called neurological imprinting (2009). Researchers believe that 90% of a person's daily perceptions are forgotten, but not necessarily lost. Instead, the memory trace lays dormant waiting for adequate stimulation. Even if these memories are never accessed, these traces are still retrievable given the right stimulation or cue (Christie, 2009). So if an image is shown while introducing a new vocabulary word, and a

student may not immediately remember the word's meaning, that memory is not lost, but could be triggered later by the viewing of that image or a similar image.

Dual Coding

The dual coding theory is a theory of cognition and was first advanced by Allan Paivio of the University of Western Ontario in 1969. It was supported by previous neurological research done indicating that memory for some verbal information is enhanced if a relevant visual is also presented or if the learner can imagine a visual image to go with the verbal information (Anderson and Bower, 1973). Since then, researchers like Mark Sadowski have continued to build upon this idea of how to acquire sight vocabulary to develop a more meaningful vocabulary. Dual coding is based on the assumption that cognition occurs in, “two independent but connected codes: a verbal code for language and a nonverbal code for mental imagery” (Sadoski, 2005). He states that using concrete, high-imagery words in combination with verbal and nonverbal contexts are found to be important factors in teaching sight vocabulary along with word decodability.

In other research done on visual imagery, a random sample of words was drawn from the Paivio, Yuille, and Madigan norms to test the role that imagery plays in the production of written definitions (1968). College undergraduates were presented with a randomly selected, randomly ordered set of 12 words drawn from the original random sample. They then used regression analysis, a technique used for modeling and analyzing several variables at one time, to focus on the relationship between the use of imagery in writing and the production of better definitions. To do this, they used the dependent variable (written word) and one or more independent variables such as images, definitions, and so on. The results revealed that concrete, highly imageable words promoted the use of imagery in writing, which in turn led to the production of

better definitions (Goetz, Sadowski, Stricker, & White, 2007). By showing a student an image of a word along with a written text, students can immediately have a reference point to begin to visualize the more detailed meaning of a word. The idea behind dual coding is that once a student can visualize what a word or written text means, then they will be able to recall that information more quickly.

Mnemonic Devices

A mnemonic device is a mind memory and/or learning aid. Often, mnemonics are verbal cues, like a short poem or a special word used to help a person remember something, but many times they can be visual, kinesthetic or auditory as well. One example would be the old saying “In nineteen-hundred-forty-two, Columbus sailed the ocean blue” the effect of the rhythm is used to help children remember the year that Christopher Columbus was credited for discovering North America. Another more visual example would be a string tied around a finger to remind someone to make an important phone call once they get home. Mnemonics are based on the idea that associations can be made between easy-to-remember words or images and more important data that must be retained. After learning more about the brain and its functions, it’s easy to see how the use of certain cues can help by storing information in more than one part of the brain, making it easier to access when it’s needed. According to Manning (2004), “Not only do illustrations provide clues about the text and aid comprehension, they’re also a tremendous source of enjoyment. That’s as good a reason as any for focusing on illustrators’ work.” Mnemonic devices work even better when an individual has a personal connection to the trigger word or image. According to Wilson, having a personal connection with a word is very important in helping to learn new vocabulary (2009). In his article titled “Word Walls and

Temples: Strategies for Teaching and Learning Vocabulary,” he uses the following anecdote as an example:

Jenny, a colleague of mine, was teaching a class in which a Buddhist monk was one of the students. In one particular lesson, students were learning parts of the body. Jenny pointed to the side of the head—the hollow near the eye—and asked, “Does anyone know what this is called?” When she explained that it was called the temple, the monk’s eyes lit up. After all, he had spent most of his life in temples. From that point onward, whenever Jenny reviewed the vocabulary from the course, the monk, unlike his classmates, always got this word right (2009).

A great example of using a mnemonic device as well as a personal connection to recall information is to pair vocabulary words with images that many people can easily relate to. An example of this can be found in Appendix A. When introducing the word “incessant” which means continuing or following without interruption, it is shown with the image of a red-faced, newborn baby crying. Any parent who has had a newborn baby, or even a babysitter who has had to babysit for a child that just wouldn’t stop crying, will immediately relate to the meaning of this word with very little difficulty. Not only are you stimulating the visual and verbal parts of the brain, but now the emotional areas as well. This means that an individual is three times more likely to access this information at a later time.

Multiple Intelligences

Continuing on the concept of brain-based research and how the human brain recalls memory and information, it’s important to discuss Howard Gardner’s theory of Multiple Intelligences. Gardner’s theory suggests that intelligence, as it is commonly defined, does not truly embody the wide variety of human abilities that people are capable of (1983). He defined the following seven of these intelligences in 1983: Spatial, Linguistic, Logical- mathematical, Kinesthetic, Musical, Interpersonal, Intrapersonal. Then in 1999 he added an eighth intelligence

and called it Naturalist. According to Gardner, each of these intelligences should be considered when educating and testing student performance, not just the traditional linguistic or mathematical abilities. Gardner's theory opened the door to differentiated learning in education and has helped teachers to teach non-traditional students who need more stimulation to retain information than just by oral and written language. It is because of this information that I chose to research how the use of visual imagery can impact the learning of new vocabulary.

From an educational viewpoint, this theory provides teachers with more ways to connect what is being taught with how a student learns best. Some students are more linguistic and learn best from reading written words, but many others might have a musical intelligence and could relate to a text better if it were sung. There are seven different intelligences, and in 1992, the Teele Inventory of Multiple Intelligences or TIMI, was developed by Susan Teele to test a student's aptitude for each of the seven intelligences.

According to Teele's research, the one intelligence that almost all students seem to show strengths in is the area of visual / spatial intelligences (Teele, 1992). This is due primarily to the large amount of visual receptors in the human brain. More than any other sense receptor, like smell or taste, 40% of the brain is dedicated to processing visual imagery (Jensen 2005).

Visual Literacy

John Debes, co-founder of the International Visual Literacy Association, first coined the term "visual literacy" in 1969. Debes offered the following definition of the concept, "Visual literacy refers to a group of vision-competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences" (1969). However, because multiple disciplines make use of the term visual literacy, finding one common definition of visual literacy is difficult. Many disciplines and researchers believe that visual literacy is the ability to interpret,

negotiate, and make meaning from information presented in the form of an image. Visual literacy is based on the idea that pictures can be “read” and that meaning can be communicated through a process of reading. This concept has even been explored in the corporate learning world by Cross in his 2003 article titled “Sight Mammals:”

We humans are sight mammals. We learn almost twice as well from images and words as from words alone. Visuals engage both hemispheres of the human brain. Pictures translate across cultures, education levels, and age groups. Yet, the majority of the content of corporate learning is text. Schools spend years teaching how to read but only hours on visual literacy. It’s high time for us to open our eyes to the possibilities (Cross, 2003).

Visual Vocabulary Project

After researching the topics of brain-based research, dual coding, mnemonic devices, and visual literacy, it is very evident that the use of visual imagery in combination with written text can help to enhance the learning of new vocabulary words. Since a majority of standardized testing relies on a student’s reading comprehension, this concept has been used to create visual vocabulary posters of the top 100 most commonly used ACT/SAT words. These will serve as a study guide to help students increase their reading comprehension, which will in turn impact their scores on these tests (Fisher, 2008). The following quote by Burnell emphasizes that with the amount of visual stimulation that today’s students receive it’s important to try to harness this visual learning style.

Because of television, advertising, and the Internet, the primary literacy of the 21st century will be visual. It is no longer enough to read and write text—students must learn to process both words and pictures. They must be able to move fluently between text and images, between literal and figurative words (Burmark, 2002, p.1).

After discussing the rationale and reasoning for this project, the next step was to actually select the top 100 most commonly used vocabulary words found in the ACT and SAT. Comparing

multiple resources and listings of the words from the College Board to the actual SAT and ACT organizations, 100 words were selected based on frequency of use and relevance. These can be found in Appendix B.

The original idea for this project was began at Northview High School in Grand Rapids, Michigan as a way to implement a school wide “Words-of-the-Week” program focused on increasing student vocabulary. The words selected were from the top 500 vocabulary words most commonly used on ACT and SAT Tests. The idea was to post five words a week with common prefixes, suffixes, or root words in each and every classroom so that students were exposed to the words visually. That was it. No definitions or necessity to incorporate them into the curriculum were required. Just post a new sheet each week, unless you wanted to do more.

In light of this, I decided to have my photography and Photoshop students create “Words-of-the-Week” posters for each of the 500 words. The posters were to have the word, a brief definition, and one simple image that really represented the essence of that word, the simpler the better. Using only one image really forced the students to look deeply into the meaning of the word. The posters were a big success and each week, I would display the five new “Words of the Week” in the main entry of our building where all students saw them on a daily basis. A student example of one of these posters can be seen in Appendix A. When this poster of the word “incessant” was displayed at my high school, I had numerous parents, coworkers, and students comment on how they would never forget what the meaning of the word after viewing the image of the screaming baby. Not only was the poster aesthetically pleasing, but it was direct and provided the viewer with an emotional connection to the word as well.

Since then, I have continued to do this visual vocabulary project with my students as a way to help them learn new vocabulary as well as to improve their sense of visual literacy by

getting them to think about good design. To an art teacher, it seemed very natural to pair visual imagery with new vocabulary, but evidently it hadn't really been done before. It became apparent that this idea was more innovative than other vocabulary strategies when literacy expert, Doug Fisher, asked to use some examples in his upcoming book *Word Wise & Content Rich* which was published in 2008.

As an educator, this brought to mind some very important questions about how we learn vocabulary:

- Does the use of visual images actually impact how and what we learn?
- How have visual images been used in the past when teaching literacy, or more specifically, vocabulary?
- Could a person actually increase his or her ACT or SAT score by reviewing these "Visual Vocabulary" posters?

In order to answer these questions, I created a study guide of the top 100 ACT/SAT vocabulary words utilizing my visual vocabulary posters. The words were taken from the College Board Association's official SAT study guide website and can be found in Appendix B (2009).

Each of the 100 words in the study guide has been given a two-page spread. The first page has a photographic image, the word, and a very brief definition composed into one image. An example of this can be seen in Appendix C. Every attempt was made to create the most simplistic and aesthetically pleasing arrangement possible. The second page has a breakdown of the official definition(s), parts of speech, and examples of the word used in different sentences or contexts. Also included is a fun fact that somehow relates to the image used for the word. I used student work when possible, but many of the images included are my own artwork.

It was very important that the images conveyed the word definition quickly and that the viewer could connect emotionally or visually to the image. In order to do this, I not only researched each word as thoroughly as possible, reading all definitions and seeing it used in different contexts, but I also surveyed a wide variety of family members, friends, and most importantly, students to see how they would interpret the words. Because this study guide is primarily being created for high school age students, I wanted to be sure that the images would relate to their generation. However, not so specifically that ten years from now the next group of teenagers would not be able to find a connection to the imagery. For example, the word adulation which means, high praise or excessive admiration, can easily be connected to an image of Bon Jovi with screaming fans, but an image of a group like the Jonas Brothers would be more appropriate for this generation of students. Both of these images exist, but copywriting laws may impede my use of them, so instead I created my own photographic images to recreate these scenarios. Not only does this avoid copyright infringement, but it also provided an excellent opportunity for me to further master the art of photography.

After researching each of the 100 words, I began to look for visual representations of the ideas that I had for each to see what was already available. A fortuneteller looking into a crystal ball, very easily represented some of the words such as clairvoyant, exceptionally insightful or able to foresee the future. See example of this image in Appendix D. Other words like digression, the act of straying from the main point in a speech or argument, was much more difficult to convey in a single photograph and took quite a bit more brainstorming. Once I had photographed about half of the words, I had several different groups of students and teachers look at the images to get feedback on them. This proved to be an excellent way to see just how relevant and useful the visual vocabulary words were.

I continued to look for feedback and ideas for my photographic images throughout the project and once all 100 words had been photographed, it was time to collage them into a successful composition with the word and definition. The images were slightly rendered in an Adobe Photoshop program and then the text font and color were selected carefully based on readability and aesthetics. Again, once all 100 images were created, I went back to more students, teachers, and college professors to get more feedback on how quickly and easily the visual vocabulary could be interpreted, read, and understood.

The final step in the creation of the study guide was to list the word, definition, part of speech, and example sentences on a separate page that is laid out next to the image. Also included is a “fun fact” or description that helps explain why the image was chosen to go along with each word. Although the front page of this study guide is what truly makes it unique and utilizes the brain research on dual coding, the back page was just as important for a couple of reasons. First of all, many of the words have multiple definitions and can be used in many different contexts. The visual vocabulary images display the most commonly used definition suggested by the College Board, but to truly understand a word, you must try to think about all of its meanings and uses. Secondly, many of the definitions have been simplified in order to be read quickly, but it’s still important that they be read in their entirety to be truly understood. Thirdly, part of dual coding is allowing the brain to form a connection with each word. Maybe the image provided is not how a student would initially interpret the word. The second page allows them to look at just the word and definition(s) in order to formulate their own mental images whether it is the same image on the first page or not. Either way, giving the students an image to start with begins that mental imaging process. More examples of visual vocabulary images can be found in Appendices E through G.

Once completed, I want to determine whether or not this visual vocabulary study guide would in fact help to raise students' scores on the standardized tests. Pre and post testing would be done in order to collect data. This will be done in a few ways. First, by delivering pre and post vocabulary tests to a select group of students, who have taken the ACT or SAT previously. Secondly, by tutoring these same students using this visual vocabulary study guide and comparing the two test results. Thirdly, I will also have an English teacher at my high school teach vocabulary the regular way (without images) for a portion of the year and with images the other portion. This could be alternated weekly. This would be a significant way to see whether there is improvement of scores between the two different approaches at the end of the year due to the fact that we will be using the same students for the test and control group. I intend on completing this research within the next two years in order to allow for two different age groups to be assessed.

Conclusion

There are many factors that affect standardized test results (i.e. anxiety, low math skills, and so on) but having an increased knowledge and understanding of vocabulary can increase a student's reading comprehension and will in turn help them to understand the questions being asked of them (Fisher, 2008). The number one way to elicit or trigger memory recall is by association (Jensen, 2005). In order to help students learn and retain new vocabulary, I have created this visual vocabulary study guide as a tool for those students who struggle with reading comprehension. It will improve their knowledge of the vocabulary words that the College Board deems most important. These visual vocabulary posters will help students to visualize these abstract and complex words in a concrete manner by providing them with a direct association. This is known as dual coding. Based on the extensive research available on brain-based learning,

these visually pleasing and educational images will help to connect and stimulate multiple parts of the brain and will make learning vocabulary not just more relevant but more interesting and fun as well.

Most students need so much more than written text to truly understand concepts or ideas. Educators need to stimulate their students' many senses and allow them to make relevant connections to what they are learning. The old saying that a picture is worth a thousand words can't be emphasized enough. Although I have not officially tested the impact of the visual vocabulary on students yet, this whole process has definitely helped me to learn 100 vocabulary words in a way that I will never forget.

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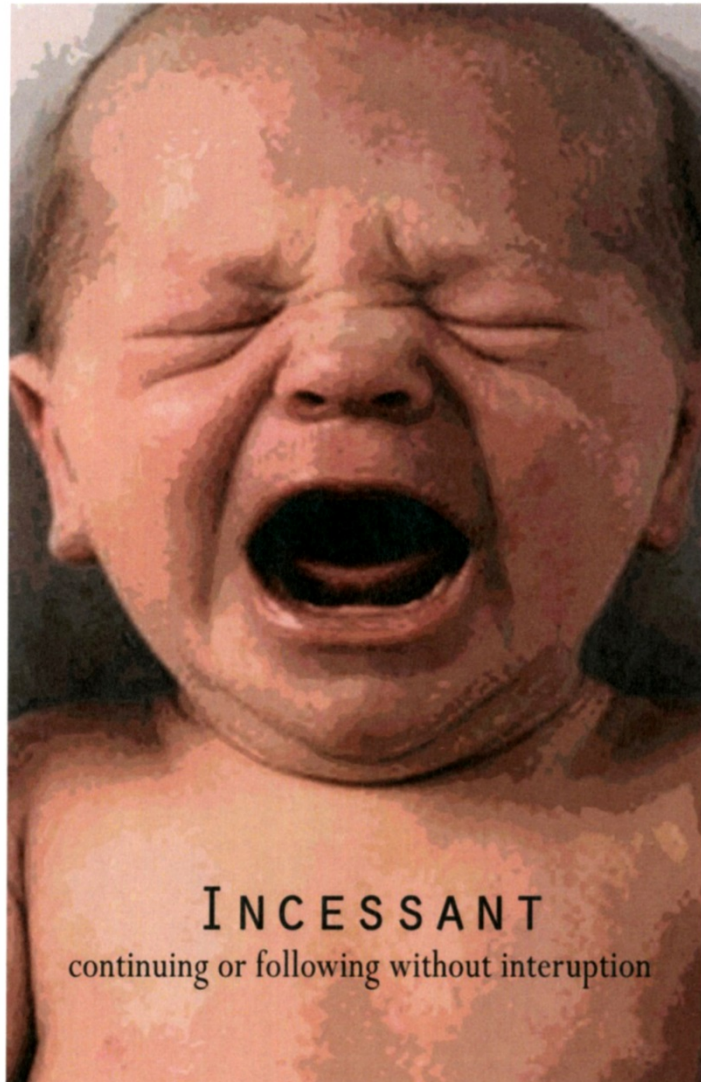
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Appendix A



Appendix B

Top 100 SAT Vocabulary Words

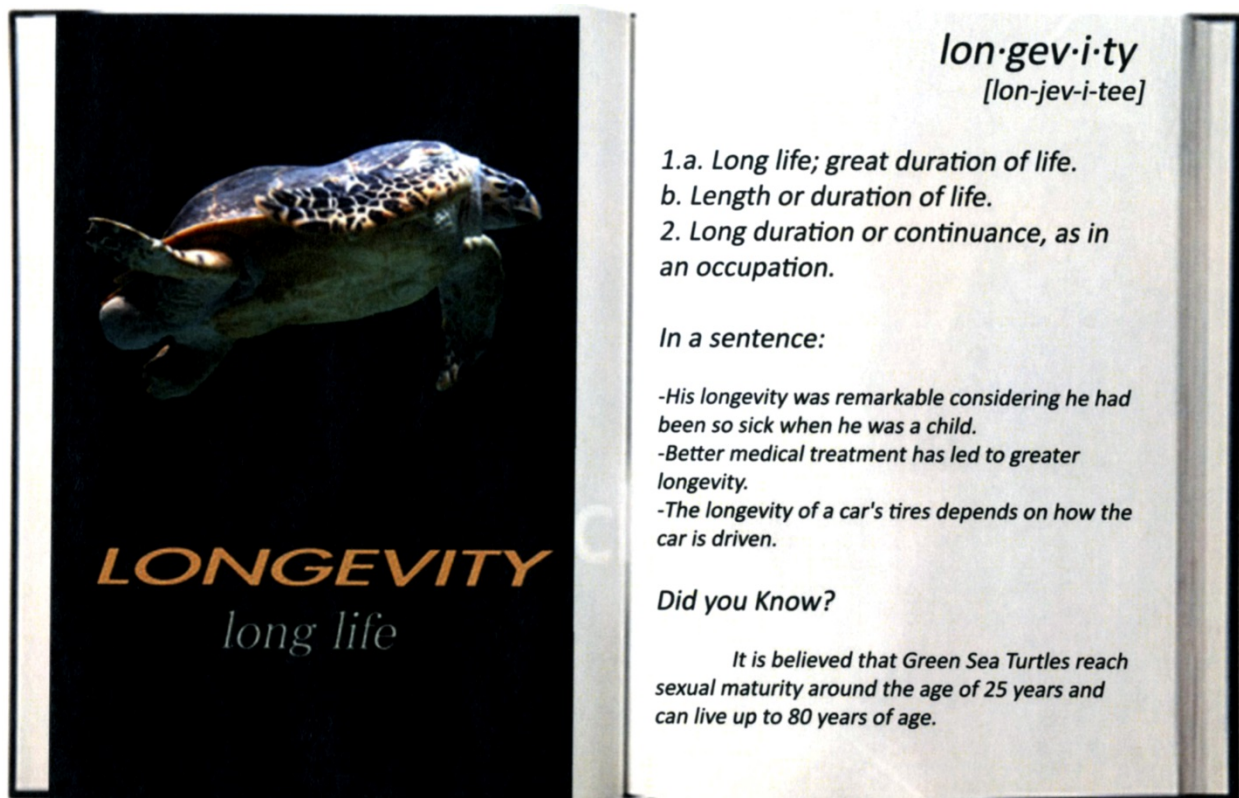
1. abbreviate: (v) to shorten, abridge
2. abstinence: (n) the act of refraining from pleasurable activity, e.g., eating or drinking
3. adulation: (n) high praise
4. adversity: (n) misfortune, an unfavorable turn of events
5. aesthetic: (adj) pertaining to beauty or the arts
6. amicable: (adj) friendly, agreeable
7. anachronistic: (adj) out-of-date, not attributed to the correct historical period
8. anecdote: (n) short, usually funny account of an event
9. anonymous: (adj) nameless, without a disclosed identity
10. antagonist: (n) foe, opponent, adversary
11. arid: (adj) extremely dry or deathly boring
12. assiduous: (adj) persistent, hard-working
13. asylum: (n) sanctuary, shelter, place of refuge
14. benevolent: (adj) friendly and helpful
15. camaraderie: (n) trust, sociability amongst friends
16. censure: (v) to criticize harshly
17. circuitous: (adj) indirect, taking the longest route
18. clairvoyant: (adj) exceptionally insightful, able to foresee the future
19. collaborate: (v) to cooperate, work together
20. compassion: (n) sympathy, helpfulness or mercy
21. compromise: (v) to settle a dispute by terms agreeable to both sides
22. condescending: (adj) possessing an attitude of superiority, patronizing
23. conditional: (adj) depending on a condition, e.g., in a contract
24. conformist: (n) person who complies with accepted rules and customs
25. congregation: (n) a crowd of people, an assembly
26. convergence: (n) the state of separate elements joining or coming together
27. deleterious: (adj) harmful, destructive, detrimental
28. demagogue: (n) leader, rabble-rouser, usually appealing to emotion or prejudice
29. digression: (n) the act of turning aside, straying from the main point, esp. in a speech or argument

30. diligent: (adj) careful and hard-working
31. discredit: (v) to harm the reputation of, dishonor or disgrace
32. disdain: (v) to regard with scorn or contempt
33. divergent: (adj) separating, moving in different directions from a particular point
34. empathy: (n) identification with the feelings of others
35. emulate: (v) to imitate, follow an example
36. enervating: (adj) weakening, tiring
37. enhance: (v) to improve, bring to a greater level of intensity
38. ephemeral: (adj) momentary, transient, fleeting
39. evanescent: (adj) quickly fading, short-lived, esp. an image
40. exasperation: (n) irritation, frustration
41. exemplary: (adj) outstanding, an example to others
42. extenuating: (adj) excusing, lessening the seriousness of guilt or crime, e.g., of mitigating factors
43. florid: (adj) red-colored, flushed; gaudy, ornate
44. fortuitous: (adj) happening by luck, fortunate
45. frugal: (adj) thrifty, cheap
46. hackneyed: (adj) clichéd, worn out by overuse
47. haughty: (adj) arrogant and condescending
48. hedonist: (n) person who pursues pleasure as a goal
49. hypothesis: (n) assumption, theory requiring proof
50. impetuous: (adj) rash, impulsive, acting without thinking
51. impute: (v) to attribute an action to particular person or group
52. incompatible: (adj) opposed in nature, not able to live or work together
53. inconsequential: (adj) unimportant, trivial
54. inevitable: (adj) certain, unavoidable
55. integrity: (n) decency, honesty, wholeness
56. intrepid: (adj) fearless, adventurous
57. intuitive: (adj) instinctive, untaught
58. jubilation: (n) joy, celebration, exultation
59. lobbyist: (n) person who seeks to influence political events
60. longevity: (n) long life
61. mundane: (adj) ordinary, commonplace

62. nonchalant: (adj) calm, casual, seeming unexcited
63. novice: (n) apprentice, beginner
64. opulent: (adj) wealthy
65. orator: (n) lecturer, speaker
66. ostentatious: (adj) showy, displaying wealth
67. parched: (adj) dried up, shriveled
68. perfidious: (adj) faithless, disloyal, untrustworthy
69. precocious: (adj) unusually advanced or talented at an early age
70. pretentious: (adj) pretending to be important, intelligent or cultured
71. procrastinate: (v) to unnecessarily delay, postpone, put off
72. prosaic: (adj) relating to prose; dull, commonplace
73. prosperity: (n) wealth or success
74. provocative: (adj) tending to provoke a response, e.g., anger or disagreement
75. prudent: (adj) careful, cautious
76. querulous: (adj) complaining, irritable
77. rancorous: (adj) bitter, hateful
78. reclusive: (adj) preferring to live in isolation
79. reconciliation: (n) the act of agreement after a quarrel, the resolution of a dispute
80. renovation: (n) repair, making something new again
81. resilient: (adj) quick to recover, bounce back
82. restrained: (adj) controlled, repressed, restricted
83. reverence: (n) worship, profound respect
84. sagacity: (n) wisdom
85. scrutinize: (v) to observe carefully
86. spontaneity: (n) impulsive action, unplanned events
87. spurious: (adj) lacking authenticity, false
88. submissive: (adj) tending to meekness, to submit to the will of others
89. substantiate: (v) to verify, confirm, provide supporting evidence
90. subtle: (adj) hard to detect or describe; perceptive
91. superficial: (adj) shallow, lacking in depth
92. superfluous: (adj) extra, more than enough, redundant
93. suppress: (v) to end an activity, e.g., to prevent the dissemination of information
94. surreptitious: (adj) secret, stealthy

- 95. tactful: (adj) considerate, skillful in acting to avoid offense to others
- 96. tenacious: (adj) determined, keeping a firm grip on
- 97. transient: (adj) temporary, short-lived, fleeting
- 98. venerable: (adj) respected because of age
- 99. vindicate: (v) to clear from blame or suspicion
- 100. wary: (adj) careful, cautious

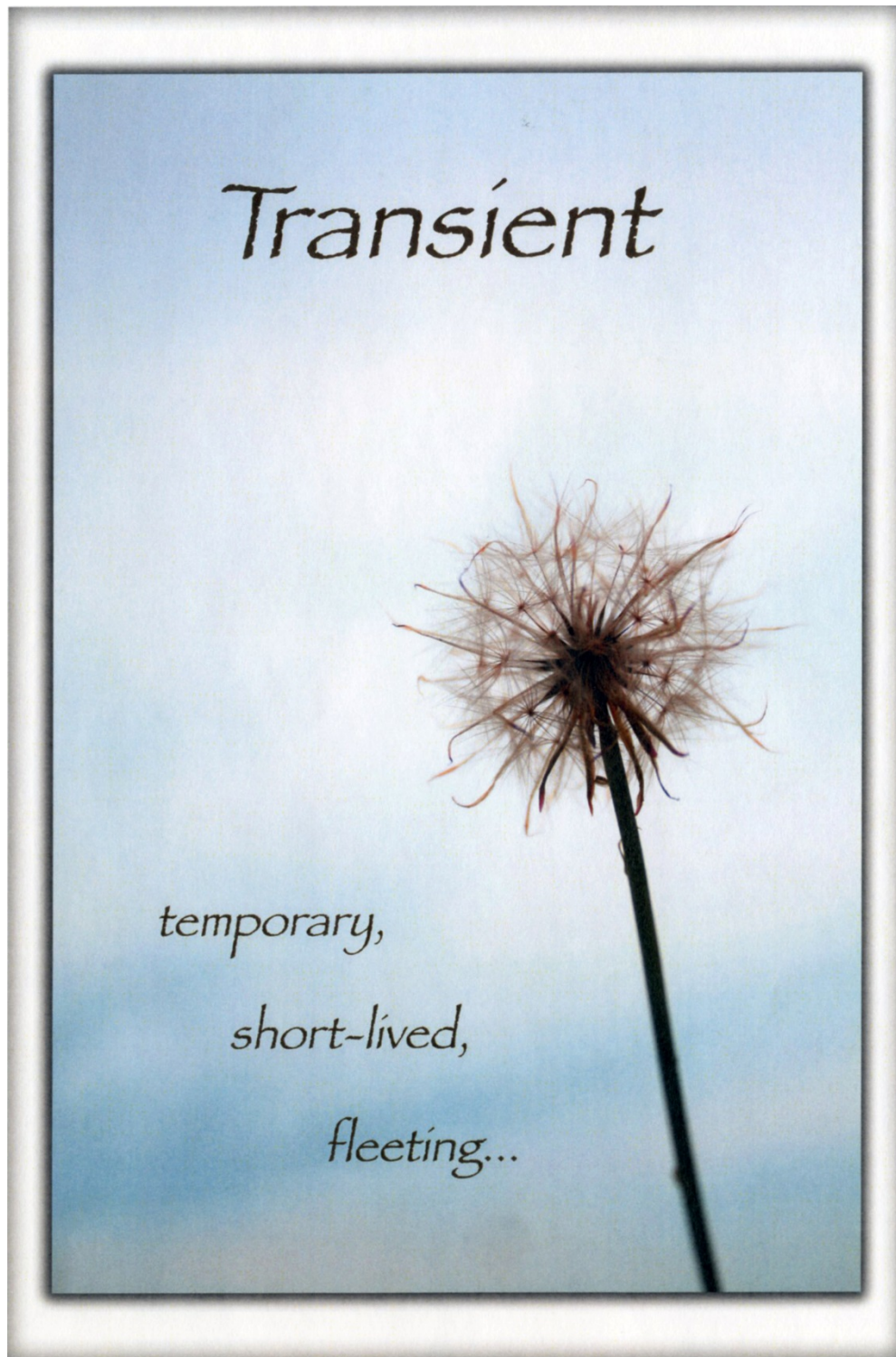
Appendix C



Appendix D



Appendix E

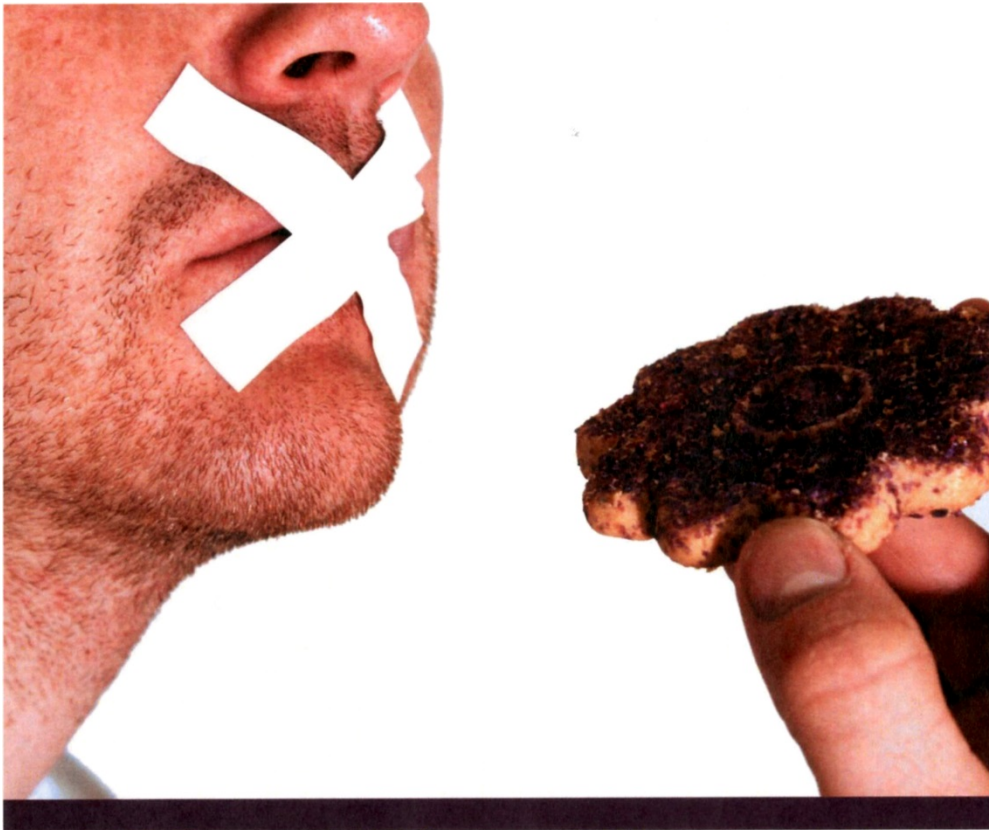


Appendix F

Procrastinate



Appendix G



Abstinence

*Refraining from pleasurable activity,
i.e. eating or drinking*

Appendix H

