



Nonfiction and Study Skills

Program 9

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Is The Internet Making Us Stupid?

For most of the 20th century, humans' IQ scores rose about three points per decade. In recent years, however, this trend has slowed and even reversed. In the words of Dr. Evan Horowitz of Tufts University, "People are getting dumber. That's not a judgment; it's a global fact." The research is clear on what's causing this: internet access. The internet is making us stupid—it's impacting many of our cognitive skills in negative ways and destroying our collective intellect.

The internet is making us stupider in part because it is full of misinformation. While there are some reputable sources of information online, a lot of content is designed with only one thing in mind: making you click. This "click bait" is full of sensationalized stories, conspiracies, and outright lies. And, very often, it's difficult to tell what's real and what's not. According to the Centre for International Governance Innovation, 86% of internet users can't tell the difference between what's true and what's fake.



In addition, relying on the internet for information weakens our critical thinking because algorithms show us only what we want to see. Algorithms are automated programs that determine the kind of content you see based on what you've clicked in the past. For example, imagine you click on a few articles like "The Evils of Sugar" and "Does Sugar Cause Cancer?". The algorithms decide that you only want to see information about how sugar is bad. They won't show you alternative articles about the benefits of sugar, the history of sugar, and so on. Without those alternative viewpoints, you'll never challenge yourself to think critically.



The internet also seriously impairs our concentration and our memory. Countless studies have shown that the more time people spend in front of an internet-connected screen, the less they are able to concentrate. We get distracted by links and games, skim over what we're trying to read, and have our thought processes interrupted by ads and pop-ups. The result is a functional IQ drop of up to 10 points! Studies also show that the internet is messing with our ability to remember things. This well-documented phenomenon is called

"offloading." Basically, people no longer commit facts to memory because they know the information is only a click away.

Finally, the internet destroys our ability to perform basic tasks. Every time you ask your phone for directions, for example, you lose an opportunity to exercise a cognitive skill. Instead of learning and practicing how to navigate a map, you allow the internet to do it for you. The result is that people either forget or never learn how to do basic tasks. This problem has the biggest impact on young people, who have grown up with the internet. Unlike previous generations, they never learned to complete basic tasks like driving and cooking without the internet's "aid".

Annotating Fiction

How to annotate:

- Mark important lines or passages. You can underline, circle or use brackets.
- Write short notes in the margin.

What to annotate:

- Character development & key plot events
- Themes or images
- Questions for discussion
- Your reactions & predictions
- Connections to earlier ideas in the text

Sample annotations from p. 71 in *The Outsiders*:

and stared. "A paperback copy of *Gone with the Wind*! How'd you know I always wanted one?"

Johnny reddened. "I remembered you sayin' something about it once. And me and you went to see that movie, 'member? I thought you could maybe read it out loud and help kill time or something."

"Gee, thanks." I put the book down reluctantly. I wanted to start it right then. "Peroxide? A deck of cards . . ." Suddenly I realized something. "Johnny, you ain't thinking of . . ."

why so excited about this book?

Johnny sat down and pulled out his knife. "We're gonna cut our hair, and you're gonna bleach yours." He looked at the ground carefully. "They'll have our descriptions in the paper. We can't fit 'em."

"Oh, no!" My hand flew to my hair. "No, Johnny, not my hair!"

hair = Pony's identity, sets greasers apart from socs.

It was my pride. It was long and silky, just like Soda's, only a little redder. Our hair was tuff—we didn't have to use much grease on it. Our hair labeled us greasers, too—it was our trademark. The one thing we were proud of. Maybe we couldn't have Corvairs or madras shirts, but we could have hair.

"We'd have to anyway if we got caught. You know the first thing the judge does is make you get a haircut."

"I don't see why," I said sourly. "Dally could just as easily mug somebody with short hair."

"I don't know either—it's just a way of trying to break us. They can't really do anything to guys like Curly Shepard or Tim; they've had about everything done to them. And they can't take anything away from them because they don't have anything in the first place. So they cut their hair."

way to exert power

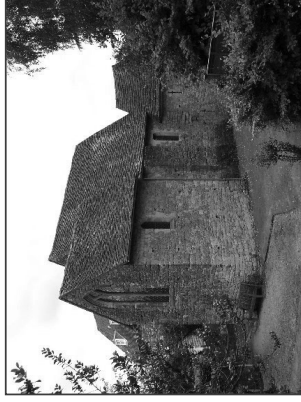
Section 2 The Age of Chivalry

KEY QUESTIONS

- What role did knights play in medieval society?
- What path did an individual follow to become a knight?
- What code of conduct were knights expected to follow?

VOCABULARY

- knight
- fief
- caltrops
- trebuchet
- crossbow
- chivalry
- page
- squire
- tournament



A fortified manor house built in 1290 in Kent, England

Fiefdom: A Warrior's Reward

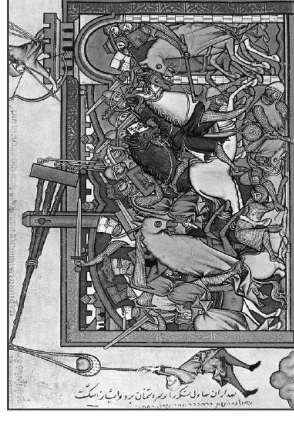
In exchange for defending a lord's lands and attacking his enemies, knights were granted a **fief**, a large plot of land that often included a manor house, farmland and forests. Being granted a fief was a profitable reward for service. Knights not only lived on the land, but enjoyed hunting rights and extracted fees from the peasants who lived on it. In this way, knights were able to live comfortably and afford the weapons, armor, and horses they needed to fight.

The Technology of Medieval Warfare

The battles that knights participated in were brutal thanks in part to new technologies. Saddles and stirrups, which existed in Asia as far back as 200 B.C., became widespread in European combat in the 700s. Once properly saddled on a well-trained horse, a knight was a formidable foe. He was able to stay seated and in control while wielding heavy weapons and ploughing through enemy soldiers.

Other war technologies included **caltrops**, sharp iron spikes that were strewn across the

battlefield. Knights had to avoid these or risk maiming themselves or their horses. **Trebuchets**, which shot large projectiles at great speed, represented another hazard to be avoided. And, finally, enemy soldiers were armed with **crossbows** that fired arrows capable of piercing a knight's metal armor.



Battle scene with trebuchet from French manuscript, 1250

The nobles of medieval Europe were in constant battle with one another. They raised private armies that fought to defend their lands, capture new ones, and increase their wealth. **Knights**, mounted horsemen who fought with great skill, were central to these efforts. By the 1100s, a code of behavior arose around knights and knighthood. These warriors enjoyed a glorified image that didn't always conform to reality.

THE WARRIOR'S ROLE IN MEDIEVAL SOCIETY

Warriors of all kinds played an important role in medieval society. The most valuable warriors were mounted knights. Beginning in the 700s, their skill in battle became essential to the lords they were pledged to. Lords generally expected their knights to fight for around 40 days a year. The rest of the time was spent in leisure and training.

KNIGHTHOOD AND CHIVALRY

Over time, a code of conduct, known as **chivalry**, developed around knights and knighthood. According to the code of chivalry, the ideal knight was not only skilled and courageous in battle, but was also righteous and just. He was supposed to provide protection to those who could not defend themselves and behave in a noble, courteous way. His was the role of a servant—faithful to his lord, his god, and his lady.

The Road to Knighthood Although a king could technically grant knighthood to anybody, most knights were of noble birth and followed a prescribed path. At around seven, a prospective knight would be sent to live with another lord. There, he acted as a **page**, or servant, and began to learn fighting arts and the code of chivalry. By fourteen, he graduated to the role of a **squire**. Squires assisted knights by tending to their horses, equipment, and doing anything else the knight required. By twenty-one, a successful squire could be knighted.

Young knights usually went on to travel for a year or two to get experience. They fought in local wars and proved their mettle at **tournaments**, sporting events in which men fought one another for glory and gold.

Tournament scene from a French manuscript c. 1325

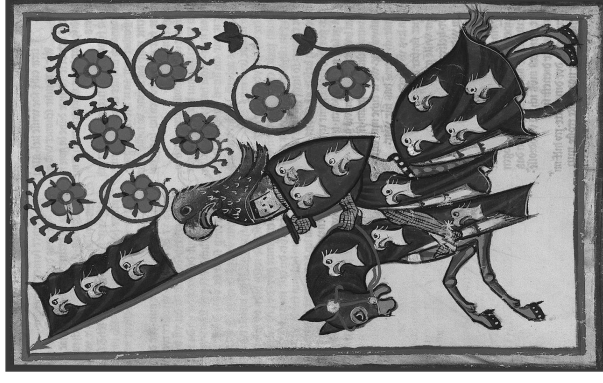


Scottish King David knighting a squire

The Glory and the Reality

Medieval culture idealized knights and knighthood. Poems, songs, and other art about chivalry glorified warfare and skirted its brutality. Knights were depicted as not only heroic, but romantic, willing to go to great lengths to win the affections of their lady love.

In reality, most knights did not live up to the lofty ideals of chivalry. They could be cruel to the lower classes, particularly those who lived on their fiefs. In battle, a knight's actions might just as easily be called brutal as brave. And women, the objects of a knight's supposed affection, were not treated as equals.



13th century German knight Hartmann von Aue, from the Codex Manesse

PRIMARY SOURCE

From the 14th-century epic poem "Sir Gawain and the Green Knight", this excerpt describes how Sir Gawain's five virtues are symbolized in the five-pointed star on his shield.



For Sir Gawain was known as a knight both good and true and faithful in five and many times five, and pure as gold, and void of all villany was he, and adorned with virtues... These five pure virtues were fixed in this knight more firmly than in any other... Therefore the knot was shaped on his strong shield, all with red gold upon red gules, called the pure pentangle among the people.

Taking Notes in Textbooks

- Write and underline each heading.
- Write down the main idea & supporting details for each paragraph.
- Keep your notes short and easy to read.

The Age of Chivalry

- Knights = horsemen who fought w/ great skill
 - Central to nobles' efforts to defend land + incr. wealth
 - By 1100s had code of conduct, glorified image

The Warrior's Role in Medieval Society

- Mounted knights = most valuable warriors
 - kn's skill essential to lords
 - Expected to fight ~40 days/year

Fiefdom: A Warrior's Reward

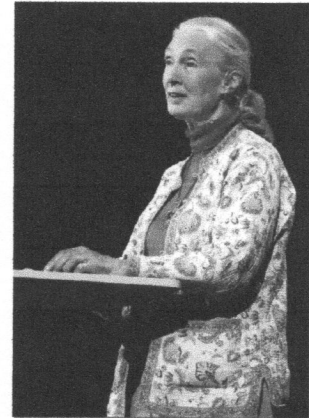
- In exchange for fighting, kn's given fief
 - Fief = plot of land w/ house, farm land, forests
 - Profitable reward - kn's lived/hunted on fiefs, collected \$ from farmers

The Technology of Medieval Warfare

- kn's battles brutal b/c of new tech.
 - Saddles/stirrups widespread in 700s
 - Allowed kn's to stay seated on horse, in control
- Other war tech:
 - caltrops: iron spikes on battlefield
 - trebuchets: shot large projectiles
 - crossbows: fired arrows that pierce armor

CHIMPS: OUR CLOSEST COUSINS

For hundreds of years, human beings believed themselves to be the only species capable of creating and using tools. That all changed in 1960, when primatologist Jane Goodall observed a chimpanzee in Tanzania's Gombe Stream National Park forming a twig into a long point and using it to collect termites for his dinner. In response to this discovery, Goodall's mentor, the anthropologist Louis Leakey, said, "Now we must redefine tool, redefine Man, or accept chimpanzees as humans." In fact, chimpanzees and other primates are our closest relatives in the animal world; they share nearly 99% of human DNA. Over the years, studies have shown us a great deal about the ways in which chimps are similar to us.



Jane Goodall

Chimps = our closest anim. relatives, sim. to us in many ways

Wow! *

THE MOTHER-CHILD BOND

Much of our knowledge about primate behavior comes from research done by Jane Goodall, who spent decades observing chimpanzees in Gombe. One of Goodall's key discoveries is that young chimpanzees, like young human beings, depend on their parents for an extended period of time. A young chimp travels on his mother's back, sleeps with her, and nurses until he is between four and six years old. He does not travel on his own until the age of nine, and frequently returns to travel with his mother until he is fully mature at the age of fifteen. This kind of long-term attachment is rarely seen in other species. — any besides humans?

* young chimps depend on parents for long time



Mother and child chimpanzees eating

The intensity of the mother-child relationship is another characteristic that chimpanzees share with humans. Chimpanzee mothers are affectionate and protective of their offspring. For example, when a baby chimpanzee begins to walk and climb trees, his mother will stay near to help him down from branches if he gets stuck. Chimp offspring return the favor by caring for their mothers as they age.

Goodall once observed an elderly chimp, Mother Bee, being fed by her daughter. Too tired and ill to climb a tree to acquire food, Mother Bee simply lay below. Her daughter, Little Bee, climbed the tree, fed herself and then climbed down and placed food in front of Mother Bee.

The length of time young chimps spend under the protection of their mothers gives them lots of leisure time. They can spend years playing and exploring their environment before taking on the responsibility of caring for themselves. However, being this dependent for so long also has a negative side. Because the mother-child bond is so strong, its disruption can be disturbing. Goodall observed that young chimps were sometimes traumatized by weaning or by the birth of a sibling. Just like human toddlers, they showed their displeasure through tantrums or sulking by themselves.

AGGRESSIVE AND ALTRUISTIC BEHAVIOR

Goodall had long thought that chimps were a relatively peaceful species, and was deeply disturbed when she discovered that, like humans, they have a dark side. For example, she observed males brutally attacking females with infants who encroached on their territory. Chimps have even been observed using tools such as sticks and stones to attack one another. Scientists believe that this kind of aggression increases the availability of resources for the attackers' offspring and makes them more likely to survive.

Even more disturbing, 1974 saw the start of what came to be known as "The Four Year War" among the Gombe chimps. It began when a group of six male chimpanzees attacked and killed a young male from a neighboring group. This was the first time anyone had observed one chimpanzee deliberately killing another. The violence continued over the next four years, during which one group systematically attacked and killed chimps in the other, taking over their territory and their females. Chimpanzees and humans are the only two species known to carry out organized violence in this manner.



Chimps being aggressive

In spite of their violent tendencies, however, chimpanzees' altruism, or unselfish concern for the well-being of others, can be quite remarkable. For instance, after a period of separation, chimps embrace, kiss, pat, and hold hands to greet each other just like people do. Scientists have observed them cleaning others' wounds, keeping flies away, and even cleaning a companion's teeth. More than once, Goodall saw chimps risk their lives to save other chimpanzees captured by pigs or baboons. This self-sacrificial behavior has also been observed in zoos where chimpanzees are kept on islands surrounded by water-filled moats. Chimpanzees cannot swim, yet some have lost their lives trying to save companions that fell into the water.

LANGUAGE ACQUISITION

Chimpanzees have also been studied in the lab. Some of the most interesting experiments have to do with language acquisition. In the mid-1940s, Keith and Catherine Hayes tried to teach a young chimp named Viki to speak. Viki learned four words – mama, papa, up, and cup – but ultimately the undertaking was a failure. As it turns out, the structure of the chimpanzee larynx makes them physically incapable of producing human language.

Other scientists tried a different route to teaching primates to speak. In the mid-1960s, Allen and Beatrix Gardner began teaching American Sign Language (ASL), which is based on hand signals, to an infant chimp named Washoe. Washoe ultimately learned more than 250 signs for actions and objects, as well as for abstract concepts like “more”. She was able to link these signs with the objects and actions they represented. For example, when she was asked in sign language to fetch an apple, Washoe would go and find an apple located in another room. She also strung signs together in new and creative ways. For example, she would refer to a refrigerator by signing OPEN FOOD DRINK, though the Gardners always called it COLD BOX.



Nim Chimpsky, a chimp raised among humans and taught ASL

The Gardners also discovered that chimps can invent new signs and learn language from each other. Another chimp, Lucy, had to wear a leash for her outings. She had no sign for leash, so one day, eager to set off, she held a bent index finger next to her collar. The sign became part of her vocabulary. A third chimpanzee, Loulis, was given no lessons in sign language. Yet by the time he was eight years old, Loulis had learned fifty- eight signs by imitating other chimps who had been taught ASL. He also received direct instruction from Washoe herself. These studies in language acquisition confirm that chimpanzee minds work much like human minds.



A chimpanzee using tools

Thanks to the research of scientists like Goodall and the Gardners, we now know that humans and chimpanzees share a number of traits, behaviors, and abilities. These striking similarities raise important questions. What, for example, can we learn about ourselves by studying chimpanzees? And what differentiates us from chimps? In other words, what makes us uniquely human? Grappling with these questions is a task for all of us, not just scientists.

Annotating Nonfiction

How to annotate:

- Mark important lines or passages. You can underline, circle or use brackets.
- Write short notes in the margin.

What to annotate:

- Main ideas
- Key arguments
- Brief summaries of important information
- Important terms
- Your comments and questions

What's wrong with these annotations?

- humans believed only we use tools

- 1960: Goodall saw chimp using twig

- chimps are our closest relatives in animal world

- studies show they are similar to us in many ways

99% of DNA is a lot of overlap!

- 4 yrs: travel on mom's back, sleep w/ mom, nurse
- 9 yrs: travel on own, return
15 yrs: fully mature

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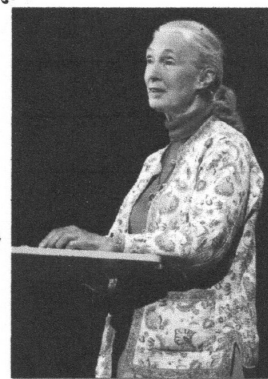
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Jane Goodall - lots of discoveries re: chimps, key discovery = chimps depend on parents for extended period

Text Structures

A **text structure** is how an author organizes information. For example:

- Description
- Sequence
- Comparison
- Cause-Effect
- Problem-Solution

Paragraph 1: _____

Have you ever seen the aurora borealis, or northern lights? They look like rivers of greenish-blue light swimming in the sky. But why do they appear? The aurora is caused by the interaction of solar wind and the Earth's magnetic field. Because the Earth has an iron core, our whole planet acts like a giant magnet. Super-charged particles from the sun's solar wind excite the atoms in Earth's magnetic field. As a result, the atoms light up and treat us to an amazing light show in the sky.

Paragraph 2: _____

Cat owners who love animals have always faced a troubling dilemma: in order for their pet to eat, other animals must die. Cats are, after all, carnivores. In response to the demands of animal-loving cat owners, one company has found a way to grow meat in a laboratory without harming any animals. Instead, a few cells are painlessly collected from a donor mouse, and then allowed to grow and multiply in a Petri dish. The answer is a cruelty-free mouse meat treat that cats love!

Hákarl: The National Dish of Iceland



Have you ever heard of a dish called Hákarl (how-kar-ul)? The story of this curious food begins with the gurry shark, a large, slow-moving animal that lives in the cold waters around the North Pole. It's unique because it's the only creature on Earth with extremely high concentrations of a compound called trimethylamine oxide, or TMAO.

TMAO has a positive effect for sharks and a negative effect on people. For the sharks, it acts as a natural antifreeze and keeps them from getting too cold in the arctic waters. When consumed by humans, however, TMAO is poisonous. It causes nausea, vomiting, and neurological issues similar to those you'd get from drinking too much alcohol. Eat enough gurry shark, and the consequences could be deadly!

While TMAO clearly isn't a problem for sharks, it was a big problem for the early settlers of Iceland. Desperately hungry, they tried eating gurry sharks, only to find themselves poisoned by the TMAO in the shark's flesh.

Although the obvious solution would be to not eat gurry sharks, that wasn't an option for the hungry Icelanders. Instead, they came up with a different answer: let the shark flesh rot! It turns out that if you bury gurry shark flesh for 6-12 weeks, dig it back up, and then let it air dry for another few months, you're left with a cheese-like snack that's completely safe to eat. The Icelanders call it Hákarl, and it's considered a delicacy.



Shark meat drying

Study Skills & Strategies

Tips for Successful Time Management

- Make a schedule and stick to it.
- Set realistic goals.
- Avoid multitasking.
- Eliminate distractions.
- Schedule in flexibility and fun.

Sample Study Schedule

2:30 – 4:30:	Soccer practice
4:30 – 5:00:	Arrive home, have a snack
5:00 – 6:00:	Outline and write intro of Eng. essay
6:00 – 6:30:	Dinner
6:30 – 7:00:	Do math assignment
7:00 – 7:30:	Study break / relax
7:30 – 8:30:	Study for bio test

Avoiding Procrastination

Most students procrastinate at some point. Here are some tips to help you deal with procrastination effectively:

- Figure out why you're procrastinating.
- Use time management strategies: make a schedule and set realistic goals.
- Set up a study space with few distractions—put your phone away!
- Motivate yourself: build in breaks and rewards.
- Start with a small step. Don't get overwhelmed by thinking about the whole project at once.
- Don't be a perfectionist. You can always fix a first draft later.

Test Prep

- Organize your materials and your space.
- Use study tools actively:
 - Quiz yourself using flash cards or a study guide.
 - Use your notes to do tellbacks.
 - Think like a teacher—ask yourself questions you think will be on the test.
 - Go back to anything you missed or didn't understand.
- Don't cram!
 - Schedule short, focused study sessions.
 - Spread out your sessions.

Test Taking

Before the test:

- Get enough sleep.
- Get to class on time and prepared.
- Don't cram right before the test.

During the test:

- Listen to and read instructions carefully.
- Preview the entire test before you begin.
- Don't get stuck on hard questions—skip them and return later.
- Review the entire test before turning it in.

Strategies for different question types:

- Multiple choice questions: read the question carefully and read all the answer choices—don't stop on the first one that seems correct.
- Short answer questions: answer as much of the question as you can.
- Essay questions: make an outline on scrap paper or in the margin.

Reading Speed Grid

The Outsiders: 9.5 words per line

# of lines	Reading Speed
1	9.5
2	19
3	29
4	38
5	48
6	57
7	67
8	76
9	86
10	95
11	105
12	114
13	124
14	133
15	143

# of lines	Reading Speed
16	152
17	162
18	171
19	181
20	190
21	200
22	209
23	219
24	228
25	238
26	247
27	257
28	266
29	276
30	285

# of lines	Reading Speed
31	295
32	304
33	314
34	323
35	333
36	342
37	352
38	361
39	371
40	380
41	390
42	399
43	409
44	418
45	428

# of lines	Reading Speed
46	437
47	447
48	456
49	467
50	475
51	485
52	494
53	504
54	513
55	523
56	532
57	542
58	551
59	561
60	570

Conducting a Timing in a Different Book

1. First figure out how many words per line your book has. Choose a full line of text (not a short or indented line). Count all the letters, punctuation marks, and spaces in that line, divide by 6, and round to the nearest whole number. That is the average words per line for your book.
2. In your book, mark where you'll begin reading and read for exactly one minute.
3. Count the number of lines you read during the minute. Multiply the number of lines by the number of words per line from Step 1. This is your reading speed. For example, if you read 16 lines in a book that has 11 words per line, your reading speed would be 16×11 , or 176 words per minute.

Reading Speed Tracker

Words Per Minute

550

500

450

400

350

300

250

200

150

100

50

Speed:

Date:

Title:

