**Chatman Writing Samples August 2020**

**Chatman Writing Sample - Senior Care Blogs**

***Is it age-related memory loss or something else?***

An estimated 40% of those 65 and older have “senior moments,” brief episodes of forgetting a word on the tip of the tongue or losing track of the name of a former coworker. Failure to remember details of the plot of a movie or the name of a soap advertised on TV are not signs of brain disease. These reminders of advancing age may be inconvenient or embarrassing, but they are normal features of the slow cognitive decline characteristic of the aging process, requiring little more than a sense of humor and self-acceptance to navigate.

While people of any age may forget trivial things when they are in a hurry, under stress, suffering from illness, recovering from surgery, or just growing older, dementia is another matter, more disconcerting and debilitating than simple slips of memory. Clinicians often offer lists of telling contrasts to make visible the difference between age-related forgetfulness and dementia.

In contrast to ordinary forgetting of a friend’s birthday or a dental appointment, dementia reveals itself with inexplicable gaps in a person’s recall of important personal dates and historical events. When greeted by her grown children at her front door with a loud, happy call of “Happy Anniversary,” Claudia may appear startled and ask, “Whose anniversary is it?” On July 4 when the fireworks display begins and the high school band plays “Stars and Stripes Forever,” Anthony may ask his wife if a war has started or whether someone in the neighborhood is shooting at them.

As dementia progresses, memory losses increase. An articulate, well-educated woman may forget what she ate for breakfast or that she and her husband had just discussed selling their piano. As a result of their fragile memory, dementia patients repeat questions. “Does anyone here smoke cigars? Who sleeps in that bedroom?” Eventually, not only is verbal information scrambled, but so is visual memory.

Family and close friends know that something is wrong when someone who has been in their lives for years no longer recognizes their faces.

Dementia may progress more quickly or slowly depending on its physiological basis. Creutzfeldt-Jakob is fast-moving due to a rapid build-up of proteins in the brain called prions. Alzheimer's, Lewy body dementia, and frontotemporal dementia progress slowly but involve severe symptoms involving personality changes, hallucinations, sleep disorders, and disruptions in language and speech patterns. The common thread in all dementias appears to be a mysterious process whereby misfolded prions destroy brain cells.

Surveys of American adults reveal that Alzheimer’s is second only to cancer as the most feared illness. For most people, dementia looms as a family of irreversible brain diseases destructive of memory, personality, and thinking skills. More than five million Americans have been diagnosed with Alzheimer’s, and as the population of the elderly increases, the total could reach 14 million. The toll the illness takes on everyone close to an Alzheimer’s patient helps to explain why it is so frightening.

But is it still incurable? Recent research into the genetics of Alzheimer’s at Case Western University School of Medicine offers hope that a newly discovered gene-protein relationship may be the key to allow scientists to suppress the development of proteins already identified as agents in the brain disease process. By all reports, experiments with mice have been promising. **543 words**

**Nutrition and Seniors: How to Help Them Eat Well**

Frank never was much of a chef, but he got by for 70 years with his homemade concoctions: beans and weenies and sliced cheese and ketchup on white bread, washed down with a Pepsi. At a recent exam, Frank’s doctor warned him that that he needed a diet with less salt, starch, fat, and sugar, and more vegetables and lean protein. Frank balked at the doctor’s suggestion, but when his nephew learned of the conversation, he enrolled his Uncle Frank in a senior lunch delivery service.

Frank promised to give it a try, but after a week, he complained to his nephew that the meals were horrible.

“Frank, it’s a free lunch. What’s wrong with the food?”

Frank’s answer was carrots. He hated carrots, even mixed with peas, and he was not fond of broiled chicken either. “That’s all it is,” Frank griped. “Chicken and carrots, wheat bread, and a plastic cup of peaches or apple sauce. Bottled water. Not even a cookie.”

Frank’s problem with healthy food was its taste. Seniors like Frank grew up eating the healthy meals of the 1950’s, meat and potatoes, rolls or biscuits slathered with butter, whole milk, and chocolate cake. Nobody had heard of cholesterol, and calories didn’t count when most people worked with their hands and stood on their feet for ten hours a day.

Would Frank now be forced to say goodbye to his favorite foods? His nephew’s answer surprised him. “Doctor it up, Uncle. Got any barbeque sauce or peppers to spice up that chicken? Could mayo or mustard jazz up the carrots? How about a spoonful of peanut butter for your bread? You have the fixings. Just mix in your secret sauce.”

Frank is not alone. Americans of every age are learning to love healthy food. Ingrained habits make dietary changes a struggle. So, what do the nutritionists advise for overweight or change-adverse seniors?

The tip Frank’s nephew offered is consistent with what the dieticians say. Great chefs have always known how to take a blob of white fish or a bowl of cauliflower and make them look, smell, and taste delicious. Lemon butter turns the fish delish, and roasted garlic sprinkled with parmesan cheese transforms cauliflower into a taste bouquet.

Those who prepare meals for elders should not force them to renounce all their favorite dishes. Serve one or two special favorites each week, such as meatloaf (substituting ground turkey for beef) or potato soup with a broccoli garnish (in smaller portions than Mom would have put on the table in the 1950’s).

The experts say that the trick of healthy cooking and eating is substitution. Swap high-calorie, salty, sugary flavor enhancers like butter, gravy, and molasses for lemon or orange zest, sliced bell peppers, a sprinkle of chives, or a half cup of lightly salted seeds or nuts.

A combination of old and new ingredients may quickly become Uncle Frank’s new favorite. A lifelong Southern fried chicken lover may learn to prefer chicken baked in low-calorie mushroom soup with fresh onion slices. A lady with a sweet tooth can learn to smile for baked apples drizzled with honey and brown sugar and caked with raisins and cinnamon but minus the pie dough and refined sugar of yesteryear’s recipe.

**541 Words**

**Kae Chatman Obit Space Blog 2 – July 2020**

Individual lives are stories. Stories end, abruptly as an April storm or slowly as an August sun slips into nighttime. But regardless of how the story ends, each life deserves a place and time set aside for its telling.

A remarkable quality of today’s funeral directors is that they follow the direction of families. They listen, advise, and empower survivors to personalize memorial services and care for the deceased. Funeral directors know the applicable state laws, the cost of post-mortem services, how to obtain a death certificate, how to recover and transport human remains, and how to make final arrangements that align with the circumstances of the death and the desires of the deceased, close friends, and family.

Americans in the 2020’s are directing funerals back-to-the-future. Baby boomers of every political stripe have rediscovered and repurposed old-timey home funerals and back yard burial practices abandoned in the 1950’s as archaic and unsanitary. Libertarians want the government to end death taxes and constraints on family traditions and religious rituals, while progressives favor flute music, bare feet, body baskets, decorated shrouds, and natural settings for dignified, chemical-free decomposition.

As the 20th century dawned, most Americans were farmers, factory workers, trolley car operators, icemen, maids, seamstresses, and launderesses. Funeral customs emigrated to the U.S.A. from Ireland, Germany, Poland, Russia, China, and Mexico. Segregated African-American communities buried their own and guarded their graveyards from vandals.

Few Americans were affluent. Many spoke little English. They tended their sick at home, and when someone died, their relatives washed and dressed them, left them in bed for visitation, and held wakes or sat *Shiva.* Men nailed pieces of scrap wood together to fashion coffins. New York City provided potter’s fields to bury indigents. In rural America, family plots or church yards were the last stop on the path from birth to eternity.

When did these simple customs fall into disrepute? American funeral traditions survived without great change until public health menaces instilled a fear of contagion from dead bodies. In 1918-1919 a viral pandemic called the Spanish flu killed millions world-wide. In the 1920’s-1930’s, Americans were terrified by tuberculosis, a debilitating and deadly bacterial disease. In the 1940’s- 1950’s, polio crippled American children and left a U.S. president lame from a childhood encounter with the disease.

That was then. Why should middle class Americans now want to explore home funerals or conduct memorial services in unconventional settings? One driver of the trend is the cost of traditional funerals and burials (ranging upward from $10,000). But it’s not just sticker shock. In the words of critics of America’s 20th century way of death, it’s too “industrial,” meaning cold, impersonal, conforming, non-diverse, and dangerous to the environment. Educated, well-off Americans seek control over their deaths. They search for personal meaning and want their values to guide their choices.

*Don’t get me wrong. The mortuary arts accomplish marvels in restoring the blush of youthful flesh and concealing the ravages of illness. The deceased reclined on a pillow-lined casket with soft lights overhead appears to enjoy a hard-earned peace, creating what used to be advertised as a “beautiful memory picture.” In some cases, the preservation of the loved one’s face for public viewing is all-important to the family and to the community.* *There is nothing wrong with choosing post-mortem cosmetic treatment.*

*Moreover, persons who pass away without medical attention, or whose bodies are unsuitable for viewing should be mourned at a closed casket service or after cremation. Photographs, personal artifacts, video and audio tapes, and eulogies can remind survivors of their loved one’s face, voice, hobbies, handiwork, and life accomplishments.*

*Home funerals, celebrations of life, and green burials are not for everyone. Some find the thought of bathing, dressing, and displaying a dead relative in their living room to be creepy. Others recoil at the idea of packing dry ice around their partner’s body to preserve it for home visitation. Condo owners, mobile home and apartment dwellers, and those who live in a travel trailer are not equipped to conduct a home funeral.*

There is nothing wrong with what funeral homes do except that sight and smell are not the only ways we know, love, and miss those we lose to death. A contributing factor in reviving interest in home funerals is the desire of many survivors to have and hold their loved ones who have died. Touch is, after all, the oldest of our senses. The tactile sense is supremely reliable in communicating feelings of love, care, support, and acceptance.

The satisfaction unmet by mortuaries is the need some survivors feel to hold, kiss, comb the hair, and pat the hands of their loved one. Often, all too quickly, the dead are whisked away, unembraced, from a hospice bed to an embalmer. For the parents of a young child, for a spouse or partner, and most of all for a lover, the immediate loss of the beloved’s body with no time for touch burdens grief with added devastation.

Another desire that at-home services provide is privacy. I know a couple who had yearned for children but had difficulty conceiving. At long last, she was pregnant. She glowed. He grinned. They leveraged every dollar they had to buy a child-friendly farm house with a barn, a garden, and acres of land running with brooks and deer, and dotted with trees that would mature to become make-believe forts or fairy castles. They imagined their child running, exploring, jumping, and laughing from one end of their property to the other.

Five months along, all movements stopped. Her doctor confirmed what she already guessed. The tiny one they had dreamed about would be delivered stillborn.

Somehow, she underwent the delivery and received a death certificate with a name recorded on the paper along with a small, decorated box. “This is yours,” the doctor said. The box was uncannily light, yet unbearably heavy.

The couple went home, where they decided to make and decorate a box slightly larger than the hospital’s container. One box fit inside the other. When they were ready, they spoke to each other and to the one they buried on their property in a place known only to them.

Happily, these sweet people made a baby who lived. The child runs like a deer, laughs and hides in the barn, and discovers new pathways through the woods.

Each life is a story. Each story has an end. The question now is not which type of funeral or burial we should choose but which choice is available, practical, and able to bring peace to the survivors. Meanwhile, we should appreciate all who help us bid farewell to those we will never stop missing. (55)

**1,111 words**

***Do you telegraph your emotions? Samuel Morse did.***

**Morse and the Invention of Telegraphic Communications**

Samuel Morse (1791-1872), the chief architect of the telegraph as a means of mass communication, quit his successful career as an artist and turned to invention following the unexpected death of his beloved wife Lucretia. In 1825, Samuel Morse had traveled on horseback more than 200 miles from Connecticut to Washington, D.C., to accept a $1,000 commission to paint the portrait of the Marquis de Lafayette, one of America’s great revolutionary heroes.

In the USA of 1825, there was no quick way to send messages over long distances. The U.S. mail moved at the speed of horses, so the letter Morse’s father sent to inform him of Lucretia’s death took five days to reach him. Morse immediately saddled his horse to return home, but by the time he arrived, his young wife and mother of his three children had already been buried.

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<https://npg.si.edu/object/npg_NPG.80.208>

Self-portrait, 1812, Samuel More, National Portrait Gallery

Over the next four years, Samuel Morse buried both his father and mother. Overwhelmed with grief, he took an extended holiday in Europe. On his voyage home in 1832, Morse met Charles Thomas Jackson, an inventor with a lively interest in the possibility of long-distance wire transmission of electrical impulses. The conversations with Jackson sparked his creativity, and Morse began to sketch ideas for mechanical devices that might realize Jackson’s plans.

As his grief subsided, Morse’s impatience with the horse and buggy pace of communication in the 1830’s found an outlet. He was not alone in thinking that the time for remote message-sending was at hand. He shared with many others of his time a fascination with the battery, a device invented in 1800 by Alessandro Volta that used cloth soaked in salt water together with zinc and copper discs to generate an electric current. Later inventors in the USA and Europe learned to coax the electrical current to move through wires hung on poles and connected at transmission and receiving stations.

In 1825, the same year that Lucretia Morse died, Leopoldo Nobili was the first to design an instrument to measure an electrical current. Other experimenters found that the coiling of wires produced a magnetic field that would cause a needle inside the coil to twist and turn.

In the 1830’s, Inventors – an elite fraternity into which Samuel Morse had already established himself as a member -- tried various ways to manipulate a current to send electrical signals. Early attempts at remote communication through visual devices called semaphores or optical telegraphs proved ineffective due to the vagaries of changing weather, variations in land elevation, and limitations in the size and strength of visible materials. The common goal of the experiments was to manage the electrical impulses generated by the batteries to make remote communication possible. When the visual telegraph failed, the intrepid inventors shifted their experiments to sound as a means to sending messages through wires.

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**Telegraph Key**

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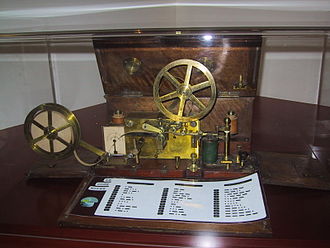
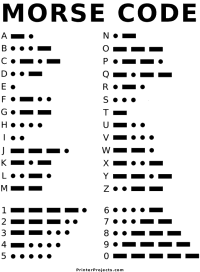
 

Chart from <https://www.pinterest.com/pin/241927811210863081/>

It was in his adaptation of auditory technology to mathematical symbols and human language that Samuel Morse excelled. Morse’s first telegraphic device used a clicker to send and receive signals. In 1838, Morse also invented a numerical and alphabetical code – the dots and dashes of Morse Code – to make possible the transmission of information through telegraph wires.

The operator at a sending station would tap out messages in Morse Code on a telegraph key. The operator at the receiving location would then translate the dots and dashes of Morse Code into text messages. During the American Civil War (1861-1865), President Lincoln and his Union generals used telegraphic communication to coordinate their attacks on Confederate units, and in a fitting tribute to Lucretia Morse, they could tell the families of Union soldiers the outcome of battles within hours after the cannons had ceased firing.

Before the 19th century ended, most developed nations had built telegraph networks with local offices. Not only generals and presidents, but ordinary people, businesses, railroads, and newspapers could purchase and send short messages called telegrams to any city or sizeable town. By 1854, ocean cables moved messages across continents and seas.

The 19th century was the golden age of the telegraph. Newer, faster communication technologies introduced in the 20th century replaced telegraphs with teletypes, radio, television, satellites, and ultimately, computers, the internet, and mobile phones. But the deeply human need to communicate--the faster and cheaper the better—serves to remind us how much a grief-stricken Samuel Morse and his associates developed communications technology to serve ordinary people who were lucky enough to live in an extraordinary era of invention. **737 words**

**Chatman Writing Sample- Philosophy March 2020-Free Will**

**Case Study 1 - Sparky**

**Since early childhood, Sparky has been fascinated by fire. He has set fires in his back yard, in his kindergarten classroom, and in his grandmother’s attic.**

**At age 12, Sparky is in court-ordered therapy. He says he loves fire because the flames are unpredictable and powerful. Sparky has little insight into why he sets the fires or why his parents are deeply concerned about him. If he sets another fire, he will spend his teenage years in a youth detention facility.**

***Questions for group discussion:*** *Is an action free if it comes about as a result of a compulsive disorder or mental illness? Do children and adolescents have the same mental capacities as adults? Can fire setting behavior be “cured” with therapy?*

**Case Study 2 - Senator Ping**

**Senator Ping is by far the most successful member of his family, which has an unusually high number of alcoholics. In his early years, Paul Ping was an outstanding student, an athlete, and a brilliant law student. He seldom used alcohol.**

**Following his election to the U.S. Senate, however, Senator Ping found himself in an environment in which elected officials were wined and dined by lobbyists and citizen groups. He began to drink socially, and over several years, became alcohol dependent. He has been intoxicated in public, and his reelection chances are slim.**

***Questions for group discussion:*** *Did Senator Ping decide to become an alcoholic, or is he the victim of genetic and/or environmental determinism?*

**Case Study 3 - Jane**

**Jane is a chronically anxious woman, who has long worried that she might develop cancer. Two months ago, she learned that she has lung cancer, even though she never smoked cigarettes or was knowingly exposed to asbestos.**

**Now Jane blames herself for getting sick. Her therapist told her years ago that if she didn’t learn to control her stress levels, she could become ill.**

***Questions for group discussion:*** *Did Jane’s anxious thoughts manifest as a physical disease? Did she choose to be sick? If we can give ourselves cancer from stress, can we cure cancer with pleasant thoughts?*

**Chatman Mometrix Testing 2019 AODA counselor exam**

**How do I become a licensed alcohol and drug abuse counselor?**

Each state specifies which exams and passing scores are required to license counseling professionals. The International Certification and Reciprocity Consortium (IC&RC) recognizes the Alcohol and Other Drug (AODA) Counselor exam as a reliable assessment of a test taker’s knowledge of drugs, drug use, and the alcohol and drug counseling process.

**Who should register to take the AODA Counselor exam?**

The AODA test is designed for those with the education and supervised work experience to qualify for a state license as a substance abuse counselor.

To register for the AODA exam, follow the instructions of your state, province, or national board listed on the IR&RC website. These local boards establish eligibility standards, exam fees, dates, and testing sites for the AODC. Be prepared to document your education and to pass a criminal background check.

Once the board approves your application to take the AODA, you will receive an admission letter in the mail.

**How is the AODA Counselor test administered?**

ISO-Quality Testing manages sites that administer the AODA Counselor exam, a three-hour test consisting of 150 multiple choice questions. Upon entering the test location, test takers must present the admission letter sent to them by the IC&RC as well as a government-issued photo ID. No personal possessions, scratch paper, or study materials may be brought into the test site.

**What does the AODA test cover?**

The AODC exam is content-driven. To score well, you must demonstrate detailed knowledge of the physiological and psychological effects of commonly abused substances, legal and illegal, the societal and legal consequences of alcohol and drug dependency, and the legal and ethical obligations of a certified counselor. A few examples of likely test questions follow:

* What is the space between two neurons called?
* How do barbiturates affect the brain stem?
* How long can a drug screening test detect methamphetamine use?
* Which tests provide reliable measures of blood alcohol level?
* What does the term *formication* mean?
* When, if ever, is an alcohol or drug abuse counselor required to break client confidentiality?
* Who is responsible for creating a drug treatment plan?

**I’m busy. How quickly can I master the AODA test material?**

Preparing for the AODA Counselor test takes effort, but a solid study plan need not waste your time. A focused, test-centered approach pays off. You get maximum traction on your road to AODA test success when your study involves the practice testing, content review, and memorization drills available to you with Mometrix’s AODA Counselor test preparation materials.

**How should I begin my study for the AODA Counselor exam?**

Don’t study until you take the [**Mometrix Academy AODA practice test**](https://www.mometrix.com/academy/alcohol-and-drug-counselor-exam-practice-test/)**,** a free online practice quiz to help you estimate the amount and type of preparation you may need. Of the 15 questions, how many did you get right? If this practice quiz were the actual AODA test, would you have passed?

**What if I need to review everything the AODA exam covers?**

Look into Mometrix’s [**AODA Exam Secrets Study Guide**](https://www.mometrix.com/studyguides/aoda)***.*** Available in both print and Kindle editions, AODA Secrets offers a recap of every key area on the certification exam:

* Pharmacological and Physiological Effects of Alcohol and Drugs
* Clinical Evaluation of Addiction
* Treatment Planning
* Service Coordination
* Counseling
* Client, Family, and Community Education
* Documentation
* Professional and Ethical Responsibilities

The [**AODA Exam Secrets Study Guide**](https://www.mometrix.com/studyguides/aoda)also includes advice from testing experts on when and how to guess the answers to tough questions, how the wording of a question often hints at the answer, how to manage study time, and how to control test anxiety.

**Where can I find additional AODA Counselor practice tests?**

Mometrix’s [**AODA Exam Practice Questions**](https://www.amazon.com/AODA-Exam-Practice-Questions-First-ebook/dp/B00R6P8MJI/ref=dp_kinw_strp_1)gives you for 120 pages of test readiness in paperback or Kindle format. Answer keys follow every practice exam with in-depth explanations of which answers are correct and why.

**How can I make the most of my available study time?**

Take your AODA Counselor test preparation materials with you. Mometrix’s [**AODA Flashcards**](https://www.flashcardsecrets.com/aoda) are designed to fit into your hand and your busy schedule. Flashcards break large bodies of test content into manageable chunks of information you can memorize in a ten-minute coffee break. Picture this: one card may list several drugs and ask a question about a common side effect. The flip side of the card then reveals the answer. Another card might feature a definition and ask you to name the term, which is which is printed on the other side.

**Will Mometrix really help me pass the AODA Counselor exam?**

Yes. Ask any assessment expert. Repetition of key terms and practice tests that mirror the content and format of the actual exam develop the test taker’s competence and confidence.

Read the reviews. Mometrix produces the best test preparation materials on the market.

**Chatman Sample – NCPT Test (for the Mometrix Test Preparation Company)**

**Who should take the NCPT exam?**

As the demand for health care grows, so does the need for certified phlebotomists. Hospitals, blood donor clinics, and medical research laboratories prefer certified technicians who have the knowledge and skills to follow strict health and safety standards while drawing blood from a diverse patient population.

The National Center for Competency Testing administers the National Certified Phlebotomy Technician (NCPT) exam for phlebotomists who seek expanded career opportunities and higher pay. Candidates for certification must have completed a high school diploma or a GED and a medical laboratory training program. Applicants may register for the Certified Phlebotomist Exam on the NCCT website.

**What is the cost to register for the NCPT exam?**

The fee for taking the NCPT is $90 for recent graduates, students enrolled in a medical laboratory technician program, and for military service members. The fee is $135 for working phlebotomists who graduated from their program more than six months prior to testing.

**Where and when is the NCPT offered?**

NCCT makes the NCPT exam available at more than 700 tests sites in the USA. Registered candidates should call 800-875-4404 to locate a convenient test location, date, and time. Test takers must bring a government issued, photo ID; the name and address must match the candidate’s registration information.

No food or beverages are permitted in the testing area. Electronic devices cannot be used during the testing period.

**Are accommodations available for test takers with disabilities?**

Yes, if arrangements are made at least four weeks in advance of the scheduled test date. The NCCT Candidate Handbook explains how to submit a written request with supporting documentation for specific accommodations.

**How long is the NCPT exam?**

The NCPT exam is a 2 ½ hour test with 145 scored questions, available in both computerized and paper versions.

**What does the Phlebotomy technician exam cover?**

The NCPT is organized into six content areas with varied numbers of scored questions:

Quality and Professional Issues - 26

Infection Control and Safety - 30

Terms and Anatomy – 19

Orders and Equipment Selection – 26

Patient ID and Site Preparation – 15

Collection, Problems, and Corrections – 29

Testable topics range from aldosterone levels, blood smears, and cytomegalovirus, to patient rights, the radioallergosorbent test, tunica media, and valves. The questions follow a multiple-choice format.

**What is a passing score on the NCPT?**

NCPT scores are computed for the correct answers given. There is no single passing score. Instead, question values are weighed according to how essential the relevant knowledge to answer a question is to the candidate’s performance as a certified phlebologist. In other words, easier questions earn more points than the difficult questions.

**What happens if I fail the NCPT test?**

Candidates who fail the NCPT receive a score report highlighting content areas they need to review. A 30-day waiting period is required before a candidate for certification may retake a failed examination. Only three attempts are permitted. Candidates must reapply and pay the fee for each retest.

**How should I study for the NCPT exam?** *Proprietary information follows.* **793 words**

**Chatman Sample - Online Lecture: Machine Learning and AI April 2020**

**Machine Learning** is the way machines “think” to accomplish simple, repetitive tasks.  Their sensors perceive a range of sights and sounds.  When the machine “hears” or “sees” certain objects, they compare the new experience with earlier learning to recognize the shape or sound of a dog or a laundry basket.  Many ordinary household appliances possess this type of intelligence.  They are programmed to do a limited range of tasks.

**For example: “How does Roomba work?”**

Woodford, Chris.  “Roomba robot vacuum cleaners.” [https://www.explainthatstuff.com/how-roomba-works.html (Links to an external site.)](https://www.explainthatstuff.com/how-roomba-works.html) Updated: December 17, 2018.

**Artificial intelligence**

Smart machines or computerized systems possess capabilities we think of as “higher” intelligence.  Not only might they **recognize patterns** and perform a limited range of repetitive tasks, but they may also **learn to generalize and predict outcomes**from raw data or evidence.

A smart machine might not only recognize that is X a laundry basket if it has characteristics a, b, c, and d, but it **can reach a conclusion** that the basket is full (and if it has arms, empty the basket).  A smart machine might not only take temperatures, record blood pressure, and isolate plaque in blood vessels, but it may be able to assemble that information and calculate a patient’s risk of having a heart attack.

Artificial intelligence, like human intelligence, is built up from simple perception and cognition to the detection of “problem” outcomes. Problem detection and counter-measures make artificial intelligence extremely useful in national defense, medicine, and economics (to name a few applications).

**Further Reading**

Bates, Sofie.  “How do we teach robots to do simple tasks?” Stanford University Engineering Department, Stanford Magazine.  Oct. 31, 2018.

[https://engineering.stanford.edu/news/how-do-we-teach-robots-do-basic-tasks (Links to an external site.)](https://engineering.stanford.edu/news/how-do-we-teach-robots-do-basic-tasks)

Harris, Tom. “How Robots Work.”

[https://science.howstuffworks.com/robot6.htm (Links to an external site.)](https://science.howstuffworks.com/robot6.htm (Links%20to%20an%20external%20site.))

 Wilson, Robert. “How do robots think?” *Electronics Weekly*, 9 September 2014. [https://www.electronicsweekly.com/blogs/viewpoints/robots-think-2014-09/ (Links to an external site.)](https://www.electronicsweekly.com/blogs/viewpoints/robots-think-2014-09/)

**Chatman Sample - Textbook Project: “Caretaker Training - Bathing the Elderly and Disabled” - Introduction/skills/background**

Training caretakers with no medical experience and limited English language skills can be tricky. Patient care experts may wonder how best to convey instructions to aspiring CNAs about caring for fragile patients, especially when the lesson involves sensitive, emotionally charged activities such as bathing. We suggest that trainers borrow techniques used in medical schools to shift the students’ focus from theory to practice, empowering trainees to employ their senses and develop confidence in their abilities to serve as caretakers.

Touch is the oldest and most powerful of senses. People often ignore sights or sounds, but a touch is immediate, close at hand, chilly or warm, relaxed or anxious. The tactile sense is supremely reliable in communicating feelings of care, support, and acceptance. Even those who cannot speak the patient’s language can convey their attitude eloquently through their hands as well as their tone of voice and facial expressions. Well trained hands can detect knots, sore spots, swellings, and other anomalies on a patient’s body, alerting the caretaker to patient discomfort or lack of sensation, which the CNA should report to a supervisor.

*Nurse educator voiceovers, videos, or illustrations may encourage trainees to run their hands over their own arms or those of other students to experiment with the speed, pressure, and direction of the touch best suited to bathe, comfort, respect the modesty of the patient.*

*If gloves must be worn to bathe patients with infectious diseases, they may be added to the hand training, as well as towels, washcloths, sponges, cotton swabs or toothbrushes.*

Trainees should practice the recommended hand motions and be invited to describe their life experiences of bathing family members. The more trainees recognize that they already possess important life skills and have the capacity to contribute valuable information concerning a patient’s condition, the greater their confidence will be in themselves and in their CNA training.