

Chapter 1 : Lewis Thomas Quotes - BrainyQuote

The Lives of a Cell: Notes of a Biology Watcher () is collection of 29 essays written by Lewis Thomas for the New England Journal of Medicine between and

Highlight and copy the desired format. Lives of a Cell: Emerging Infectious Diseases, 21 4 , Without these previously independent lives working together, we would not have the capacity for thought, communication, and movement. We are shared, rented and occupied. Our lives depend fully on the earth, including the atmosphere, and the many other human and nonhuman lives that occupy it. In explaining this complex interdependence, Dr. The labs develop and compare DNA patterns from bacterial pathogens submitted by state, Food and Drug Administration, and US Department of Agriculture laboratories from across the nation 5. The work of PulseNet provides insight into the lives of a bacterial cell through DNA pattern matches. For some matches, the connection is clear; for other matches, no connection is known. Yet these bacteria are not just the same strain or type; they have identical or nearly identical patterns of DNA. Without this special attribute, we would still be anaerobic bacteria and there would be no music. Others result from mobile genetic elementsâ€”snippets of DNA that are able to move between bacteria 6. Suddenly a cell exists that creates a brand new pattern. As each of the cell progeny divides, the new pattern lives on in each new clone. These progeny are the lives of a cell. Some patterns are stable and spread so far and wide so long ago that they exist throughout nature. The PulseNet specimens have no connection other than symbiotic flora, colonization, contamination, or infection by bacteria that at some pointâ€”years agoâ€”were progeny of the same cell. Then one of those cells mutates through a DNA insertion, deletion, or point mutation, and suddenly a new pattern appears. If the lives of this cell appear in 2 specimens sent to PulseNet, connections are revealed across time and space. A factory produces a contaminated product, and the lives of a cell connect a retired person on a limited income to a young adult consuming the same product in a different county. Contamination on a farm can send lives of a cell across the country to rich and poor. Like these, connecting lives of a cell can be labor- and resource-intensive. In the case of human infections, unavoidable delays occur between the time a person is exposed to bacteria, becomes sick, and provides a sample for culture; the culture grows; the bacterium is identified in the laboratory, grown on media for transportation, and sent to a second laboratory; a pattern is determined; and matches are identified. After a match is determined, investigations often require repeated phone calls, followed by intensive testing of products and finally massive recalls. If the pattern disappears, investigations may be suspended before a common source is found. All 3 interpretations of lives of a cellâ€”the once independent lives of a single cell, the many lives human, animal, bacterium, fungus, virus of the earth, and the lives of a bacterial cell that travels throughout the earthâ€”strongly suggest a need for multidisciplinary and interdisciplinary collaborations, i. Thomas and many other great scientists. Publicity about recalls may leave the perception that our food supply is riskier than before PulseNet. On the contrary, following the lives of a cell leads to a new understanding of disease mechanisms. As many diverse professionals work together and pool knowledge to develop economical solutions, our food supply becomes safer. Dato is a public health physician and a post-doctoral scholar at the Department of Biomedical Informatics, University of Pittsburgh. Her research interests include translational public health informatics and infectious disease epidemiology. Top Acknowledgments I thank Bruce Kaplan and many anonymous reviewers for thoughtful suggestions and editing necessary to honor a great manâ€”Lewis Thomasâ€”and advance his observations as a biology watcher.

Chapter 2 : The Lives of A Cell by Lewis Thomas | Teen Ink

THE LIVES OF A CELL (National Award Winning Book) NOTES OF A BIOLOGY WATCHER Lewis Thomas We are told that the trouble with Modern Man is that he has been trying to detach himself from nature.

The Lives of a Cell: Notes of a Biology Watcher by Lewis Thomas consists of short, insightful essays that offer the reader a different perspective on the world and on ourselves. The book draws its name from the first essay, "The Lives of a Cell," in which Thomas offers his observations on ecology and the role of cellular activity. He goes on to describe how this common ancestry means that we still have a lot in common with everything on this planet. Thomas says that "we still share genes around, and the resemblance of the enzymes of grasses to those of whales is a family resemblance" 3. Thomas relates to the reader that he has been trying to conceive of the earth itself as a type of organism, "but it is no go" 4. The earth is just too big, too complex for such an analogy. But then it came to him. The earth is most like a single cell 4. In the next essay, "Thoughts for a Countdown," Thomas discusses further how all cellular life on this planet is interconnected and similar. He discusses the custom that was prevalent throughout the Apollo program that astronauts returning from space would be ushered into isolation wearing surgical masks. The implication is, of course, that the astronauts may have brought a strange virus. Thomas states that this whole notion is built on a faulty understanding of science and biology. He points out that most of the associations on this planet between living things are cooperative 5. If there was anything microscopic living on the moon, it would have a "lonely time waiting for acceptance to membership here" 6. In the next essay, "On societies as organisms," Thomas points out that the writers of books on insect behavior go to great lengths to distinguish the uniqueness of insect life. Furthermore, it is political incorrect to imply in any way that the "operation of insect societies has any relation at all to human affairs" He writes that ants are "so much like human beings as to be an embarrassment" They launch armies into war and use chemical sprays to alarm and confuse their enemies. They capture slaves The next essay, "Fear of Pheromones," betrays the fact that this book was first published in the early s as Thomas writes: Nevertheless, his observations are funny. He points out that with all the new devices of communication, "why would we want to release odors into the air to convey information about anything" For example, in the essay entitled simply "Vibes," Thomas tell the reader that we "leave traces of ourselves wherever we go, on whatever we touch" He relates that one of the odd discoveries made by small boys is that when two pebbles are struck sharply together they emit, briefly, a "curious smoky odor" If the stones are cleaned or heated the odor disappears. However, it returns if the stones are touched again by a human hand before being struck

Chapter 3 : The Lives of a Cell - Essay

Lewis Thomas was a physician, poet, etymologist, essayist, administrator, educator, policy advisor, and researcher. A graduate of Princeton University and Harvard Medical School, he was the dean of Yale Medical School and New York University School of Medicine, and the president of Memorial Sloan-Kettering Institute.

Background[edit] Lewis Thomas was a physician, immunology researcher, dean, poet, etymologist, and essayist. He was a research fellow at the Thorndike Memorial laboratories, and a researcher at Tulane University and University of Minnesota. He was the head of the pathology department at New York University Medical School for fifteen years as well as the chair for the Department of Medicine at Bellevue Hospital. Lewis Thomas published multiple books throughout his career, the first being *The Lives of a Cell: Notes of a Biology Watcher*. In he published *The Medusa and the Snail: More Notes of a Biology Watcher*. He wrote an autobiographical book in , *The Youngest Science: Notes of a Medicine-Watcher*. Thomas argues that even our own bodies are not solely ours since the mitochondria and other organelles are descended from other organisms. He creates a metaphor of the Earth as a giant cell itself with humans just as one part of a vast system. Thoughts for a Countdown Astronauts must be decontaminated before they are allowed to interact on Earth. All organisms on Earth are interdependent and a stray virus or bacteria from the moon will not be adapted to harm us since it is not part of this connection. Bacteria are interconnected to the point where some cannot survive without others and some even live within others. We must recognize how interconnected even the smallest organisms are on Earth; especially if we must interact with life outside our planet. On *Societies as Organisms* Thomas introduces one of his key metaphors of humans behaving like ants. He suggests that this metaphor is not used because humans do not like to be compared to insects that, as a society, can function as an organism. There are many examples of animals acting as a large organism when in large groups from termites and slime molds to birds and fish. Thomas argues that the communication of results in science puts humans in the same model as these other species. A *Fear of Pheromones* Humans fear pheromones because we believe we have gone above the basic secretion of chemicals in our communication. However, there are signs that point to humans relying on pheromones as well as our most technological forms of communication. Thomas shows pheromones in the animal world with examples of moths and fish. He then goes on to explain what impact pheromones in humans could have on the future such as in the perfume industry and finding histocompatible donors. *The Music of This Sphere* Music is the only form of communication that saves us from an overwhelming amount of small talk. This is not only a human phenomenon, but happens throughout the animal world. Thomas makes examples of animals from termites and earthworms to gorillas and alligators that perform some sort of rhythmic noise making that can be interpreted as music if we had full range of hearing. From the vast number of animals that participate in music it is clear that the need to make music is a fundamental characteristic of biology. Thomas proposes that the animal world is continuing a musical memory that has been going since the beginning of time. An *Earnest Proposal* Thomas argues that even though we have the technological advancements to destroy the Earth that we do not know near enough about the world in which we live. To solve this problem he suggests that we should not be able to fire nuclear weapons without being able to explain one living thing fully. The organism that Thomas proposes is the protozoan *Myxotricha paradoxa*. There is information known about this protozoan that lives in the digestive tract of Australian termites but with more study it could be a model for how our cells developed. It is seen throughout nature that organisms cooperate and progress into more complex forms. We cannot destroy vast amounts of Earth with nuclear weapons until we understand how interconnected we all are. *The Technology of Medicine* Thomas presents the three levels of technology in medicine: Thomas suggests that in order to save money in health care, the highest priority in funding should be given to basic research. *Vibes* Humans leave a trace of chemicals in every place they go and on everything they touch. Other animals use signaling mechanisms to leave trails or identify each other. The sense of smell is an important sense in using these mechanisms, but it is still not well understood. Humans, compared to the rest of the animal world, do not have a good olfactory sense though we may be better than we first assume. Johannes Kepler once argued that the Earth is an

immense organism itself, with chemical signals spreading across the globe through various organisms in order to keep the world functioning and well informed. Ceti Tau Ceti is a nearby sun-like star that we are on the verge of being able to begin making contact with, as well as other celestial bodies, to search for life. We have been attracted to the vast regions of space outside our Earth bubble and what they could hold. If extraterrestrial life is found, it scientifically would make sense, but the social impact of no longer being unique would give humans a new sense of community. The question of what information to send out is answered by Thomas by sending music, specifically Bach. It is timeless and the best language we have to express who we are. If possible Thomas also suggests sending art. However, the questions of what to send will not stop once we receive a reply. The Long Habit As humans we always evade death, despite how it is a natural part of our lives. Unless it is far removed, as in war or on television, then we can discuss it without a problem. It is a subconscious effort that by not thinking about death we may continue to live. Nevertheless, even if we cured all diseases we still would die one day. We must not fear death and research the dying process just as we would any other biological process. Most people who have a near death experience do not recall any pain or fear. It is perhaps the loss of consciousness that people fear more than death itself. Antaeus in Manhattan Thomas returns to his pondering of the social behaviors of insects in this essay. He discusses the change in behavior of insects in groups and singular insects. We have used insects and their behavior to convey lessons, rules, and virtues and now they have been used in art. Thomas describes an art exhibit with living ants, surrounded by humans who act in a similar manner to the ants themselves. Autonomy Humans have to learn how to walk, skip, and ride a bicycle but inside our bodies perform specific manipulations from birth that we do not need to learn. There is new research that suggests humans may be able to change these inner processes with teaching. Thomas reasons that his body has been functioning fine without him trying to control every little process so he will let it continue to do so. He suggests to try the exact opposite and try to disconnect from your body altogether. Organelles as Organisms The biologic revolution is filling in the gaps in understanding about how our cells function. As we begin to understand more about organelles it is clear that they are not originally created from our cells. Mitochondria and chloroplasts most likely have a bacterial ancestry and flagellae and cilia most likely were once spirochetes. It is not necessarily a master-slave relationship that we have with our organelles, but one where their ancestors found an easy way to stay protected and secure. We have brought them along with us as we evolved and yet we do not understand them completely. Organelles and eukaryotic cells are one of the most established symbiotic relationships. Germs We treat bacteria as an ever-present enemy even though there are only a small number that actually cause disease, and by accident in most cases. Bacteria normally do not gain anything by causing illness or death in their hosts. Our illness is mostly caused by our immune system doing too great of a job in response to bacteria in our system. The strength of our response is not necessary for most cases, but remains from a primitive time. Your Very Good Health Health care has become the new name for medicine though this is a misnomer since illness and death cannot be totally eradicated. Thomas argues that to understand how medicine should be used we should look to those internists that are involved in the system. Most things get better in a short while by themselves, so we should no longer be instilling in the public a constant fear of failed health. This will be the best way to solve the problem of funding health care since people will only use it when it is necessary. Social Talk There are different degrees of social behavior in animals. However, it is not clear where humans fit on the scale. Most signs point that we are above the social behavior of ants and bees that go about a singular task as a whole community. Language is the one trait that brings us to the level of such animals. All humans engage in language and are born with the understanding of language. Language, and perhaps along with art and music, is the core of our social behavior. Information The human mind comes with the understanding of how to deal with and use language. We store up information as a cell stores energy, though with language, this information can be put to further use. Another main difference between language and other communication systems in biology is the ambiguity that is a necessity in language which would cause the other communication systems to fail. Death in the Open Death is not supposed to happen in the open, along highways and in sight of others. Everything is in the process of dying all around us, though we keep it hidden from our sight and minds. Death is part of the cycle and we need to understand we are part of a larger process. The process of dying is

necessary for the birth of the new and we will all experience it together. Natural Science Thomas explains science as a wild manifestation of human behavior. He explains that science and discovery is a compulsion that scientists seem to have written in their very genes. Science cannot be organized and forced; it must be free to go where the next question leads. It is similar to a bee hive in some sense, but also to animals on a hunt. The activity is never ending and the conglomeration of minds always yearning for the next discovery cannot be kept under control. Natural Man How humans approach nature has been changing throughout recent years. We used to view nature as ours to control and use to better mankind. Now we have moved away from this view and seen that we are part of the larger system and not the ruler of it. The Iks This essay focuses on the tribe of Iks in northern Uganda.

Chapter 4 : Lewis Thomas (Author of The Lives of a Cell)

The lives of a cell is an amazing book, which i believe most people should read, if they can handle it. The reason i say this is because it explores the human vision of the world around us, and the life forms and beings that pass us by in a matter of a lifetime.

The Lives of a Cell By: The Lives of a Cell: Notes of a Biology Watcher by Lewis Thomas consists of short, insightful essays that offer the reader a different perspective on the world and on ourselves. The book draws its name from the first essay, "The Lives of a Cell," in which Thomas offers his observations on ecology and the role of cellular activity. He goes on to describe how this common ancestry means that we still have a lot in common with everything on this planet. Thomas says that "we still share genes around, and the resemblance of the enzymes of grasses to those of whales is a family resemblance" 3. Thomas relates to the reader that he has been trying to conceive of the earth itself as a type of organism, "but it is no go" 4. The earth is just too big, too complex for such an analogy. But then it came to him. The earth is most like a single cell 4. In the next essay, "Thoughts for a Countdown," Thomas discusses further how all cellular life on this planet is interconnected and similar. He discusses the custom that was prevalent throughout the Apollo program that astronauts returning from space would be ushered into isolation wearing surgical masks. The implication is, of course, that the astronauts may have brought a strange virus. Thomas states that this whole notion is built on a faulty understanding of science and biology. He points out that most of the associations on this planet between living things are cooperative 5. If there was anything microscopic living on the moon, it would have a "lonely time waiting for acceptance to membership here" 6. In the next essay, "On societies as organisms," Thomas points out that the writers of books on insect behavior go to great lengths to distinguish the uniqueness of insect life. Furthermore, it is political incorrect to imply in any way that the "operation of insect societies has any relation at all to human affairs" He writes that ants are "so much like human beings as to be an embarrassment" They launch armies into war and use chemical sprays to alarm and confuse their enemies. They capture slaves The next essay, "Fear of Pheromones," betrays the fact that this book was first published in the early s as Thomas writes: Nevertheless, his observations are funny. He points out that with all the new devices of communication, "why would we want to release odors into the air to convey information about anything" For example, in the essay entitled simply "Vibes," Thomas tell the reader that we "leave traces of ourselves wherever we go, on whatever we touch" He relates that one of the odd discoveries made by small boys is that when two pebbles are struck sharply together they emit, briefly, a "curious smoky odor" If the stones are cleaned or heated the odor disappears. However, it returns if the stones are touched again by a human hand before being struck

Chapter 5 : The Lives of a Cell: Notes of a Biology Watcher

About Lives of a Cell. Elegant, suggestive, and clarifying, Lewis Thomas's profoundly humane vision explores the world around us and examines the complex interdependence of all things.

The Lives of a Cell December 12, Review: The Lives of a Cell An exploration of symbiosis In a scurrying ant hill, it is tempting to see a civilization, constructing its pyramids or cathedrals for generations far in the future – tempting too to consider our own societies as higher-order ant hills, each individual barely aware of their contributions to a larger force. Often these metaphors are dry, breaking down at the slightest probing, offering little beyond a shrug. But in *The Lives of a Cell*, Lewis Thomas manages to create, from such simple analogies, deep and complex meaning. In this delightful collection of essays from the early 60s, Thomas, a physician and member of the National Academy of Sciences, uses empiricism not as final truth, but as a nucleating event for greater insights into our human nature and the driving curiosity behind science. His central thesis, conveyed steadily across each compact essay, is the fundamental need for life to interact and the whole that emerges greater than its parts. From termite colonies to human language to the biosphere itself, Thomas treats symbiosis and emergence not as special arrangements but as the natural order of things: It is searching and expansive. The essays synthesize disparate facts into cohesive, fresh interpretations of the meaning of life – all life. Those that could be falsified may be one day. Does this detract from his insights? I hardly think so; not all things worth considering can be tested. It is also refreshing to see a committed scientist connect his discipline to his wider interests. Entire other pieces absorb the reader in the speciation of words from Indo-European roots and the surprising or is it obvious? The work is of its time, of course. Thomas writes lovingly of our endosymbiotic organelles – the mitochondria and chloroplasts that undergird all complex life – and speculates that the centriole, the fibers that properly divide chromosomes, may be the third such cellular companion. Though this is not the case, we now know, it hardly detracts from the lesson on symbiosis as a deeply entrenched force of nature. And even 25 years after the Cold War, his appeal against Armageddon resonates still. It takes the form of a challenge: The target, *Mixotricha paradoxa*, is a brilliant choice as it, astoundingly, comprises at least five species in close endosymbiosis. At the end of the decade, therefore, I am willing to predict that the feeding in of all the information then available will result, after a few seconds of whirring, in something like the following message, neatly and speedily printed out: How are spirochetes attached? Science can tell us truths about nature; it has little to say on truths about ourselves, on how we should live, how we should feel about the world we study. Yet in contemplating the human need to search for understanding, and in attempting to synthesize a collection of biological facts into a philosophy of life, Thomas has drawn from science inspiration for a decidedly unreductive view of the creatures that inhabit our blue and green Earth. Joyce Carol Oates, in reviewing this collection, writes:

Chapter 6 : Review: The Lives of a Cell | The Haswell Lab

Despite the diversity of topics considered by Thomas in The Lives of a Cell, all the essays share a characteristic structure. First, Thomas identifies the problem or issue, then he summarizes the.

In this activity students read the essay and hold a Socratic discussion of the contents. A discussion of the essay would be appropriate at various points in a high school biology or honors biology course depending upon the direction in which the teacher decides to place emphasis. The author makes mention of many parts of the cell including the cell membrane, mitochondria, centrioles, chloroplasts, so it lends itself well to introducing the parts of the cell. The essay also contrasts viruses to cells. Students will engage in meaningful inquiry discussion. Students will learn key parts of the cell and the role of these parts by writing metaphoric descriptions of these parts. Students will engage in discussion of endosymbiotic theory. National Standards addressed by this lesson include content standards for grades for the Life Sciences. Fundamental concepts include the cell as a unit of structure and functions, the molecular basis for heredity and biological evolution. North Carolina Standards 2. The origin and history of life. Demonstrate comprehension of main ideas and supporting details. Making inferences, predicting, and drawing conclusions based on text. Identifying and analyzing elements of expressive environment found in text in light of purpose, audience, and context. Identifying and analyzing text components such as organizational structures, story elements, and organizational features and evaluating their impact on the text. Decoding vocabulary using knowledge of Anglo-Saxon, Greek, and Latin bases and affixes. Using vocabulary strategies such as context clues, resources, and structural analysis roots, prefixes, etc to determine meaning of words and phrases. The Lives of a Cell by Lewis Thomas—copies of the paperback book by the same title can be purchased through Amazon. The teacher should preview the essay for content and to be prepared to address any vocabulary that might be unfamiliar to the students. Also, if the teacher is not accustomed to using Socratic discussion with the class it is recommended that they review this process. Open the lesson with a discussion of the literary elements of simile and metaphor author makes use of these throughout the essay. Students should be familiar with annotating a piece of text for discussion; highlighting, underlining, margin notes and questions. Background on the article may be given, however students should be allowed to explore their own ideas during reading and discussion so this should be kept to a minimum. Students should be provided a list of key biology vocabulary prior to reading the article. Students may be given the meaning of the terms or asked to look them up on their own as part of preparing for the reading. Use the KIM vocabulary chart. Students should be allowed to quickly preview the article and to point out any other unfamiliar vocabulary so that this may be addressed before actually working with the piece as a homework assignment. Students are asked to read and annotate the article this works best as a homework assignment to reduce the amount of class time used. Students should answer the discussion questions to accompany the article this may also be completed at home. This portion of the lesson should take the form of a class discussion or Socratic seminar. Students should begin by first discussing their interpretation of the questions provided. Discussion can then progress into the student generated questions. The role of the teacher at this point should be to ask probing questions or to redirect discussion from the handout. It is OK to ask students to provide evidence for their comments and to ask for agreement or disagreement from the class. This is to be encouraged. However some preliminary discussion on how to address differences of opinion may be necessary with some students or classes. It is important to the discussion to maintain the atmosphere that students can safely and without fear express their ideas. Teacher should take notes during this part of the discussion on any misconceptions or areas to revisit at the end of the discussion. Teacher should elaborate on any ideas or address misconceptions that may have arisen during the class discussion. It is important to have a time for teacher input separate from the student discussion to foster the appropriate atmosphere of the free classroom discussion. It is important that students be given the opportunity to work through the article on their own. Students should complete the flip chart of cell organelles and place it in their journals. Metaphors from the reading or student created metaphors and similes may be shared and used as a form of formative assessment to help determine understanding. Some examples from the

reading are listed below. For lower level readers the teacher may want to read aloud sections of the text and have students discuss the meaning of each portion or the essay. Critical Vocabulary These are the terms with which students seem to have the most difficulty, since the English standard course of study emphasized etymology of word this information is provided where it could be found. Mitochondria-organelle where cellular respiration take place here the energy stored in glucose molecules is converted to energy that can be used by the cell. The molecule of heredity.

Chapter 7 : The Lives of a Cell: Notes of a Biology Watcher by Lewis Thomas

The cell membrane (cell wall in plants) is the protective layer that makes this unit of life possible. In the first chapter and frequently throughout, the author wants to think of the earth as a kind of organism, but he can't make it work - too big, too complex, too many working parts without visible connections.

Mar 10, Roy Lotz rated it did not like it Recommends it for: But now, after finishing it, I am both confused and disappointed. The only thing I can think of that could have motivated Lewis Thomas to write this book is sheer egoism. He would talk your ear off, and I bet he laughed at his own jokes too. When I try to imagine Lewis Thomas, I picture a paunchy, white-haired fellow with a round, ruddy face. He is in his New England home, furnished with dark oak furniture, dressed in a scarlet robe, sipping coffee and typing his essays. Thomas types in spurtsâ€”banging out a few sentences and then pausing to look out his window at his well-kept yard. He always has a smile on his face when he writes, and laughs under his breath every once in a while when he thinks he has been clever. And whenever he is particularly impressed with one of his own sentences, he calls his wife over, who is an expert in feigning enjoyment. The best part of this book is the writing, but even here I think Thomas is irritating, vexing. He has the annoying habit of sticking in an extra tidbit after every sentence, like this. It is as if he always has something extra to say, an afterthought. After a while I just want him to shut up, be quiet. Even if Thomas could be excused for being a middling writer, it is hard to excuse his vapid ideas. The real, solid biological information contained in this book could be found in any intro-level biology textbook. But instead of actually explaining this information, Thomas just uses his educational background to pepper his essays with technical terms that a layreader will have to look up. He has no interest in educating the public in his field, but only wishes to be admired for his broad learning. When Thomas strays away from these basic biological facts which is often , the quality gets even worse. I would be willing to bet that, if Thomas was only slightly less intelligent, he would have ended up being a conspiracy theorist, and might have been given a show on the History Channel chasing aliens. I say this because these essays are filled with pseudo-science. Thomas repeatedly says that the majority of life on Earth is symbiotic, and this is true. But he fails to mention that the majority of these symbiotic relationships are parasiticâ€”which undermines his rosy-eyed portrait of life on this planet, if you ask me. Thomas seems to think that it is a biological mistake when a virus makes its host sick. I have no idea how a doctor could believe this. Most normal symptoms of sicknessâ€”sneezing, coughing, runny nose, diarrheaâ€”are ideal ways for a virus to spread. He also includes an essay on ways to train our internal organs, in the same way dogs can be trained. Was he high when he wrote this? The more I think about it, the more it makes sense. Like, language is totally alive, for real! Not, like, metaphorically though, like for real. I would say he is just about as thought provoking as a conversation with an intoxicated, college-aged biology major. To summarize, I am sincerely confused as to why people like this book. The writing is pompous, and the subject matter alternately frivolous, commonplace, or provably incorrect. Thomas might have made a good science fiction writer, but he is not a good science writer.

Chapter 8 : The Lives of a Cell: Notes of a Biology Watcher - Wikipedia

Thomas's enthusiasm for research and the scientific advancement of medicine is embedded in a wider vision of human accomplishment and man's place in the universe.

Chapter 9 : Lives of a Cell by Lewis Thomas | blog.quintoapp.com

The Lives of a Cell by Lewis Thomas copies of the paperback book by the same title can be purchased through blog.quintoapp.com; each student should have a copy of the essay for marking. KIM vocabulary chart for key vocabulary.