Lucretius On the Nature of Things
Lucretius On the Nature of Things draws heavily on Epicurus’s ideas, translating them from Greek into Latin and putting them into his own poetic voice. It is therefore the best source we have for the ideas of classical Epicurean philosophy.

The atomic model is not more than a representational model of the physical universe up to a certain level of magnification. Modern science dives much deeper than atoms and ends up with no matter at all.

Lucretius zooms out to Epicurean cosmology. He argues that the world was not created by the gods, but by the combination of atoms. He also believes that the world, like all other physical matter, will eventually be destroyed.

"Lucretius invokes Venus as the great cause of production. He dedicates his work to Memmius; praises Epicurus, whose doctrine he follows; vindicates his subject from the charge of impiety; exposes the emptiness of the religious system of his day, and the fictions of the poets; and introduces, not without allusions to the difficulties to be overcome, the great arguments of which he proposes to treat. Entering upon his subject, he shows, first, that nothing can proceed from nothing, and that nothing can return to nothing. Secondly, that there are certain minute corpuscles, which, though imperceptible to our senses, are conceivable in our minds, and from which all things originate.

He refutes those who had held other opinions, as Heraclitus, who said that fire was the origin of things; and others, who had maintained the same of air, water, and earth. He attacks Empedocles, who said that the universe was compounded of the four elements, and Anaxagoras, who advocated the homoeomeria – that all things contained instances of other things, only to a lesser degree; for example, a tree contained small amounts of fire, but it predominantly contained little particles of trees. He then contends that the universe is boundless, that atoms are infinite in number, and that space must be unlimited.

"Exempt from all pain, exempt from perils, all-sufficient in its own resources, and needing nothing from us, the gods are neither propitiated by services from the good, nor affected with anger against the bad."

"When the life of men lay foully groveling before our eyes, crushed beneath the weight of religion, Epicurus was the first to raise mortal eyes against her. He was the first to break the close bars of nature's portals, and traversed the whole immensity of space in mind and thought. Epicurus’ victory over Religion sets us on a level with Heaven."

"Nothing is ever divinely generated from nothing, and nothing can be produced from nothing. All things are done without the agency of the gods."

"All things are enlarged and nourished from their own specific matter."

"Those who fear punishment after death confound their enjoyments in the present life. If they had knowledge of the true nature of things after death, they would be free to enjoy life. Lucretius describes the nature of the soul so that men can enjoy life, but, as Voltaire wrote, the vain attempts of men to discuss the nature of the soul and the after life are like men born blind discussing the nature of light."

Lucretius proceeds to treat of the properties of atoms, of which the first is motion, which they owe either to their own weight or the impulse of other atoms. Atoms are borne downwards, as being heavy, and when solid atoms come in collision, they must necessarily rebound; some unite with others; those that unite closely, form bodies hard and dense; those that combine more loosely, thin and subtle substances.

Atoms in their course downwards decline a little from the right line. Were they not to decline, nothing would be produced, and there could be no free agency in animals when produced. Atoms are still borne on in the same way in which they have moved from all eternity; nor is this assertion to be disputed because all things seem at rest.
Some atoms are rough and jagged, others smooth and round; some produce bitter and some sweet, some hard and some soft bodies. But the figures of atoms are not infinite, though the number of each figure is infinite. Shows that compound bodies contain atoms of different figures, and alludes to the natural history of the earth, and the fabulous history of Cybele [the Earth as mother of the gods and beasts].

The world was by no means made for us by divine power."
"The wails which infants raise when they come forth to view the regions of light are mixed with funeral lamentations."
"There is nothing so great and admirable at which all men do not by degrees less and less wonder."

In the opening paragraphs of book 2, Lucretius praises philosophy because of its capacity to remove the fears and cares of men; removal of fear and anxiety is the first step to attaining happiness. The second step is to obtain the very few things that banish pain and bestow plenty of pleasures, and this can only be achieved through Reason. He says that the contemplation of the highest wisdom places a man above his peers who are straying in all directions to find the best path of life, and vying with one another to attain the most power. He also says that men do not require riches to be happy; the man who lies underneath a tree, near a river, with no wealth gratifies his senses with pleasure.

This description reminded me of Marlowe’s poem, “The Passionate Shepherd to His Love.” In the poem, a shepherd tries to persuade his love to live with him in fields and enjoy the pleasures of nature. He isn’t rich, but promises to make her various luxuries from things found in nature. The poem reinforces Lucretius argument that one can be happy, though poor; and that one does not require traditional luxuries to be happy.

Walter Raleigh’s response to Marlowe’s poem is fascinating. The speaker in the poem does not refute Lucretius claim that one can be happy without fineries, but the speaker considers men to be liars, and joy to have an expiration date.

Lucretius discussion of free-will also merits mention. He states that atoms naturally swerve at indeterminate points of time and space, thus breaking the law of causation. If this did not happen, then there could be no free-will because everything would be determined by the laws of causation. He argues that the delay between the opening of the gates at a horse race and the movement of the horses demonstrates that the commencement of motion is produced in the mind, after which the limbs of the body are set into motion; i.e. the horse sees the gates open, it decides to run, it sends its decision to run from its mind to the limbs of its body, the limbs of the body commence motion. A hard determinist might argue that the mind does not exist, and that the ‘decision’ is merely atoms being set in motion by a long line of causation; i.e. the atoms of light strike the eye of the horse, setting in motion atoms in the brain of the horse that commence the motion of other atoms in the limbs of the horse. And this chain of causation is inevitable.

Lucretius’s philosophy of how human beings should live dictates pursuing friendship and avoiding war. In the introduction to his translation of De rerum natura, Anthony M. Esolen comments that Lucretius "really believes that in Epicureanism lies our best hope for happiness, and he very much wants to let us in on the secret, so that we may be as happy as is possible in a world imperfectly suited for our existence."

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Lucretius tells us that Epicurus's belief in the human need for science was rooted in compassion: he looked around and saw a world full of people cringing in fear and dread of the wrath of the gods, as expressed via random phenomena such as lightning and earthquakes, which he aimed to teach them were in fact purely natural disasters (the legal shorthand "act of god" would have had his hackles rising).

Lucretius’ mission is to explain that physics in beautiful poetry, to make it more understandable and more palatable to his readership than its occasional philosophical obscurity might otherwise be.