A special message, to us all, from Albert Einstein.

Various quotes Einstein presented to the public throughout his life relating to things I feel most of us would appreciate and learn from if we were better exposed to his genius. These include not only statements about every day living but philosophical views about the meaning, relevance and value of life as well. His clever melding of science into a good many of his statements seems to me to warrant recommending to readers they carefully finger through all the quotations. In my opinion they are quite revealing.

- 1. "A hundred times every **DAY I REMIND MYSELF THAT MY INNER AND OUTER LIFE ARE BASED ON THE LABOURS OF OTHER MEN**, living and dead, and that I must exert myself in order to give in the same measure as I have received and am still receiving..."
- 2. "A HAPPY MAN is too satisfied with the present to dwell too much on the future"
- 3. "Concepts that have proven useful in ordering things easily achieve such authority over us that **WE FORGET THEIR EARTHLY ORIGINS** and accept them as unalterable givens"
- 4. "NATURE SHOWS US ONLY THE TAIL OF THE LION. But there is no doubt in my mind that the lion belongs with it even if he cannot reveal himself to the eye all at once because of his huge dimension"
- 5. In living through this "great epoch," IT IS DIFFICULT TO RECONCILE ONESELF TO THE FACT THAT ONE BELONGS TO THAT MAD, DEGENERATE SPECIES THAT BOASTS OF ITS FREE WILL. How I wish that somewhere there existed an island for those who are wise and of good will! In such a place even I should be an ardent patriot!
- 6. I am by heritage a Jew, by citizenship a Swiss, and by makeup a human being, and *only* a **HUMAN BEING, WITHOUT ANY SPECIAL ATTACHMENT** to any state or national entity whatsoever.
- 7. [I do not] carry such information in my mind since it is readily available in books. ...THE VALUE OF A COLLEGE EDUCATION is not the learning of many facts but the training of the mind to think.
- 8. I was sitting in a chair in the patent office at Bern when all of sudden a thought occurred to me: IF A PERSON FALLS FREELY HE WILL NOT FEEL HIS OWN WEIGHT. I was startled. This simple thought made a deep impression on me. It impelled me toward a theory of gravitation.

- 9. Quantum mechanics is certainly imposing. But AN INNER VOICE TELLS ME THAT IT IS NOT YET THE REAL THING. The theory says a lot, but does not really bring us any closer to the secret of the "old one." I, at any rate, am convinced that *He* does not throw dice.
- 10. Whether you can observe a thing or not depends on the theory which you use. IT IS THE THEORY WHICH DECIDES WHAT CAN BE OBSERVED.
- 11. Try and penetrate WITH OUR LIMITED MEANS THE SECRETS OF NATURE AND YOU WILL FIND THAT, BEHIND ALL THE DISCERNIBLE CONCATENATIONS, THERE REMAINS SOMETHING SUBTLE, INTANGIBLE AND INEXPLICABLE. Veneration for this force beyond anything that we can comprehend is my religion. To that extent I am, in point of fact, religious.
- 12. If A is **SUCCESS IN LIFE**, then A = x + y + z. Work is x, play is y and z is keeping your mouth shut.
- 13. **PEACE CANNOT BE KEPT BY FORCE.** It can only be achieved by understanding. You cannot subjugate a nation forcibly unless you wipe out every man, woman, and child. Unless you wish to use such drastic measures, you must find a way of settling your disputes without resort to arms.
- 14. I BELIEVE IN INTUITION AND INSPIRATION. ... At times I feel certain I am right while not knowing the reason. When the eclipse of 1919 confirmed my intuition, I was not in the least surprised. In fact I would have been astonished had it turned out otherwise.
- 15. I am enough of an artist to draw freely upon my imagination.

 IMAGINATION IS MORE IMPORTANT THAN KNOWLEDGE. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution. It is, strictly speaking, a real factor in scientific research.
- 16. **EVERYONE SITS IN THE PRISON OF HIS OWN IDEAS**; he must burst it open, and that in his youth, and so try to test his ideas on reality.
- 17. All religions, ARTS AND SCIENCES ARE BRANCHES OF THE SAME TREE. All these aspirations are directed toward ennobling man's life, lifting it from the sphere of mere physical existence and leading the individual towards freedom.
- 18. He may (A human being) also believe in the existence of THE IDEAL LIMIT OF KNOWLEDGE and that it is approached by the human mind. He may call this ideal limit the objective truth.

- 19. PHYSICAL CONCEPTS ARE FREE CREATIONS OF THE HUMAN MIND, and are not, however it may seem, uniquely determined by the external world. In our endeavour to understand reality we are somewhat like a man trying to understand the mechanism of a closed watch. He sees the face and the moving hands, even hears it's ticking, but he has no way of opening the case. If he is ingenious he may form some picture of a mechanism which could be responsible for all the things he observes, but he may never be quite sure his picture is the only one which could explain his observations
- 20. Still, there are moments when one feels free from one's own identification with HUMAN LIMITATIONS AND INADEQUACIES. At such moments, one imagines that one stands on some spot of a small planet, gazing in amazement at the cold yet profoundly moving beauty of the eternal, the unfathomable: life and death flow into one, and there is neither evolution nor destiny; only being.
- 21. Great spirits have always encountered violent opposition from mediocre minds. THE MEDIOCRE MIND IS INCAPABLE OF UNDERSTANDING the man who refuses to bow blindly to conventional prejudices and chooses instead to express his opinions courageously and honestly.
- 22. Why is it **NOBODY UNDERSTANDS ME** and everybody likes me?
- 23. So many people today and even professional scientists seem to me like SOMEONE WHO HAS SEEN THOUSANDS OF TREES BUT HAS NEVER SEEN A FOREST. A knowledge of the historic and philosophical background gives that kind of independence from prejudices of his generation from which most scientists are suffering. This independence created by philosophical insight is in my opinion the mark of distinction between a mere artisan or specialist and a real seeker after truth.
- 24. THE WORDS OR THE LANGUAGE, as they are written or spoken, do not seem to play any role in my mechanism of thought.
- 25. When I examine myself and my methods of thought I come to the conclusion that the GIFT OF FANTASY HAS MEANT MORE TO ME than my talent for absorbing positive knowledge.
- 26. I DO NOT KNOW HOW THE THIRD WORLD WAR WILL BE FOUGHT, but I can tell you what they will use in the Fourth rocks!
- 27. A HUMAN BEING IS A PART OF THE WHOLE, called by us "Universe," a part limited in time and space. He experiences himself, his thoughts and feelings as something separate from the rest—a kind of optical delusion of his consciousness. The striving to free oneself from this delusion is the one

issue of true religion. Not to nourish it but to try to overcome it is the way to reach the attainable measure of peace of mind.

- 28. Without "ETHICAL CULTURE," there is no salvation for humanity.
- 29. He must LEARN TO UNDERSTAND THE MOTIVES OF HUMAN BEINGS, their illusions, and their sufferings in order to acquire a proper relationship to individual fellow-men and to the community. These precious things are conveyed to the younger generation through personal contact with those who teach, not—or at least not in the main—through textbooks. It is this that primarily constitutes and preserves culture. This is what I have in mind when I recommend the "humanities" as important, not just dry specialized knowledge in the fields of history and philosophy.
- 30. "...the world is in greater peril FROM THOSE WHO TOLERATE OR ENCOURAGE EVIL than from those who actually commit it."
- 31. To think with **FEAR OF THE END OF ONE'S LIFE** is pretty general with human beings. It is one of the means nature uses to conserve the life of the species.
- 32. THE WORD GOD IS FOR ME NOTHING MORE THAN THE EXPRESSION AND PRODUCT OF HUMAN WEAKNESSES, the Bible a collection of honourable, but still primitive legends which are nevertheless pretty childish. No interpretation no matter how subtle can (for me) change this.
- 33. If I would be a young man again and had to decide how to make my living, I would not try to become a scientist or scholar or teacher. I WOULD RATHER CHOOSE TO BE A PLUMBER OR A PEDDLER in the hope to find that modest degree of independence still available under present circumstances.
- 34. Now he has departed from this strange world a little ahead of me. That means nothing. PEOPLE LIKE US, WHO BELIEVE IN PHYSICS, KNOW THAT THE DISTINCTION BETWEEN PAST, PRESENT AND FUTURE is only a stubbornly persistent illusion.
- 35. The important thing is not to stop questioning; **CURIOSITY HAS ITS OWN REASON FOR EXISTING.** One cannot help but be in awe when contemplating the mysteries of eternity, of life, of the marvellous structure of reality. It is enough if one tries merely to comprehend a little of the mystery every day. The important thing is not to stop questioning; never lose a holy curiosity.
- 36. **INVENTION IS NOT THE PRODUCT OF LOGICAL THOUGHT**, even though the final product is tied to a logical structure.

- 37. Because the academic career puts a young person in a sort of compulsory situation to produce scientific papers in impressive quantity, a **TEMPTATION TO SUPERFICIALITY** arises that only strong characters are able to resist.
- 38. GOD DOES NOT CARE about our mathematical difficulties. He integrates empirically.
- 39. What I'm really interested in is whether GOD COULD HAVE MADE THE WORLD IN A DIFFERENT WAY; that is, whether the necessity of logical simplicity leaves any freedom at all.
- 40. You see, when a **BLIND BEETLE CRAWLS OVER THE SURFACE OF A GLOBE HE DOESN'T NOTICE** that the track he has covered is curved. I was lucky enough to have spotted it.
- 41. How on earth are you ever going to explain in terms of chemistry and physics SO IMPORTANT A BIOLOGICAL PHENOMENON AS FIRST LOVE?
- 42. As far as I'm concerned I PREFER SILENT VICE TO OSTENTATIOUS VIRTUE. In the matter of physics, the first lessons should contain nothing but what is experimental and interesting to see. A pretty experiment is in itself often more valuable than twenty formulae extracted from our minds.
- 43. The devil has put a penalty on all things we enjoy in life. Either **WE** SUFFER IN OUR HEALTH, OR WE SUFFER IN OUR SOUL, OR WE GET FAT.
- 44. I love to travel, but I HATE TO ARRIVE.
- 45. When a man sits with a pretty girl for an hour, it seems like a minute. But let him SIT ON A HOT STOVE FOR A MINUTE AND IT'S LONGER THAN ANY HOUR. That's relativity.
- 46. We often discussed his notions on objective reality. I recall that during one walk Einstein suddenly stopped, turned to me and asked whether I really believed that THE MOON EXISTS ONLY WHEN I LOOK AT IT.
- 47. If you want to **LIVE A HAPPY LIFE**, tie it to a goal, not to people or objects.
- 48. **IF I CAN'T PICTURE IT, I can't understand it.**

- 49. I said before, the most beautiful and most profound religious emotion that we can experience is the sensation of the mystical. And THIS MYSTICALITY IS THE POWER OF ALL TRUE SCIENCE. If there is any such concept as a God, it is a subtle spirit, not an image of a man that so many have fixed in their minds. In essence, MY RELIGION CONSISTS OF A HUMBLE ADMIRATION FOR THIS ILLIMITABLE SUPERIOR SPIRIT that reveals itself in the slight details that we are able to perceive with our frail and feeble minds.
- 50. The physicists say that I am a mathematician, and the mathematicians say that I am a physicist. I am a completely isolated man and though everybody knows me, THERE ARE VERY FEW PEOPLE WHO REALLY KNOW ME.
- 51. Even on the most solemn occasions I GOT AWAY WITHOUT WEARING SOCKS and hid that lack of civilisation in high boots.
- 52. MAN SEEKS TO FORM FOR HIMSELF, IN WHATEVER MANNER IS SUITABLE FOR HIM, a simplified and lucid image of the world, and so to overcome the world of experience by striving to replace it to some extent by this image. This is what the painter does, and the poet, the speculative philosopher, the natural scientist, each in his own way. Into this image and its formation, he places the centre of gravity of his emotional life, in order to attain the peace and serenity that he cannot find within the narrow confines of swirling personal experience.
- 53. The supreme task of the physicist is the discovery of the most general elementary laws from which the world-picture can be deduced logically. But there is NO LOGICAL WAY TO THE DISCOVERY OF THESE ELEMENTAL LAWS. THERE IS ONLY THE WAY OF INTUITION, which is helped by a feeling for the order lying behind the appearance, and this *Einfühlung* [literally, empathy or 'feeling one's way in']' is developed by experience.
- 54. How can it be that MATHEMATICS, BEING AFTER ALL A PRODUCT OF HUMAN THOUGHT WHICH IS INDEPENDENT OF EXPERIENCE, is so admirably appropriate to the objects of reality? Is human reason, then, without experience, merely by taking thought, able to fathom the properties of real things?
- 55. As far as the laws of MATHEMATICS REFER TO REALITY, they are not certain; and as far as they are certain, they do not refer to reality.
- 56. The meaning of relativity has been widely misunderstood.

 PHILOSOPHERS PLAY WITH THE WORD, LIKE A CHILD WITH A

 DOLL. Relativity, as I see it, merely denotes that certain physical and mechanical facts, which have been regarded as positive and permanent, are relative with regard to certain other facts in the sphere of physics and

- mechanics. It does not mean that everything in life is relative and that we have the right to turn the whole world mischievously topsy-turvy.
- 57. No man can visualize four dimensions, except mathematically ... I THINK IN FOUR DIMENSIONS, BUT ONLY ABSTRACTLY. The human mind can picture these dimensions no more than it can envisage electricity. Nevertheless, they are no less real than electro-magnetism, the force which controls our universe, within, and by which we have our being.
- 58. Sometimes ONE PAYS MOST FOR THE THINGS ONE GETS FOR NOTHING.
- 59. If I were not a physicist, I would probably be a musician. I often think in music. I live my daydreams in music. I see my life in terms of music. ... I cannot tell if I would have done any creative work of importance in music, but I DO KNOW THAT I GET MOST JOY IN LIFE OUT OF MY VIOLIN.
- 60. READING AFTER A CERTAIN AGE DIVERTS THE MIND TOO MUCH FROM ITS CREATIVE PURSUITS. Any man who reads too much and uses his own brain too little falls into lazy habits of thinking...
- 61. Practically, I AM, NEVERTHELESS, COMPELLED TO ACT AS IF FREEDOM OF THE WILL EXISTED. If I wish to live in a civilized community, I must act as if man is a responsible being. I know that philosophically a murderer is not responsible for his crime; nevertheless, I must protect myself from unpleasant contacts. I may consider him guiltless, but I prefer not to take tea with him.
- 62. MY OWN CAREER WAS UNDOUBTEDLY DETERMINED, NOT BY MY OWN WILL but by various factors over which I have no control—primarily those mysterious glands in which Nature prepares the very essence of life, our internal secretions.
- 63. The ordinary HUMAN BEING DOES NOT LIVE LONG ENOUGH TO DRAW ANY SUBSTANTIAL BENEFIT FROM HIS OWN EXPERIENCE. And no one, it seems, can benefit by the experiences of others. Being both a father and teacher, I know we can teach our children nothing. We can transmit to them neither our knowledge of life nor of mathematics. Each must learn its lesson anew.
- 64. I BELIEVE IN INTUITIONS AND INSPIRATIONS. I sometimes feel that I am right. I do not know that I am
- 65. I do not think that religion is the most important element. **WE ARE HELD TOGETHER RATHER BY A BODY OF TRADITION**, handed down from father to son, which the child imbibes with his mother's milk. The

- atmosphere of our infancy predetermines our idiosyncrasies and predilections.
- 66. I AM HAPPY BECAUSE I WANT NOTHING FROM ANYONE. I do not care for money. Decorations, titles or distinctions mean nothing to me. I do not crave praise. The only thing that gives me pleasure, apart from my work, my violin and my sailboat, is the appreciation of my fellow workers.
- 67. I claim credit for nothing. **EVERYTHING IS DETERMINED, THE BEGINNING AS WELL AS THE END**, by forces over which we have no control. It is determined for the insect as well as for the star. Human beings, vegetables or cosmic dust, we all dance to a mysterious tune, intoned in the distance by an invisible player.
- 68. THE HUMAN MIND, NO MATTER HOW HIGHLY TRAINED, CANNOT GRASP THE UNIVERSE. We are in the position of a little child, entering a huge library whose walls are covered to the ceiling with books in many different tongues. The child knows that someone must have written those books. It does not know who or how. It does not understand the languages in which they are written. The child notes a definite plan in the arrangement of the books, a mysterious order, which it does not comprehend, but only dimly suspects. That, it seems to me, is the attitude of the human mind, even the greatest and most cultured, toward God.
- 69. Perhaps **WE LIVE BEST AND DO THINGS BEST** when we are not too conscious of how and why we do them.
- 70. I HAVE ONLY TWO RULES which I regard as principles of conduct. The first is: Have no rules. The second is: Be independent of the opinion of others.
- 71. The desire for guidance, love, and support prompts men to form the social or moral conception of God. This is the God of Providence, who protects, disposes, rewards, and punishes; the God who, according to the limits of the believer's outlook, loves and cherishes the life of the tribe or of the human race, or even of life itself; the comforter in sorrow and unsatisfied longing; he who preserves the souls of the dead. THIS IS THE SOCIAL OR MORAL CONCEPTION OF GOD.
- 72. THE INDIVIDUAL FEELS THE FUTILITY OF HUMAN DESIRES and aims and the sublimity and marvellous order which reveal themselves both in nature and in the world of thought.
- 73. I maintain that the **COSMIC RELIGIOUS FEELING** is the strongest and noblest motive for scientific research

- 74. Those whose acquaintance with SCIENTIFIC RESEARCH IS DERIVED CHIEFLY FROM ITS PRACTICAL RESULTS EASILY DEVELOP A COMPLETELY FALSE NOTION OF THE MENTALITY of the men who, surrounded by a sceptical world, have shown the way to kindred spirits scattered wide through the world and through the centuries.
- 75. How strange is the lot of us mortals! EACH OF US IS HERE FOR A BRIEF SOJOURN; for what purpose he knows not, though he sometimes thinks he senses it
- 76. IN HUMAN FREEDOM IN THE PHILOSOPHICAL SENSE I AM DEFINITELY A DISBELIEVER. Everybody acts not only under external compulsion but also in accordance with inner necessity.
- 77. I have never looked upon ease and happiness as ends in themselves this critical basis I call the ideal of a pigsty. The ideals that have lighted my way, and time after time have given me new courage to face life cheerfully, have been Kindness, Beauty, and Truth. WITHOUT THE SENSE OF KINSHIP WITH MEN OF LIKE MIND, WITHOUT THE OCCUPATION WITH THE OBJECTIVE WORLD, THE ETERNALLY UNATTAINABLE IN THE FIELD OF ART AND SCIENTIFIC ENDEAVOURS, LIFE WOULD HAVE SEEMED EMPTY TO ME. The trite objects of human efforts possessions, outward success, luxury have always seemed to me contemptible.
- 78. The really VALUABLE THING IN THE PAGEANT OF HUMAN LIFE SEEMS TO ME NOT THE STATE BUT THE CREATIVE, SENTIENT INDIVIDUAL, THE PERSONALITY; it alone creates the noble and the sublime, while the herd as such remains dull in thought and dull in feeling.
- 79. War seems to me a mean, contemptible thing: I WOULD RATHER BE HACKED IN PIECES THAN TAKE PART IN SUCH AN ABOMINABLE BUSINESS.
- 80. To sense that BEHIND ANYTHING THAT CAN BE EXPERIENCED THERE IS A SOMETHING THAT OUR MIND CANNOT GRASP and whose beauty and sublimity reaches us only indirectly and as a feeble reflection, this is religiousness. In this sense I am religious. To me it suffices to wonder at these secrets and to attempt humbly to grasp with my mind a mere image of the lofty structure of all that there is.
- 81. The MAIN SOURCE OF THE PRESENT-DAY CONFLICTS between the spheres of religion and of science lies in this concept of a personal God.

- 82. Many persons have inquired concerning a recent message of mine that "A **NEW TYPE OF THINKING IS ESSENTIAL** if mankind is to survive and move to higher levels."
- 83. THE GREAT MORAL TEACHERS OF HUMANITY were, in a way, artistic geniuses in the art of living.
- 84. "...THE MAN WHO REGARDS HIS OWN LIFE AND THAT OF HIS FELLOW CREATURES AS MEANINGLESS is not merely unfortunate but almost disqualified for life"
- 85. THE INDIVIDUAL IS WHAT HE IS AND HAS THE SIGNIFICANCE that he has not so much in virtue of his individuality, but rather as a member of a great human society, which directs his material and spiritual existence from the cradle to the grave.
- 86. A MAN'S VALUE TO THE COMMUNITY depends primarily on how far his feelings, thoughts, and actions are directed towards promoting the good of his fellows.
- 87. It is clear that all the valuable things, material, spiritual, and moral, WHICH WE RECEIVE FROM SOCIETY CAN BE TRACED BACK THROUGH COUNTLESS GENERATIONS TO CERTAIN CREATIVE INDIVIDUALS. The use of fire, the cultivation of edible plants, the steam engine each was discovered by one man.
- 88. Only the individual can think, and thereby create new values for society nay, even set up new moral standards to which the life of the community conforms. WITHOUT CREATIVE, INDEPENDENTLY THINKING AND JUDGING PERSONALITIES THE UPWARD DEVELOPMENT OF SOCIETY IS AS UNTHINKABLE as the development of the individual personality without the nourishing soil of the community.
- 89. The example of great and PURE CHARACTERS IS THE ONLY THING THAT CAN PRODUCE FINE IDEAS and noble deeds.
- 90. THERE IS NOTHING DIVINE ABOUT MORALITY, IT IS A PURELY HUMAN AFFAIR. His religious feeling takes the form of a rapturous amazement at the harmony of natural law, which reveals an intelligence of such superiority that, compared with it, all the systematic thinking and acting of human beings is an utterly insignificant reflection.
- 91. There are few enough people with sufficient independence to see the **WEAKNESSES AND FOLLIES OF THEIR CONTEMPORARIES** and remain themselves untouched by them.

- 92. MAN CAN FIND MEANING IN LIFE, short and perilous as it is, only through devoting himself to society.
- 93. But laws alone cannot secure freedom of expression; in order that every man may present his views without PENALTY THERE MUST BE A SPIRIT OF TOLERANCE IN THE ENTIRE POPULATION.
- 94. I live in that **SOLITUDE WHICH IS PAINFUL IN YOUTH, BUT DELICIOUS** in the years of maturity.
- 95. **EVERYTHING THAT IS REALLY GREAT AND INSPIRING** is created by the individual who can labour in freedom.
- 96. We should TAKE CARE NOT TO MAKE THE INTELLECT OUR GOD; it has, of course, powerful muscles, but no personality. It cannot lead, it can only serve.
- 97. Everyone IS AWARE OF THE DIFFICULT AND MENACING SITUATION IN WHICH HUMAN SOCIETY -- shrunk into one community with a common fate finds itself, but only a few act accordingly.
- 98. Whoever undertakes to set himself up as a judge of Truth and Knowledge is SHIPWRECKED BY THE LAUGHTER OF THE GODS.
- 99. JOY IN LOOKING AND COMPREHENDING IS NATURE'S MOST BEAUTIFUL GIFT.
- 100. Never before have I lived through a storm like the one this night. ... The sea has a look of indescribable grandeur, especially when the sun falls on it. One feels as if one is dissolved and merged into Nature. Even more than usual, ONE FEELS THE INSIGNIFICANCE OF THE INDIVIDUAL, AND IT MAKES ONE HAPPY.
- 101. Measured objectively, what a man can wrest from Truth by passionate striving is utterly infinitesimal. But the **STRIVING FREES US FROM**THE BONDS OF THE SELF AND MAKES US COMRADES of those who are the best and the greatest.
- 102. Since OUR INNER EXPERIENCES CONSIST OF REPRODUCTIONS, AND COMBINATIONS OF SENSORY IMPRESSIONS, THE CONCEPT OF A SOUL WITHOUT A BODY SEEM TO ME TO BE EMPTY AND DEVOID OF MEANING
- 103. Something there is that can refresh and revivify older people: joy in the activities of the younger generation—a joy, to be sure, that is clouded by dark forebodings in these unsettled times. And yet, as always, the

springtime sun brings forth new life, and we may rejoice because of this new life and contribute to its unfolding; and Mozart remains as beautiful and tender as he always was and always will be. THERE IS, AFTER ALL, SOMETHING ETERNAL THAT LIES BEYOND REACH OF THE HAND OF FATE AND OF ALL HUMAN DELUSIONS. And such eternals lie closer to an older person than to a younger one oscillating between fear and hope. For us, there remains the privilege of experiencing beauty and truth in their purest forms.

- 104. IN ORDER TO BE A PERFECT MEMBER of a flock of sheep, one has to be, foremost, a sheep.
- 105. HAIL TO THE MAN WHO WENT THROUGH LIFE ALWAYS HELPING OTHERS, knowing no fear, and to whom aggressiveness and resentment are alien.
- 106. FEW PEOPLE ARE CAPABLE OF EXPRESSING WITH EQUANIMITY OPINIONS THAT DIFFER FROM THE PREJUDICES OF THEIR SOCIAL ENVIRONMENT. Most people are even incapable of forming such opinions.
- 107. THERE HAS BEEN AN EARTH FOR A LITTLE MORE THAN A BILLION YEARS. As for the question of the end of it I advise: Wait and see!
- 108. WHAT I SEE IN NATURE IS A MAGNIFICENT STRUCTURE that we can comprehend only very imperfectly, and that must fill a thinking person with a feeling of "humility."
- 109. IF SOMETHING IS IN ME WHICH CAN BE CALLED RELIGIOUS then it is the UNBOUNDED ADMIRATION FOR THE STRUCTURE OF THE WORLD so far as our science can reveal it.
- 110. **WISDOM IS NOT A PRODUCT OF SCHOOLING** but of the lifelong attempt to acquire it.
- 111. NOTHING TRULY VALUABLE ARISES FROM AMBITION OR FROM A MERE SENSE OF DUTY; it stems rather from love and devotion towards men and towards objective things.
- 112. **FALLING IN LOVE IS NOT AT ALL THE MOST STUPID** thing that people do but gravitation cannot be held responsible for it.
- 113. **SCIENCE IS A WONDERFUL THING** if one does not have to earn one's living at it.

- 114. But let us not forget that HUMAN KNOWLEDGE AND SKILLS ALONE CANNOT LEAD HUMANITY TO A HAPPY AND DIGNIFIED LIFE. Humanity has every reason to place the proclaimers of high moral standards and values above the discoverers of objective truth.
- 115. FOR THE MOST PART WE HUMANS LIVE WITH THE FALSE IMPRESSION OF SECURITY and a feeling of being at home in a seemingly trustworthy physical and human environment. But when the expected course of everyday life is interrupted, we are like shipwrecked people on a miserable plank in the open sea, having forgotten where they came from and not knowing whither they are drifting. But once we fully accept this, life becomes easier and there is no longer any disappointment.
- 116. Study and in general the pursuit of truth and beauty is a sphere of activity in which WE ARE PERMITTED TO REMAIN CHILDREN ALL OUR LIVES.
- 117. The MOST IMPORTANT HUMAN ENDEAVOUR IS THE STRIVING FOR MORALITY in our actions. Our inner balance and even our very existence depend on it. Only morality in our actions can give beauty and dignity to life.
- 118. Bear in mind that **THOSE WHO ARE FINER AND NOBLER ARE ALWAYS ALONE** and necessarily so and that because of this they can enjoy the purity of their own atmosphere.
- 119. Who would have thought around 1900 that in fifty years time **WE WOULD KNOW SO MUCH MORE AND UNDERSTAND SO MUCH LESS.**
- 120. "... from the age of twelve I began to suspect authority and distrust teachers. I learned mostly at home, first from my uncle and then from a student who came to eat with us once a week. He would give me books on physics and astronomy. The More I read, the More Puzzled I WAS BY THE ORDER OF THE UNIVERSE AND THE DISORDER OF THE HUMAN MIND, by the scientists who didn't agree on the how, the when, or the why of creation. Then one day this student brought me Kant's Critique of Pure Reason. Reading Kant, I began to suspect everything I was taught. I no longer believed in the known God of the Bible, but rather in the mysterious God expressed in nature."
- 121. THE BASIC LAWS OF THE UNIVERSE ARE SIMPLE, but because our senses are limited, we can't grasp them. There is a pattern in creation
- 122. Since OTHERS HAVE EXPLAINED MY THEORY, I CAN NO LONGER UNDERSTAND it myself.

- 123. SCIENCE IS NEVER FINISHED BECAUSE THE HUMAN mind only uses a small portion of its capacity, and man's exploration of his world is also limited. If we look at this tree outside whose roots search beneath the pavement for water, or a flower which sends its sweet smell to the pollinating bees, or even our own selves and the inner forces that drive us to act, we can see that we all dance to a mysterious tune, and the piper who plays this melody from an inscrutable distance—whatever name we give him— Creative Force, or God—escapes all book knowledge.
- 124. INTUITION MAKES US LOOK AT UNRELATED FACTS AND THEN THINK ABOUT them until they can all be brought under one law. To look for related facts means holding onto what one has instead of searching for new facts. Intuition is the father of new knowledge, while empiricism is nothing but an accumulation of old knowledge. Intuition, not intellect, is the 'open sesame' of yourself.
- 125. Let us accept the world is a mystery. NATURE IS NEITHER SOLELY MATERIAL NOR ENTIRELY SPIRITUAL. Man, too, is more than flesh and blood; otherwise, no religions would have been possible. Behind each cause is still another cause; the end or the beginning of all causes has yet to be found. Yet, only one thing must be remembered: there is no effect without a cause, and there is no lawlessness in creation"
- 126. If I hadn't an absolute faith in the harmony of creation, I wouldn't have tried for thirty years to express it in a mathematical formula. IT IS ONLY MAN'S CONSCIOUSNESS OF WHAT HE DOES WITH HIS MIND THAT ELEVATES HIM ABOVE THE ANIMALS, and enables him to become aware of himself and his relationship to the universe.
- 127. I LIKE TO EXPERIENCE THE UNIVERSE AS ONE HARMONIOUS WHOLE. Every cell has life. Matter, too, has life; it is energy solidified. Our bodies are like prisons, and I look forward to be free, but I don't speculate on what will happen to me. I live here now, and my responsibility is in this world now.... I deal with natural laws. This is my work here on earth.
- 128. THE GENUINE SCIENTIST IS NOT MOVED BY PRAISE OR BLAME, nor does he preach. He unveils the universe and people come eagerly, without being pushed, to behold a new revelation: the order, the harmony, the magnificence of creation!
- 129. And as MAN BECOMES CONSCIOUS OF THE STUPENDOUS LAWS THAT GOVERN THE UNIVERSE IN PERFECT HARMONY, he begins to realize how small he is. He sees the pettiness of human existence, with its ambitions and intrigues, its 'I am better than thou' creed. This is the beginning of cosmic religion within him; fellowship and human service become his moral code. And without such moral foundations, we are hopelessly doomed.

- 130. I believe in one thing—that ONLY A LIFE LIVED FOR OTHERS IS A LIFE WORTH LIVING.
- 131. IF WE WANT TO IMPROVE THE WORLD WE CANNOT DO IT WITH SCIENTIFIC KNOWLEDGE BUT WITH IDEALS. Confucius, Buddha, Jesus and Gandhi have done more for humanity than science has done. We must begin with the heart of man—with his conscience—and the values of conscience can only be manifested by selfless service to mankind.
- 132. I BELIEVE THAT WE DON'T NEED TO WORRY ABOUT WHAT HAPPENS AFTER THIS LIFE, as long as we do our duty here—to love and to serve.
- 133. I have faith in the universe, for it is rational. Law underlies each happening. And I HAVE FAITH IN MY PURPOSE HERE ON EARTH. I HAVE FAITH IN MY INTUITION, the language of my conscience, but I have no faith in speculation about Heaven and Hell. I'm concerned with this time—here and now.
- 134. Philosophy is empty if it isn't based on science. SCIENCE DISCOVERS, PHILOSOPHY INTERPRETS.
- 135. Indeed, it is not intellect, but **INTUITION WHICH ADVANCES HUMANITY**. Intuition tells man his purpose in this life.
- 136. I cannot conceive of anything after my physical death—perhaps it will end it all. The knowledge that I am now on this earth and a mysterious part of eternity is enough for me. My death will be an easy one, too, for since early youth I have always detached myself from family, friends, and surroundings. And should I live on, I HAVE NO FEAR OF THE NEXT LIFE. Whatever good I did helped to free me from myself. What a miserable creature man would be if he were good not for the sake of being good, but because religion told him that he would get a reward after this life, and that if he weren't good he'd be punished.
- 137. "...OUR FACULTIES ARE DULL AND CAN ONLY COMPREHEND WISDOM AND SERENE BEAUTY IN CRUDE FORMS, but the heart of man through intuition leads us to greater understanding of ourselves and the universe"
- 138. Wait a minute! I am not a mystic. Trying to find **OUT THE LAWS OF NATURE HAS NOTHING TO DO WITH MYSTICISM**, though in the face of creation I feel very humble. It is as if a spirit is manifest infinitely superior to man's spirit. Through my pursuit in science I have known cosmic religious feelings. But I don't care to be called a mystic.

- 139. I DO NOT BELIEVE IN THE GOD OF THEOLOGY WHO REWARDS GOOD AND PUNISHES EVIL. My God created laws that take care of that. His universe is not ruled by wishful thinking, but by immutable laws
- 140. You must warn people not to make the intellect their God. THE INTELLECT KNOWS METHODS BUT IT SELDOM KNOWS VALUES, AND THEY COME FROM FEELING. If one doesn't play a part in the creative whole, he is not worth being called human. He has betrayed his true purpose.
- 141. Certainly there are things worth believing. I believe in the brotherhood of man and in personal originality. But IF YOU ASKED ME TO PROVE WHAT I BELIEVE, I COULDN'T. You can spend your whole life trying to prove what you believe; you may hunt for reasons, but it will all be in vain. Yet our beliefs are like our existence; they are facts. If you don't yet know what to believe in, then try to learn what you feel and desire.
- 142. An intuitive child couldn't accomplish anything without some knowledge. There will come a point in everyone's life, however, where ONLY INTUITION CAN MAKE THE LEAP AHEAD, WITHOUT EVER KNOWING PRECISELY HOW. One can never know why, but one must accept intuition as a fact.
- 143. Don't think about why you question, simply don't stop questioning.

 DON'T WORRY ABOUT WHAT YOU CAN'T ANSWER, AND DON'T

 TRY TO EXPLAIN WHAT YOU CAN'T KNOW. Curiosity is its own reason. Aren't you in awe when you contemplate the mysteries of eternity, of life, of the marvellous structure behind reality? And this is the miracle of the human mind—to use its constructions, concepts, and formulas as tools to explain what man sees, feels and touches. Try to comprehend a little more each day. Have holy curiosity
- 144. First you must have faith in an eternal world independent of you; then you must have faith in your ability to perceive it, and finally you must try to explain it by means of concepts or mathematical constructions. But don't always accept traditional concepts without re-examining them. Even overthrow my relativity theory, if you find a better one. . . . You must believe that the world was created as a unified whole which is comprehensible to man. Of course, it's going to take an infinitely long time to investigate this unified creation. But to me that is the highest and most sacred duty—unifying physics. SIMPLICITY IS THE CRITERION OF THE UNIVERSE.
- 145. **BE A LONER.** That gives you time to wonder, to search for the truth. Have holy curiosity. Make your life worth living.

- 146. "Try not to become a man of success but rather TRY TO BECOME A MAN OF VALUE. He is considered successful in our day who gets more out of life than he puts in. But a man of value will give more than he receives."
- 147. We are succumbing to ILLUSIONS PRODUCED BY OUR SELF-CREATED LANGUAGE, without reaching a better understanding of anything.
- 148. I HAVE ALWAYS BELIEVED THAT JESUS meant by the Kingdom of God the small group scattered all through time of intellectually and ethically valuable people.
- 149. "...every one who is seriously engaged in the pursuit of science becomes convinced that the laws of nature manifest the existence of a SPIRIT VASTLY SUPERIOR TO THAT OF MEN, and one in the face of which we with our modest powers must feel humble"
- 150. The Wonder of NATURE DOES NOT BECOME SMALLER BECAUSE ONE CANNOT MEASURE IT by the standards of human moral and human aims.
- 151. Science can only arrange ethical propositions logically and furnish the means for the realization of ethical aims, but the **DETERMINATION OF AIMS IS BEYOND ITS SCOPE**.
- 152. I WANT TO KNOW HOW GOD CREATED THIS WORLD. I'm not interested in this or that phenomenon, in the spectrum of this or that element. I want to know His thoughts, the rest are details.
- 153. I believe that we **HAVE TO CONTENT OURSELVES WITH OUR IMPERFECT KNOWLEDGE** and understanding and treat values and moral obligations as a purely human problem—the most important of all human problems.
- 154. THERE ARE ONLY TWO WAYS TO LIVE YOUR LIFE. One is as though nothing is a miracle. The other is as though everything is.
- 155. **COMMON SENSE IS** nothing more than a deposit of prejudices laid down by the mind before you reach eighteen.
- 156. FAIRY TALES AND MORE FAIRY TALES. [in response to a mother who wanted her son to become a scientist and asked Einstein what reading material to give him]. The mother protested that she was really serious about this and she wanted a serious answer; but Dr. Einstein persisted, adding that CREATIVE IMAGINATION IS THE ESSENTIAL ELEMENT

- IN THE INTELLECTUAL EQUIPMENT OF THE TRUE SCIENTIST, and that fairy tales are the childhood stimulus to this quality.
- 157. **TWO THINGS ARE INFINITE:** the universe and the human stupidity.
- 158. **CONTEMPT PRIOR TO INVESTIGATION** is what enslaves a mind to Ignorance.
- 159. BUDDHISM HAS THE CHARACTERISTICS OF WHAT WOULD BE EXPECTED IN A COSMIC RELIGION for the future: It transcends a personal God, avoids dogmas and theology; it covers both the natural and the spiritual
- 160. If you are out to **DESCRIBE THE TRUTH**, leave elegance to the tailor.
- 161. YOU DO NOT REALLY UNDERSTAND SOMETHING unless you can explain it to your grandmother.
- 162. A LITTLE KNOWLEDGE IS A DANGEROUS THING. So is a lot.
- 163. ANY INTELLIGENT FOOL CAN MAKE THINGS BIGGER, MORE COMPLEX, and more violent. It takes a touch of genius—and a lot of courage to move in the opposite direction (thought not to be Einstein by commentators)
- 164. **EDUCATION IS THAT WHICH REMAINS**, if one has forgotten everything he learned in school.
- 165. THE WORLD IS A DANGEROUS PLACE TO LIVE, not because of the people who are evil, but because of the people who don't do anything about it.
- 166. TIME IS NATURE'S WAY of keeping everything from happening at once.
- 167. THE INTUITIVE MIND IS A SACRED GIFT and the rational mind is a faithful servant. We have created a society that honours the servant and has forgotten the gift.

QUOTES ABOUT EINSTEIN:

I was particularly won over by HIS SWEET DISPOSITION, BY HIS GENERAL KINDNESS, BY HIS SIMPLICITY, AND BY HIS FRIENDLINESS. Occasionally, gaiety would gain the upper hand and he would strike a more personal note and even disclose some detail of his day-to-day life. Then again, reverting to his characteristic mood of reflection and meditation, he would launch into a

profound and original discussion of a variety of scientific and other problems. I shall always remember the enchantment of all those meetings, from which I carried away an indelible impression of Einstein's great human qualities.

Louis de Broglie, New Perspectives in Physics, p. 182

Like many other great scientists he does not fit the boxes in which popular polemicists like to pigeonhole him. ... It is clear for example that he had respect for the religious values enshrined within Judaic and Christian traditions ... but WHAT HE UNDERSTOOD BY RELIGION WAS SOMETHING FAR MORE SUBTLE THAN WHAT IS USUALLY MEANT BY THE WORD IN POPULAR DISCUSSION.

John Brooke, as quoted in "Childish superstition: Einstein's letter makes view of religion relatively clear" in *The Guardian* (13 May 2008)

EINSTEIN WAS A GIANT. His head was in the clouds, but his feet were on the ground. Those of us who are not so tall have to choose!

Richard Feynman, as quoted in *Collective Electro-dynamics: Quantum Foundations of Electromagnetism* (2002) by Carver A. Mead, p. xix

Men like Einstein proclaim obvious truths about war but are not listened to. So long as Einstein is unintelligible, he is thought wise, **BUT AS SOON AS HE SAYS ANYTHING THAT PEOPLE CAN UNDERSTAND, IT IS THOUGHT THAT HIS WISDOM HAS DEPARTED FROM HIM.**

Bertrand Russell, *Do Governments Desire War?* (1932), a newspaper article for the "New York American" (as quoted in *Mortals and Others*, v.1, 1975)

Oh, he was a lovely man, Einstein. OH, LOVELY MAN. HE HAD THE MOST PERFECT SIMPLICITY AND PERFECT MODESTY, and all his feelings were humane.

Bertrand Russell, in an interview with David Susskind, June 10, 1962.

I LIKE QUOTING EINSTEIN. Know why? Because nobody dares contradict you.

Studs Terkel, as quoted in "Voice of America" in $\it The~Guardian$ (1 March 2002)

EINSTEIN EXPLAINED HIS THEORY TO ME EVERY DAY, and on my arrival I was fully convinced that he understood it.

Attributed to Chaim Weizmann, after a long trans-Atlantic journey; Simpson's Contemporary Quotations (6822) credits Nigel Calder, Einstein's Universe (1979); a slightly different version appears in David Bodanis, E=mc², which credits Carl Seelig, *Albert Einstein: A Documentary Biography* (1956), pp. 80–81

[H]IS WORK REVOLVED AROUND THREE RULES WHICH APPLY TO ALL SCIENCE, our problems, and times:

OUT OF CLUTTER, FIND SIMPLICITY;
FROM DISCORD MAKE HARMONY; AND FINALLY
IN THE MIDDLE OF DIFFICULTY LIES OPPORTUNITY.

John Archibald Wheeler, interviewed in Cosmic Search Vol. 1, No. 4 (Fall 1979). The three principles are sometimes attributed to Einstein himself, but no source can be found showing that Einstein stated them, and Wheeler didn't indicate in the interview whether he was quoting something Einstein had told him or giving his own description of how Einstein worked.

All above quotes from the url below. It is important to note most quotations I have cited have been cut and pasted from longer and more detailed quotations. It is the underlying message of Einstein's ideas I have attempted to bring forward for reader appreciation and understanding. I have taken the view that readers would probably undertake their own additional research if they were so inclined.

http://en.wikiquote.org/wiki/Albert_Einstein