FYTR 1.12

FOUNDATION YEAR

READING TEST

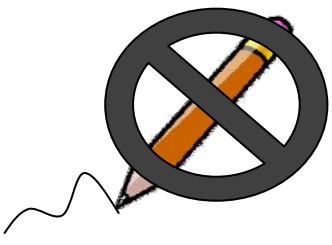
TITLE: **The Incredibles**

LEVEL: Medium

WHAT: **Practice Reading Exam including:**
Text
Worksheets
Answer Key

WHY: To give practice in multiple choice exam format similar to the Foundation Year Reading Exam

HOW: Read the text and answer the questions.
Check your answers in the Answer Key.
If your answer doesn't match the Answer Key, refer to the script.



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PRACTICE EXAMINATION - READING TEST

INSTRUCTIONS FOR STUDENTS:

The questions in this section relate to the reading text: **The Incredibles**

There are **7** parts in the reading section of the test:

Part 1: Main Points	(20 marks)
Part 2: Closer Reading	(30 marks)
Part 3: Connectors	(10 marks)
Part 4: Reference	(10 marks)
Part 5: Vocabulary	(10 marks)
Part 6: Paraphrase/Summary	(10 marks)
Part 7: University Word List	(10 marks)

Time approximately: 40 minutes

THE INCREDIBLES

This text is adapted from an article by Graham Lawton in New Scientist magazine, 13 May 2006.

1. By the year 2050, enormous changes will have occurred in the world and in human capabilities. Peter Schwartz, in the world of 2006 a business strategist and 'scenario planner' advising companies on how to prepare for the future, has suggested a scenario where in 2050 he will be aged 100, have already had two careers and will be looking forward to another as he expects to live another 50 years. Thanks to a bioscience revolution that took place around the beginning of the century, he is surrounded by healthy, happy, rich and long-lived people. Many of these enjoy **enhancements** that exceed the biology they were born with, such as greater memory or intelligence. The aging process has been radically slowed, and the elderly are healthier and look younger, due to lack of disease and genetic engineering.

2. **While** Schwartz's vision sounds to most like a fantasy, the prospect of human enhancement is being taken increasingly seriously, discussed by such bodies as The World Economic Forum, the US National Science Foundation, and the UK's Office of Science and Technology. Although humans have always strived to tame or transcend nature through technology, technology has now reached a stage where the potential for human impact on nature is revolutionary. Joel Garreau, writer of the book *Radical Evolution,* states 'For hundreds of years our technologies have been aimed outward, at modifying our environment. Now we've got a suite of technologies that are aimed inward, at **modifying** our minds, metabolisms, personalities and children.'

3. Scientists have identified five broad areas of real-world technologies that could, now or in the very near future, be used to enhance normal functioning, including genetic engineering, physical performance drugs, cognitive drugs, implants and extension of human life expectancy. None of these technologies were explicitly designed to allow the healthy to transcend their limits. Rather, they were created to counter disease and disability. However, what the US Council on Bioethics, set up to advise President Bush on stem cells and cloning issues, has recognized is that all of them have the potential to be used 'beyond therapy' - 'to alter the normal workings of the human body and psyche, to augment or improve their native capacities and performances'. The council was also among the first to recognize a significant fact about **such** technologies: if it has enhancement potential, the healthy will start using it to give them an edge.

4. This has been borne out in several instances in recent times. According to some reports, around 10 per cent of US university students regularly take Ritalin or other prescription stimulants as 'smart drugs' to boost their attention and concentration. Another example is the use of 'Viagra', designed to counteract men's failing sexual performance due to age or illness, but regularly used as a recreational drug. **Furthermore**, cosmetic surgery, based on techniques originally developed to treat injuries or disfigurements, has never been more popular or socially acceptable, and performance-enhancing substances are rife in professional sport. Even reproductive technologies are being co-opted in ways that blur the boundary between therapy and enhancement: IVF parents requesting sex selection of embryos, for example, to engineer the ideal family.

5. For those seeking an advantage, many more opportunities are just around the corner. Around 40 cognition-enhancing drugs are currently in development, designed to improve wakefulness, attention, memory, decision-making and planning. Moreover, gerontologists are starting to believe in the possibility of direct **intervention in** the process of **senescence** to significantly increase the average human lifespan.

6. There have also been rapid advances in brain-machine interfaces, such as retinal implants, communication devices for paralysed and locked-in patients, and even memory prostheses, hinting at the possibility of neural implants that enhance normal functioning. In addition, progress in genetic engineering and gene therapy suggests that it will soon be possible to rewrite personal genetic codes, and those of future generations, removing broken genes, correcting errors and even inserting new ones.

7. According to the NSF, the technologies that make human enhancement possible are collectively known as nano-bio-info-cogno, or nanoscience, biotech, IT and cognitive science. It is clear that to predict where technologies will be 20 years from now, past progress cannot be used as a guide, as most technologies are advancing not linearly, but exponentially. **In other words**, what **they** are capable of keeps on doubling every few months or years. **Exponential growth** initially looks like linear growth, but soon enough **it** starts producing spectacular gains in ever shorter periods of time. Once exponential growth is factored into the equation, the progress of the previous twenty years is at best a guide to the next eight.

8. The most celebrated example of exponential growth in technology is Moore's law, which states that by almost any measure chosen, the performance of computing doubles approximately every 18 months. That means that within living memory, computing power has increased more than 100 million-fold. That is a rate of technological growth **unprecedented** in human history. Exponential growth in computing power drives similar growth in other technologies, for instance DNA sequencing, or brain scanner resolution. According to the NSF, nano-bio-info-cogno all have the capacity to grow exponentially for decades to come.

9. Mutually reinforcing growth is only half the story. The NSF says there is another important trend to take into account. **This** is 'convergence' – the idea that as these separate technological strands develop, the boundaries between them will blur and they will eventually merge into a single, unified science 'based on the unity of nature', as the NSF puts it.

10. Some futurologists, notably Ray Kurzweil of Kurzweil Technologies in Wellesley, Massachusetts, argue that exponential growth and technological convergence will lead to a 'singularity', a time when change becomes so rapid and **pervasive** that human life is irreversibly transformed (New Scientist, 24 Sept. 2005, 32). Even if **that** does not happen, exponential growth still holds out the prospect of extraordinary technological progress in as little as 20 or 30 years. **For example**, such developments as brain implants that allow direct mind-to-mind communication, memory chips that facilitate upload of

new knowledge directly into the brain, genetic upgrades that can be reversibly slotted into all the cells in the body, and custom-made replacement body parts are already foreseen.

11. From a human perspective, that means having almost limitless power over biology – the power to end disease, abolish pain and suffering, be endowed with superhuman levels of beauty, athleticism and brains, and radically slow down or even halt aging. For many, that future cannot come soon enough. Who would turn down an offer of an extra 50 years of life, endowed with 'superhealth', superior physical and mental capabilities, and the prospect of an even better life for their children?

12. Of course, 'better' is always subjective. Human enhancement might promise liberation, but it will bring its own peculiar difficulties, and thus important issues for consideration now. As more and more enhancement technologies become available, certain questions will become increasingly raised. Is it safe? Should it be regulated? Will it lead to an 'enhancement divide' between the haves and have-nots, or even conflict between the 'enhanced' and the 'naturals'? Would individuals feel pressured or even **coerced** into using them simply to keep up?

13. Although it can be argued that these concerns are nothing new, and not valid arguments about why they should not be used or available, there is a new and potentially explosive question: What will it do to the sense of being human? The human experience is one of striving for success and learning to deal with failure. Decisions about work and family timing, efforts to gain knowledge and experience, and achievement of happiness in the face of pain and disease might fade into insignificance, and the world would seem a dull and homogenous place. Many opponents of these technologies believe that self enhancement would somehow negate humanity, that a world of enhanced humans would be a world that has lost all meaning, and that the only safe course of action is to put a stop to the whole enterprise.

14. Others, however, turn the human nature question on its head. Bioethicist James Hughes, of Trinity College Cambridge, suggests that 'To the extent that we are born with impulses for aggression, racism and selfishness or limits on our capacity for wisdom or compassion, we may be morally **obliged** to modify human nature.' Further, it can be argued that all technologies are attempts to transcend human nature – consider agriculture, plumbing, clothes, or transportation systems. Do they affect the sense of what it means to be human?

15. Some believe that an explosive technological progress leading to post-human future is unlikely, but they seem to be in a minority. According to Schwarz it is almost **inevitable** that the next 20 to 30 years will see the rapid progress that makes his 2050 scenario possible; certainly it is inevitable that great scientific progress will be made. **Thus** decisions need to be made now on such issues as sex or genetic selection of embryos, prescribing behaviour-modifying drugs to pre-schoolers, or how vigorously an attempt is made to reverse the processes of aging, to determine the direction of the road towards an enhanced future beyond therapy.

16. Chances are, of course, that human enhancement will lead neither to utopia nor to the end of humanity. More likely each new technology will be debated, tested and, if useful and not directly harmful, eventually assimilated into everyday life. Even technologies that seem morally questionable at first soon become socially acceptable. In 1969, a poll found that a majority of Americans believed that IVF 'violated God's will'; by 1978 a majority said they would use it. In the 1960's many US states outlawed the contraceptive pill for fear it would be too socially disruptive; few would do the same now. Most experts agree that human enhancement is coming and that there is no off button for what has already been started. However, the outcome is not predetermined. It is time to start choosing the future.

QUESTIONS

PART 1: MAIN POINTS (20 marks)

Select the most correct answer according to the text in each of the following questions:

1. The author regards human enhancement technologies as
   a) likely to be generally accepted
   b) needing careful screening
   c) damaging to human society
   d) not likely due to objections

2. The main aim of the article is to
   a) explain
   b) argue
   c) discuss
   d) describe

3. The main message of the article is that enhancement technology
   a) can be problematic
   b) is always advantageous
   c) is inevitable and useful
   d) is greatly exaggerated

4. The author is of the opinion that enhancement technology
   a) should be used by the healthy
   b) will be used by the healthy
   c) should be used by the unhealthy
   d) will be used to produce a master race

5. The writer concludes by
   a) encouraging acceptance of enhancement technology
   b) expressing concerns about the morality of enhancement technology
   c) urging careful consideration regarding use of enhancement technology
   d) arguing that enhancement technology is socially acceptable

PART 2: CLOSER READING (30 marks)

6. Peter Schwarz is a
   a) fortune teller
   b) business adviser
   c) biological scientist
   d) journalist

7. The writer seems to think that Schwarz's predictions are
   a) exaggerated
   b) accurate
   c) very likely
   d) dangerous

8. 'Enhancement technology' describes technology that
   a) shapes the environment
   b) improves health problems
   c) changes mental and physiological capacities
   d) results in changes of lifestyle

9. Enhancement technologies are
   a) already used by the healthy at present
   b) likely to be used by the healthy in the future
   c) designed to be used only to cure health problems
   d) mainly drug related

10. ‘Smart drugs’ are taken because they have been
    a) shown to be safe
    b) shown to increase intelligence
    c) shown to increase concentration
    d) well promoted

11. Viagra is given in the text as an example of
    a) cosmetic enhancement
    b) a socially unacceptable drug
    c) a health drug used for sport
    d) a health drug used by the health

12. In discussing types of performance-enhancing drugs and procedures under development, the writer suggests that
    a) addressing health problems is the primary focus
    b) producing ‘super’ humans is the primary focus
    c) the focus is on affordability
    d) the focus is on everyday needs

13. The writer focuses on enhancement in the following main areas in discussing developments in the near future:
    a) aging, memory, communication and genetic engineering
    b) cognition, aging, neurology and genetics
    c) intelligence, neural implants, physiology and mental health
    d) memory, physical, prostheses and disease

14. The writer suggests that development of enhancing technologies is
    a) slow but steady
    b) dangerously rapid
    c) increasing at a faster rate than in the past
    d) blocked by bureaucratic regulation

15. ‘Convergence’ is the tendency for
    a) different technologies to merge
    b) different technologies to develop separately
    c) science to become more general
    d) technologies to grow exponentially

16. ‘Singularity’ refers to
    a) narrow focus of development
    b) computer development
    c) exponential growth
    d) transformation of human life

17. The ‘sense of being human’ is discussed to show
    a) ethical concerns related to enhancement technologies
    b) concerns about effectiveness of enhancement technologies
    c) problems with widespread happiness
    d) concerns related to religious beliefs

18. Hughes
    a) is against development of enhancement technologies
    b) is in favour of development of enhancement technologies
    c) is doubtful about the value of such technologies
    d) equates enhancement technology with agricultural developments

19. The view that increasingly rapid development of enhancement technologies is inevitable is
    a) held by only a few
    b) widely held
    c) held by all scientists
    d) inconsistent with recent rates of development

20. In concluding, the writer seems to believe that enhancement technology
    a) is damaging for future generations
    b) is not a threat to future generations
    c) is morally questionable
    d) will become widely accepted

PART 3: CONNECTORS (10 marks)

Select the most appropriate connector to replace that used in the text (in bold).

21. While (paragraph 2)
    a) However
    b) Although
    c) Meanwhile

22. Furthermore (para 4)
    a) However
    b) For example
    c) Moreover

23. In other words (para 7)
    a) In contrast
    b) This means that
    c) Similarly

24. For example (para 10)
    a) In other words
    b) Consequently
    c) For instance

25. Thus (para 15)
    a) Therefore
    b) Furthermore
    c) In other words

PART 4: REFERENCE (10 marks)

Select the word or phrase that is referred to by the reference word given in the text (in bold).

26. such (para 3)
    a) technologies that enhance normal functioning
    b) technologies to counter disease and disability
    c) stem cell and cloning technologies

27. they (para 7)
    a) technologies 20 years from now
    b) scientists
    c) human enhancement technologies

28. it (para 7)
    a) technology
    b) exponential growth
    c) linear growth

29. This (para 9)
    a) another trend
    b) convergence
    c) mutually reinforcing growth

30. that (para 10)
    a) rapid change of technology
    b) convergence of technologies
    c) irreversible change in humans

PART 5: VOCABULARY (10 marks)

Select the word or phrase which best gives the meaning of the word in the text (in bold):

31. senescence (para 5)
    a) aging
    b) gaining knowledge
    c) curing disease

32. exponential growth (para 7)
    a) double the original rate
    b) a dramatic increase
    c) continually increasing rate

33. unprecedented (para 8)
    a) not seen before
    b) not affected by
    c) influential

34. coerced (para 12)
    a) cooperated
    b) forced
    c) discouraged

35. inevitable (para 15)
    a) likely
    b) unlikely
    c) certain

PART 6: PARAPHRASE AND SUMMARY (10 marks)

36. Select the sentence below that best paraphrases para 4 in the text (reprinted below):

#4. This has been borne out in several instances in recent times. According to some reports, around 10 per cent of US university students regularly take Ritalin or other prescription stimulants as 'smart drugs' to boost their attention and concentration. Another example is the use of 'Viagra', designed to counteract men's failing sexual performance due to age or illness, but regularly used as a recreational drug. Furthermore, cosmetic surgery, based on techniques originally developed to treat injuries or disfigurements, has never been more popular or socially acceptable, and performance-enhancing substances are rife in professional sport. Even reproductive technologies are being co-opted in ways that blur the boundary between therapy and enhancement: IVF parents requesting sex selection of embryos, for example, to engineer the ideal family.

a) Drugs to enhance concentration, sexual health drugs such as Viagra, performance enhancing substances for sporting achievement and cosmetic surgery techniques have become a normal part of society.

b) Drugs for increasing concentration and for sexual health, cosmetic surgery techniques, performance enhancing drugs in sport, and IVF technology have become widely accepted as ways to enhance the lives of healthy individuals in today's society (Lawton, 2006).

c) Viagra and sports performance drugs for recreational enhancement, and IVF and cosmetic surgery for physical problems or injury, are now very popular (Lawton, 2006).

37. Which of the choices below best summarises paragraphs 10-12?

a) It has been argued (Kurzweil, in Lawton 2006) that change in technology will become so rapid and cover so many areas that human life will change completely. At the very least, asserts Lawton (2006), it is likely that technological progress will have enormous consequences in areas such as genetic improvements to health and learning through direct input of knowledge to the brain via memory chips. Lawton suggests that this power to control biology will be welcomed by most, but that questions will have to be faced concerning safety, fairness, and regulation.

b) Kurzweil (2005) suggests that rapid changes in technology will result in new super forms of humans. He believes that technology advances will lead to different ways of learning, repairing body damage, and communicating. Lawton welcomes the possibly of controlling our own biology, but points out that there will also be problems with safety, regulation and cost.

c) According to some futurologists (Kurzweil, 2005) exponential growth and technological changes will result in a 'singularity' or an irreversible transformation of human life. After 20 or 30 years, brain implants, memory chips, genetic upgrades, and custom-made replacement body parts will give us limitless power over our own biology. Human advancement promises a better future, and, suggests Lawton (2006), we are unlikely to turn it down. However, he points out, 'better' is always subjective and certain questions will be raised. Will it be safe? Regulated? Affordable?

PART 7: UNIVERSITY WORD LIST (10 marks)

The following words occur in your University Word List as well as the text (in bold). Select the best choice of meaning given to fit the text.

38. enhancements (para 1)
    a) beautifications
    b) improvements
    c) modifications

39. modifying (para 2)
    a) changing
    b) protecting
    c) polluting

40. intervene in (para 5)
    a) interfere with
    b) alter
    c) add to

41. pervasive (para 10)
    a) damaging
    b) beneficial
    c) widespread

42. obliged (para 14)
    a) forced
    b) encouraged
    c) required

ANSWER KEY

PART 1: MAIN POINTS (20 marks)

1. The author regards human enhancement technologies as
   a) **likely to be generally accepted**
   b) needing careful screening
   c) inevitable but possibly damaging
   d) not likely due to objections

2. The main aim of the article is to
   a) explain
   b) argue
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3. The main message of the article is that enhancement technology
   a) can be problematic
   b) is always advantageous
   c) **is inevitable and useful**
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4. The author is of the opinion that enhancement technology
   a) should be used by healthy people
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5. The writer concludes by
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20. The writer seems to believe that enhancement technology
    a) is damaging for future generations
    b) is not a threat to future generations
    c) is morally questionable
    d) **will become widely acceptable.**

PART 3: CONNECTORS (10 marks)

21. While (paragraph 2)
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PART 6: PARAPHRASE AND SUMMARY (10 marks)

36. Select the sentence below that best paraphrases para 4 in the text :

a) Drugs to enhance concentration, sexual health drugs such as Viagra, performance enhancing substances for sporting achievement and cosmetic surgery techniques have become a normal part of society.

b) **Drugs for increasing concentration and for sexual health, cosmetic surgery techniques, performance enhancing drugs in sport, and IVF technology have become widely accepted as ways to enhance the lives of healthy individuals in today's society (Lawton, 2006).**

c) Viagra and sports performance drugs for recreational enhancement, and IVF and cosmetic surgery for physical problems or injury, are now very popular (Lawton, 2006).

37. Which of the choices below best summarises paragraphs 10-12?

a) **It has been argued (Kurzweil, in Lawton 2006) that change in technology will become so rapid and cover so many areas that human life will change completely. At the very least, asserts Lawton (2006), it is likely that technological progress will have enormous consequences in areas such as genetic improvements to health and learning through direct input of knowledge to the brain via memory chips. Lawton suggests that this power to control our own biology will be welcomed by most, but that questions will have to faced concerning safety, fairness, and regulation.**

b) Kurzweil (2005) suggests that rapid changes in technology will result in new super forms of humans. He believes that technology advances will lead to different ways of learning, repairing body damage, and communicating. Lawton welcomes the possibly of controlling our own biology, but points out that there will also be problems with safety, regulation and cost.

c) According to some futurologists (Kurzweil, 2005) exponential growth and technological changes will result in a 'singularity' or an irreversible transformation of human life. After 20 or 30 years, brain implants, memory chips, genetic upgrades, and custom-made replacement body parts will give us limitless power over our own biology. Human advancement promises a better future, and, suggests Lawton (2006), we are unlikely to turn it down. However, he points out, 'better' is always subjective and certain questions will be raised. Will it be safe? Regulated? Affordable?

PART 7: UNIVERSITY WORD LIST (10 marks)

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