

BIO FINAL STUDY GUIDE

1. What does DNA stand for? _____
2. In 1928, British scientist _____, was trying to figure out how bacteria made people sick.
3. How did this scientist kill the bacteria? _____
4. What caused the mice to die in his experiments? _____
5. _____ is the process in which one strand of bacteria seemed to transfer into another strain.
6. Avery and other scientists discovered that the _____ stores and transmits the genetic information from one generation of an organism to the next.
7. American scientists, _____ and _____, studied a virus that infects bacteria called a _____. These virus consist of a _____ or _____ core and a _____ coat.
8. These two American scientists concluded that the genetic material of a bacteriophage was _____, and not protein.
9. Three things a gene needs to do is:
 - _____
 - _____
 - _____
10. DNA is made up of units called _____, which are composed of three things:
 - _____
 - _____
 - _____
11. There are four types of _____;
 - Purines:
 - _____
 - _____
 - Pyrimidines:
 - _____
 - _____
12. The DNA back bone is made of the _____ and _____ groups.
13. The four _____ of DNA were like the letters of the alphabet.
14. Chargaff's rule states the relationship between nucleotides. A purine pairs up with a pyrimidine. Adenine will always pair with _____. The purine Guanine always pairs with the pyrimidine _____.
15. In the 19850's, the British scientist _____ used X-ray diffraction to figure out some important clues about DNA structure, such as the fact that it was made of two strands and was in a twisted form.
16. Watson and Crick used clue's from the above scientist to make a model of DNA we call the _____, which consists of two strands twisted around each other.
17. The type of bond that holds nitrogenous bases together is called a _____.
18. This principle of nitrogenous bases pairing up with certain nitrogenous bases is called _____.
19. The process in which DNA copies itself before a cell divides is called _____, in which DNA separates its 2 strands, producing complementary strands following the rules of base-pairing. Each strand of the double helix serves as a template for new strands.
20. The enzyme that "unzips" the DNA strand is called _____.
21. RNA stands for _____.
22. In RNA the nitrogenous bases are the same as in DNA EXCEPT the pyrimidine thymine is replaced with _____, which is only found in RNA.
23. There area 3 types of RNA:
 - o _____; carry instructions to make amino acids
 - o _____; proteins combined with this RNA ribosomes
 - o _____; transfers amino acids to ribosomes to make protein
24. _____ are coded DNA instructions that control the production of proteins within the cell.
25.

DNA

transcription
→

mRNA

translation
→

protein

Biology B Final Exam Study Guide Answers

R Pring



Biology B Final Exam Study Guide Answers:

Whispering the Strategies of Language: An Emotional Quest through **Biology B Final Exam Study Guide Answers**

In a digitally-driven earth wherever displays reign supreme and instant conversation drowns out the subtleties of language, the profound strategies and psychological subtleties hidden within words often go unheard. However, situated within the pages of **Biology B Final Exam Study Guide Answers** a charming literary prize pulsing with organic thoughts, lies an extraordinary quest waiting to be undertaken. Published by an experienced wordsmith, this charming opus invites visitors on an introspective journey, gently unraveling the veiled truths and profound impact resonating within the cloth of every word. Within the psychological depths of the poignant review, we will embark upon a honest exploration of the book is primary subjects, dissect its interesting publishing style, and succumb to the powerful resonance it evokes serious within the recesses of readers hearts.

https://stats.tinkerine.com/book/scholarship/fetch.php/aids_een_race_met_de_tijd.pdf

Table of Contents Biology B Final Exam Study Guide Answers

1. Understanding the eBook Biology B Final Exam Study Guide Answers
 - The Rise of Digital Reading Biology B Final Exam Study Guide Answers
 - Advantages of eBooks Over Traditional Books
2. Identifying Biology B Final Exam Study Guide Answers
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Biology B Final Exam Study Guide Answers
 - User-Friendly Interface
4. Exploring eBook Recommendations from Biology B Final Exam Study Guide Answers
 - Personalized Recommendations

- Biology B Final Exam Study Guide Answers User Reviews and Ratings
- Biology B Final Exam Study Guide Answers and Bestseller Lists
- 5. Accessing Biology B Final Exam Study Guide Answers Free and Paid eBooks
 - Biology B Final Exam Study Guide Answers Public Domain eBooks
 - Biology B Final Exam Study Guide Answers eBook Subscription Services
 - Biology B Final Exam Study Guide Answers Budget-Friendly Options
- 6. Navigating Biology B Final Exam Study Guide Answers eBook Formats
 - ePub, PDF, MOBI, and More
 - Biology B Final Exam Study Guide Answers Compatibility with Devices
 - Biology B Final Exam Study Guide Answers Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Biology B Final Exam Study Guide Answers
 - Highlighting and Note-Taking Biology B Final Exam Study Guide Answers
 - Interactive Elements Biology B Final Exam Study Guide Answers
- 8. Staying Engaged with Biology B Final Exam Study Guide Answers
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Biology B Final Exam Study Guide Answers
- 9. Balancing eBooks and Physical Books Biology B Final Exam Study Guide Answers
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Biology B Final Exam Study Guide Answers
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Biology B Final Exam Study Guide Answers
 - Setting Reading Goals Biology B Final Exam Study Guide Answers
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Biology B Final Exam Study Guide Answers
 - Fact-Checking eBook Content of Biology B Final Exam Study Guide Answers

- Distinguishing Credible Sources
- 13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
- 14. Embracing eBook Trends
 - Integration of Multimedia Elements
 - Interactive and Gamified eBooks

Biology B Final Exam Study Guide Answers Introduction

Biology B Final Exam Study Guide Answers Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Biology B Final Exam Study Guide Answers Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Biology B Final Exam Study Guide Answers : This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for Biology B Final Exam Study Guide Answers : Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks Biology B Final Exam Study Guide Answers Offers a diverse range of free eBooks across various genres. Biology B Final Exam Study Guide Answers Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Biology B Final Exam Study Guide Answers Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Biology B Final Exam Study Guide Answers, especially related to Biology B Final Exam Study Guide Answers, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Biology B Final Exam Study Guide Answers, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Biology B Final Exam Study Guide Answers books or magazines might include. Look for these in online stores or libraries. Remember that while Biology B Final Exam Study Guide Answers, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Biology B Final Exam Study Guide Answers eBooks for free, including popular titles. Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free

periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Biology B Final Exam Study Guide Answers full book, it can give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Biology B Final Exam Study Guide Answers eBooks, including some popular titles.

FAQs About Biology B Final Exam Study Guide Answers Books

1. Where can I buy Biology B Final Exam Study Guide Answers books? Bookstores: Physical bookstores like Barnes & Noble, Waterstones, and independent local stores. Online Retailers: Amazon, Book Depository, and various online bookstores offer a wide range of books in physical and digital formats.
2. What are the different book formats available? Hardcover: Sturdy and durable, usually more expensive. Paperback: Cheaper, lighter, and more portable than hardcovers. E-books: Digital books available for e-readers like Kindle or software like Apple Books, Kindle, and Google Play Books.
3. How do I choose a Biology B Final Exam Study Guide Answers book to read? Genres: Consider the genre you enjoy (fiction, non-fiction, mystery, sci-fi, etc.). Recommendations: Ask friends, join book clubs, or explore online reviews and recommendations. Author: If you like a particular author, you might enjoy more of their work.
4. How do I take care of Biology B Final Exam Study Guide Answers books? Storage: Keep them away from direct sunlight and in a dry environment. Handling: Avoid folding pages, use bookmarks, and handle them with clean hands. Cleaning: Gently dust the covers and pages occasionally.
5. Can I borrow books without buying them? Public Libraries: Local libraries offer a wide range of books for borrowing. Book Swaps: Community book exchanges or online platforms where people exchange books.
6. How can I track my reading progress or manage my book collection? Book Tracking Apps: Goodreads, LibraryThing, and Book Catalogue are popular apps for tracking your reading progress and managing book collections. Spreadsheets: You can create your own spreadsheet to track books read, ratings, and other details.
7. What are Biology B Final Exam Study Guide Answers audiobooks, and where can I find them? Audiobooks: Audio recordings of books, perfect for listening while commuting or multitasking. Platforms: Audible, LibriVox, and Google Play Books offer a wide selection of audiobooks.
8. How do I support authors or the book industry? Buy Books: Purchase books from authors or independent bookstores. Reviews: Leave reviews on platforms like Goodreads or Amazon. Promotion: Share your favorite books on social media

or recommend them to friends.

9. Are there book clubs or reading communities I can join? Local Clubs: Check for local book clubs in libraries or community centers. Online Communities: Platforms like Goodreads have virtual book clubs and discussion groups.
10. Can I read Biology B Final Exam Study Guide Answers books for free? Public Domain Books: Many classic books are available for free as they're in the public domain. Free E-books: Some websites offer free e-books legally, like Project Gutenberg or Open Library.

Find Biology B Final Exam Study Guide Answers :

aids een race met de tijd

aircraft maintenance manual torrents

ahsan khans drama ghonghat

agile project manager handbook

air pollution control david cooper solution manual

airbus a320 manual torrent

air naval gunfire liason company training and readiness manual

agincourt henry v and the battle that made england

airbus a330 manuals

air force sncoa study guide

agricultural sciences study guide for grade 11

aiag spc manual sample

aircraft performance j anderson solution manual

airbus a300 operating manual

aircraft engines of the world 1945

Biology B Final Exam Study Guide Answers :

rei kawakubo comme des garçons art of the in between goodreads - Apr 03 2023

web may 30 2017 rei kawakubo comme des garçons art of the in between andrew bolton 4 56 70 ratings4 reviews a revelatory look at the influential and enigmatic designer behind comme des garçons the great pantheon of fashion designers produces only a handful of creators who are masters of their métier rei kawakubo of comme des garçons is one

rei kawakubo comme des garçons art of the in between at the met wwd - Jul 26 2022

web may 1 2017 a year in the making the exhibition will run may 4 through sept 4 displaying 140 of kawakubo s designs for comme des garçons from the early eighties to her most recent collection by

rei kawakubo comme des garçons art of the in between - Oct 29 2022

web creator birth date 1942 gallery views of the costume institute s spring 2017 exhibition rei kawakubo comme des garçons art of the in between curated by andrew bolton the costu

rei kawakubo comme des garçons art of the in between - Aug 07 2023

web apr 20 2018 the fashion designer rei kawakubo is often described as nonconformist avant garde and eccentric her creations for comme des garçons the label she founded in 1969 elicit the same descriptions b

rei kawakubo comme des garçons art of the in between - Sep 27 2022

web may 1 2017 andrew bolton metropolitan museum of art may 1 2017 design 248 pages widely recognized as among the most important and influential designers of the past forty years rei kawakubo of

rei kawakubo comme des garçons art of the in between - Oct 09 2023

web rei kawakubo japanese born 1942 for comme des garçons japanese founded 1969 body meets dress dress meets body spring summer 1997 courtesy of comme des garçons photograph by paolo roversi

comme des garçons art of the in between the metropolitan museum of art - Mar 02 2023

web rei kawakubo comme des garçons art of the in between examines nine expressions of in betweenness in kawakubo s collections absence presence design not design fashion antifashion model multiple high low then now self other object subject and clothes not clothes it reveals how

category rei kawakubo comme des garçons art of the in - Dec 31 2022

web media in category rei kawakubo comme des garçons art of the in between the following 17 files are in this category out of 17 total comme des garçons at the met 62425 jpg 1 816 2 696 2 87 mb

andrew bolton rei kawakubo comme des garçons art of the costume - Mar 22 2022

web taking the idea that in kawakubo s work space and emptiness coalesce in the concept of interstitiality effectuating an art of the in between p 13 it examines eight aesthetic expressions of in betweenness in her collections fashion anti fashion design not design model multiple then now high low self other object

rei kawakubo comme des garçons art of the in between - Nov 29 2022

web may 30 2017 rei kawakubo of comme des garçons is one of them widely recognized among her contemporaries as the most important and influential designer of the past forty years she has since her paris debut in 1981 defined and transformed the aesthetics of

rei kawakubo comme des garçons the metropolitan museum of art - May 04 2023

web the metropolitan museum of art s costume institute spring 2017 exhibition rei kawakubo comme des garçons art of the in between on view from may 4 through september 4 examines kawakubo s fascination with interstitiality or the space between boundaries in kawakubo s work this in between space is revealed as an aesthetic

rei kawakubo comme des garçons art of the in between - Jun 05 2023

web rei kawakubo comme des garçons art of the in between was an art exhibition about the work of fashion designer rei kawakubo and her designs for her fashion house comme des garçons the exhibition ran from may 4 to september 4 2017 at the metropolitan museum of art 1

rei kawakubo comme des garçons art of the in between - Apr 22 2022

web apr 7 2017 43k views 5 years ago andrew bolton curator in charge of the costume institute discusses the exhibition rei kawakubo comme des garçons art of the in between on view at the met fifth

rei kawakubo comme des garçons art of the in between - Sep 08 2023

web the thematic show will feature approximately 150 examples of kawakubo s womenswear for comme des garçons dating from the early 1980s to her most recent collection the galleries will illustrate the designer s revolutionary experiments in in betweenness the space between boundaries

rei kawakubo comme des garçons art of the in between vogue - Feb 01 2023

web by steff yotka may 1 2017 1 11 photo the metropolitan museum of art gallery view title wall rei kawakubo loves a puzzle in an interview she once compared her work to zen koans the

rei kawakubo comme des garçons art of the in between at - Feb 18 2022

web apr 30 2017 1 of 17 rei kawakubo comme des garçons art of the in between at the met three ensembles from the square autumn winter 2003 04 josh scott wwd

rei kawakubo comme des garçons art of the in between - Jun 24 2022

web rei kawakubo comme des garçons art of the in between introduction since founding comme des garçons like some boys in 1969 the tokyo based designer rei kawakubo born 1942 has consistently defined and redefined the aesthetics of our time

rei kawakubo comme des garçons art of the in between - Aug 27 2022

web rei kawakubo comme des garçons art of the in between was an art exhibition about the work of fashion designer rei kawakubo and her designs for her fashion house comme des garçons the exhibition ran from may 4 to september 4 2017 at the metropolitan museum of art

rei kawakubo comme des garçons art of the in between 2017 - May 24 2022

web sep 22 2022 rei kawakubo comme des garçons art of the in between 2017 videofashion 42 9k subscribers subscribe 7

share 320 views 10 months ago step into the halls of the metropolitan museum of

rei kawakubo comme des garçons art of the in between - Jul 06 2023

web sep 4 2017 a meditation on variations of a single form the collection represents a powerful statement on the unstable connection between unique artwork and mass produced commodity rei kawakubo comme

legitimising the use of force in international pol pdf - Jan 03 2022

mar 19 2023 legitimising the use of force in international pol when people should go to the book stores search instigation by shop shelf by shelf it is in reality problematic this is

legitimisingtheuseo fforceininternational pol - Jun 20 2023

non lethal weapons as legitimising forces experiments in international adjudication the use of force under international law the legitimate use of military force russia the west

use of force under international law justia - Feb 16 2023

the use of force by states is controlled by both customary international law and by treaty law the un charter reads in article 2 4 all members shall refrain in their international

legitimising the use of force in international politics - Aug 22 2023

the use of force is one of the most critical and controversial aspects of international politics scholars and policy makers have long tried to develop meaningful standards capable of

legitimising the use of force in international pol 2022 - Nov 13 2022

jul 12 2023 legitimising the use of force in international politics corneliu bjola 2009 09 10 this book aims to examine the conditions under which the decision to use force can be

legitimising the use of force in international pol pdf - Oct 12 2022

as this legitimising the use of force in international pol it ends occurring monster one of the favored book legitimising the use of force in international pol collections that we

legitimising the use of force in international pol uniport edu - Mar 05 2022

jul 12 2023 international law has developed to a jus cogens prohibiting the use of force at all for settling international disputes finally this paper shall conclude that any justification of the

legitimising the use of force in international pol j h leurdijk - Sep 11 2022

apr 6 2023 broadcast legitimising the use of force in international pol can be one of the options to accompany you once having supplementary time it will not waste your time

legitimizing the use of force in international politics - May 19 2023

sep 14 2023 power and international relations david a baldwin iba ibahri condemns us use of force on 3 january legitimating

police violence newspaper narratives of legitimising the use

international law and the use of force what - Dec 14 2022

when is the use of force for humanitarian purposes legitimate the book examines this question through one of the most controversial examples of humanitarian intervention in the post

legitimising the use of force in international politics - Apr 18 2023

legitimising the use of force in international pol is available in our book collection an online access to it is set as public so you can download it instantly our books collection hosts in

legitimisingtheuseofforceininternationalpol 2022 - Jul 09 2022

costs its virtually what you craving currently this legitimising the use of force in international pol as one of the most full of life sellers here will definitely be in the course of

legitimising the use of force in international pol james - Jun 08 2022

sep 6 2023 legitimising the use of force in international pol and numerous ebook collections from fictions to scientific research in any way among them is this legitimising the use of

legitimising the use of force in international pol pdf - May 07 2022

legitimising the use of force in international pol 2 10 downloaded from uniport edu ng on august 2 2023 by guest the most important theoretical and political features of the

legitimising the use of force in international pol pdf - Dec 02 2021

legitimising the use of force in international pol pdf uniport edu - Aug 10 2022

movements including their relationship to self determination secession rebellion the use of force and terrorism legitimising the use of force in international politics grin verlag

legitimising the use of force in international pol uniport edu - Feb 04 2022

jul 28 2023 legitimising the use of force in international pol 2 13 downloaded from uniport edu ng on july 28 2023 by guest then discussed in detail brief analysis is also

legitimising the use of force in international pol wrbb neu - Mar 17 2023

jun 10 2023 use of force under international law one of the most important principles of international law is the prohibition against the use of force this rule is codified in article 2

legitimising the use of force in international politics kosovo - Jul 21 2023

jun 6 2009 legitimising the use of force in international politics kosovo iraq and the ethics of intervention authors corneliu bjola university of oxford abstract this book aims

use of force in international law wikipedia - Jan 15 2023

thus for germany and for japan the key issues are the limits on the use of force set out in their constitutions which may or may not correspond to international law including the role of

legitimising the use of force in international politics - Sep 23 2023

jul 14 2009 abstract this book aims to examine the conditions under which the decision to use force can be reckoned as legitimate in international relations drawing on communicative action theory it provides a provocative answer to the hotly contested question of how to

legitimising the use of force in international pol pdf uniport edu - Apr 06 2022

jul 28 2023 as this legitimising the use of force in international pol it ends taking place living thing one of the favored ebook legitimising the use of force in international pol collections

car parking system using micro controller 8051 - Jan 30 2022

automatic car parking indicator system using - Oct 19 2023

web index terms 8051 microcontroller rfid motors car parking introduction automated car parking is a method of automatically parking and retrieving cars that

car parking system using 8051 proteus schematic and simulation - Jun 15 2023

web nov 17 2020 janice giilispi mazidi rolin mckinlay 8051 microcontroller and embedded systems the this paper proposes a car parking system which uses rfid

car parking sensor using 8051 microcontroller issuu - Jul 04 2022

web nov 17 2016 the project is about design develop a cheap parking assist system using obstacle detection technique ultrasonic sensors are used to detect the distance from

car parking sensor using 8051 microcontroller academia edu - Oct 07 2022

web jul 7 2015 car parking sensor using 8051 microcontroller b vishnu siddhardha abstract as the population is increasing the vehicles are also increasing and so the

sistem parkir menggunakan mikrokontroler 8051 pdf scribd - Nov 27 2021

rfid based car parking system by using keil and proteus - Nov 08 2022

web nov 17 2020 8051 microcontroller based rfid car parking system ijert volume 09 issue 11 november 2020 8051

microcontroller based rfid car parking system

microcontroller based automatic car parking system - Dec 09 2022

web 8051 microcontroller based rfid car parking system ijert 790 subscribers subscribe 64 views 10 months ago download article ijert org 8051 microcontr visitor

kakashi karthick automatic car parking system using ir - May 14 2023

web car parking system using micro controller 8051 instructor s guide to accompany the 8051 microcontroller third edition may 05 2021 microcontrollers oct 10 2021 the

car parking system using micro controller 8051 - Feb 28 2022

web gambar 2 1 blok diagram mikrokontroler 8051 mikrokontroler 8051 memiliki beberapa bagian memori yang digunakan untuk operasi kontrol berikut ini pembagian memori

pdf modern car parking system using micro controller - Sep 18 2023

web nov 16 2020 project for microcontrollers and applications third year electronics as car parking system using 8051 with at89c51 16x2 lcd motor led button and

cheap parking assist system using 8051 family researchgate - Apr 01 2022

web analysis and design of hybrid energy storage systems cops nad computers simplified aids for transportation analysis unsurfaced road maintenance management car

8051 microcontroller based rfid car parking system - Jun 03 2022

web title of the project car parking system using micro controller 8051 summery of the project the main theme of this project is to design and implement an automatic control

ijert 8051 microcontroller based rfid car parking system - Jan 10 2023

web car parking sensor using 8051 microcontroller allied journals 2015 allied journals as the population is increasing the vehicles are also increasing and so the parking

car parking system using micro controller 8051 - May 02 2022

web august 13th 2017 in this project we have built an ultrasonic rangefinder using 8051 microcontroller and ultrasonic sensor we have different ways to measure the distance

free car parking system using micro controller 8051 - Feb 11 2023

web nov 9 2018 subscribe 14k views 4 years ago embedded c programming tutorial rfid based car parking system using 8051 micro controller automatic door opening and

8051 microcontroller based rfid car parking system - Apr 13 2023

web ijert org 8051 microcontroller based rfid car parking system ijert org research 8051 microcontroller based rfid car parking system

8051 microcontroller based rfid car parking system youtube - Sep 06 2022

web fig 1 block diagram of proposed system in this project rfid based car parking system we have proposed an automatic car parking system as in the modern world everything

8051 microcontroller based rfid car parking system - Jul 16 2023

web 8051 microcontroller based rfid car parking system samriddh singh 2020 international journal of engineering research and technology the importance of

car parking system using micro controller 8051 2022 - Dec 29 2021

automatic car parking indicator system using 8051 - Aug 17 2023

web contribute to kakashi karthick automatic car parking system using ir sensor in 8051 microcontroller development by creating an account on github

8051 microcontroller based rfid car parking system - Mar 12 2023

web aug 15 2013 in space where more than 100 cars need to be parked it s a very difficult task to do and also to reduce the wastage of area this system can be used this

8051 microcontroller based rfid car parking system ijert - Aug 05 2022

web car parking system using micro controller 8051 june 21st 2018 firmware basic code for the lathe e boy high power lathe controller mmbasic source code for the explore