

AP Lab 8: Population Genetics and Evolution

(Adapted from the 2001 Student Lab Manual)

Purpose: In this lab, you will:

1. learn about the Hardy-Weinberg law of genetic equilibrium
2. study the relationship between evolution and changes in the allele frequency by using your class to represent a sample population

Prelab questions:

1. What is the Hardy-Weinberg equation?
 - a. The Hardy-Weinberg equation is " $p^2+2pq+q^2=1$ " and it is used to calculate the genetic variation of a population at equilibrium by calculating the frequency of the alleles in the population.
2. Which part of the equation represents: the homozygous dominant, the heterozygotes, and the homozygous recessive?
 - a. The heterozygotes is represented by " $2pq$ "
 - b. The homozygous recessive is represented by " q^2 "
 - c. The homozygous dominant is represented by " p^2 "
3. How does the equation $p+q=1$ relate to Hardy-Weinberg?
 - a. This relates to the Hardy-Weinberg equation because the sum of the alleles (dominant and recessive) must combine to form the genotype in 1 population, making the sum 1 (100%).
4. What are the 5 conditions for Hardy-Weinberg equilibrium to exist?
 - a. No mutation
 - b. Random mating
 - c. No natural selection
 - d. Large population size
 - e. Must be isolated; no migration or emigration

Exercise A: Estimating Allele Frequencies for a Specific Trait Within a Sample Population

For this exercise, you will use the class as a sample population to find the allele frequencies for PTC tasting. For a person expressing the dominant allele, T, PTC has a bitter taste. If a person is homozygous recessive, s/he cannot taste PTC.

1. Using the PTC taste-test papers, tear off a short strip and press it to your tongue tip. Tasters will sense a bitter taste.
2. Calculate the frequency of the taster population by dividing the total number of tasters by the total number of students in the class.
3. Calculate the frequency of the non-taster population by dividing the number of non-tasters by the number of students in the class.
4. Use the Hardy-Weinberg equation to determine the frequencies (p and q) of the two alleles.

Data for Exercise A:

Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers

Brendan G. Carr



Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers:

Eventually, you will definitely discover a additional experience and expertise by spending more cash. yet when? complete you undertake that you require to acquire those all needs subsequently having significantly cash? Why dont you attempt to acquire something basic in the beginning? Thats something that will guide you to comprehend even more nearly the globe, experience, some places, as soon as history, amusement, and a lot more?

It is your very own get older to do its stuff reviewing habit. among guides you could enjoy now is **Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers** below.

https://matrix.jamesarcher.co/files/scholarship/HomePages/Collection_Digital_Literacy_Manual.pdf

Table of Contents Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers

1. Understanding the eBook Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers
 - The Rise of Digital Reading Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers
 - Advantages of eBooks Over Traditional Books
2. Identifying Lab 8 Population Genetics And Evolution Hardy Weinberg Problems 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 Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers
 - User-Friendly Interface
4. Exploring eBook Recommendations from Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers
 - Personalized Recommendations
 - Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers User Reviews and Ratings
 - Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers and Bestseller Lists
5. Accessing Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers Free and Paid eBooks

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

Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers Introduction

Lab 8 Population Genetics And Evolution Hardy Weinberg Problems 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. Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Lab 8 Population Genetics And Evolution Hardy Weinberg Problems 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 Lab 8 Population Genetics And Evolution Hardy Weinberg Problems 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 Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers Offers a diverse range of free eBooks across various genres. Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers, especially related to Lab 8 Population Genetics And Evolution Hardy Weinberg Problems 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 Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers books or magazines might include. Look for these in online stores or libraries. Remember that while Lab 8 Population Genetics And Evolution Hardy Weinberg Problems 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 Lab 8 Population Genetics And Evolution Hardy Weinberg

Problems 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 Lab 8 Population Genetics And Evolution Hardy Weinberg Problems 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 Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers eBooks, including some popular titles.

FAQs About Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers Books

What is a Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors

like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers :

collection digital literacy manual

AI usage manual award winning

dark romance thriller 2026 guide

hardcover car repair manual

advanced strategies social media literacy

handwriting practice book collection

mindfulness meditation international bestseller

friendship stories kids fan favorite

reader's choice fairy tale retelling kids

personal finance literacy hardcover

digital detox lifestyle collection

urban fantasy academy hardcover

AI usage manual stories

personal finance literacy how to

self help mindset primer

Lab 8 Population Genetics And Evolution Hardy Weinberg Problems Answers :

the sharepoint shepherd s guide for end users 2013 - Sep 22 2021

amazon com customer reviews the sharepoint - Nov 24 2021

web habit in the midst of guides you could enjoy now is the sharepoint shepherds guide for end users 2010 below the sharepoint shepherds guide for end users 2010

9780982419809 the sharepoint shepherd s guide for end - Oct 04 2022

web abebooks com the sharepoint shepherd s guide for end users 2010 9780982419809 by bogue robert l and a great selection of similar new used and collectible books

the sharepoint shepherds guide for end users 2010 open - Jan 07 2023

web the sharepoint shepherds guide for end users 2010 by amy dehmer 2010 availtek llc edition the sharepoint shepherds guide for end users 2010 2010 edition

the sharepoint shepherd s guide for end users 2010 - May 11 2023

web new for the 2010 version are background chapters to help you better understand sharepoint and decision trees to help you make the right decision on which sharepoint

the sharepoint shepherds guide for end users 2010 - Jan 27 2022

web the sharepoint shepherds guide for end users 2010 ebook bogue robert dehmer amy amazon co uk kindle store

announcing the sharepoint shepherd s guide for end users 2010 - Jul 01 2022

web jul 30 2010 i ve been honored to receive accolades for the work that i did on the sharepoint shepherd s guide for end users 2007 edition which was written and

announcing availability of the sharepoint shepherd s guide for - May 31 2022

web sep 27 2010 robert bogue sharepoint after many months of hard work and more than a few struggles i m happy to say that i have in my hands a printed copy of the

the sharepoint shepherd s guide for end users sharepoint - Mar 09 2023

web if you d like the details on the content in each specific version of the guide you can look at the sharepoint shepherd s guide for end users 2007 edition the sharepoint

the sharepoint shepherds guide for end users 2010 - Apr 29 2022

web editions for the sharepoint shepherd s guide for end users 0615194494 paperback published in 2008 0982419805 paperback published in 2010 kindle e

the sharepoint shepherd s ultimate guide for end users - Feb 25 2022

web the sharepoint shepherds guide for end users 2010 end user computing development and software engineering new challenges aug 14 2021 this book

the sharepoint shepherd s guide for end users 2010 - Jun 12 2023

web sep 24 2010 the most comprehensive and authoritative end user guide for sharepoint 2010 this guide for end users is an outstanding tool to help your users maximize their

sharepoint shepherd the best way to learn train and discover - Aug 02 2022

web the sharepoint shepherd s guide for end users get more information about the ultimate online resource for sharepoint

users

the sharepoint shepherds guide for end users 2010 kindle edition - Dec 26 2021

web the sharepoint shepherd s guide for end users is a great resource for the business user that needs to know how to get their job done with the sharepoint tools they have been

the sharepoint shepherd s guide for end users 2010 guide - Aug 14 2023

web the sharepoint shepherd s guide for end users 2010 september 2010 september 2010 read more authors robert l bogue amy dehmer publisher availtek llc isbn

the sharepoint shepherd s guide for end users 2010 goodreads - Nov 05 2022

web if you ve ever struggled to find something with sharepoint you ll appreciate the highly visu the sharepoint shepherd s guide for end users 2010 by robert l bogue

sharepoint 2010 end user training manual ntc blm gov - Apr 10 2023

web 4 the sharepoint shepherd s guide for end users by robert l bogue 5 beginning sharepoint 2010 building business solutions with sharepoint by amanda perran

the sharepoint shepherds guide for end users 2010 pdf - Oct 24 2021

web the sharepoint shepherd s guide for end users 2013 is an essential tool to enable you to maximize the value of sharepoint and build exciting functionality providing detailed

editions of the sharepoint shepherd s guide for end users - Mar 29 2022

web the sharepoint shepherd s ultimate guide for end users is the single tool you need to help your users be effective reduce your help desk calls and improve adoption in

the sharepoint shepherd s guide for end users google books - Feb 08 2023

web if you ve ever struggled to find something with sharepoint you ll appreciate the highly visual step by step nature that the sharepoint shepherd s guide uses you will be able to

the sharepoint shepherd s guide for end users 2010 - Sep 03 2022

web sep 24 2010 new for the 2010 version are background chapters to help you better understand sharepoint and decision trees to help you make the right decision on which

the sharepoint shepherd s guide for end users 2010 - Jul 13 2023

web the sharepoint shepherd s guide for end users 2010 provides end users with extensive detailed tasks to help build sites and pages with over 181 helpful tasks and

the sharepoint shepherd s guide for end users 2010 - Dec 06 2022

web x 544 pages 25 cm

evaluation of a pediatric mock code educational training - May 23 2022

web nov 25 2014 introduction this anaphylaxis simulation scenario is intended for a small interdisciplinary mock code session to be performed in a hospital patient care area

pediatric mock code resuscitation case scenario relias media - Jul 25 2022

web specialties conditions nationally ranked care in which 2022 23 u s news world report overall starting the your children s hospitals lurie children s continues to be the

pediatric mock code toolkit lurie children s hospital - Sep 07 2023

web simulation of pediatric mock codes and other crisis scenarios has demonstrated that there are significant delays in the abc steps of resuscitation including application of

simulation scenarios aorn - Dec 18 2021

in situ pediatric mock codes the first five minutes san jose - Aug 26 2022

web case scenario a 3 month old male is brought in to the emergency department via paramedics in full cardiac arrest cardiopulmonary resuscitation in progress with bag

pediatric mock code resources lurie children s simulation - Jun 23 2022

web jan 1 2015 pediatric mock codes can improve resident confidence and self assessment of their resuscitation skills data from surveys such as this can be used to design future

lurie children s hospital of chicago pediatric medicine - Jul 05 2023

web may 5 2020 the in situ mock codes were linked to pals training self efficacy pre and post mock code and feedback related surveys cpr knowledge was assessed using

the implementation of pediatric quarterly mock codes - Mar 01 2023

web review the steps to pediatric mock code program creation incorporate facilitating and debriefing into pediatric mock codes exercise using three videotaped scenarios

lurie children s hospital of chicago pediatric medicine - Mar 21 2022

web scenario 1 ems report 5 year old boy riding his bike was hit by a car he was unresponsive on arrival of first responders with pupils 5mm and sluggish bilaterally no

pediatric code blue how prepared are we a self efficacy - Jun 04 2023

web the impact of multiple mock codes did not have an effect on residents perceptions of their abilities to manage an actual code per cohen s d convention d 0 2 the mock code

the implementation of pediatric quarterly mock codes - Dec 30 2022

web the rarity of pediatric codes and opportunities for students to interact in teams led faculty to develop an interdisciplinary pediatric mock code simulation senior baccalaureate

effect of a pediatric mock code simulation program on - Sep 26 2022

web mock codes they continue to express fear anxiety and a general lack of confidence regarding their knowledge and abilities to effectively respond to pediatric emergencies

training scenarios for pediatric patients mn dept of health - Jan 19 2022

infant anaphylaxis in situ mock code mededportal - Apr 21 2022

web [ĐĨ à á ðÿ o q](#)

initiation of a pediatric mock code program at a children s hospital - Apr 02 2023

web nov 1 2020 according to andreatta saxton thompson and annich 2011 data illustrates that pediatric patients have a 27 survival rate to discharge following an in hospital

the impact of mock code simulation on the resuscitation - Oct 28 2022

web jul 1 2020 the objectives of the interprofessional mock code simulation were as follows 1 learners shall understand the roles and responsibilities of members of a healthcare

the implementation of pediatric quarterly mock - Aug 06 2023

web identify the overall goal aim for this pediatric mock code

[pediatric mock code resources lurie children s](#) - Oct 08 2023

web pediatric mock code resources pediatric emergencies typically elicit anxiety and discomfort in many healthcare professionals the actions by the staff that arrive to

simulation based mock codes significantly correlate with - May 03 2023

web aug 27 2009 each mock code consisted of a 10 15 min scenario based on common pediatric codes at our institution and a 5 10 min debriefing session immediately

[creating your pediatric mock code program lurie children s](#) - Jan 31 2023

web nov 1 2020 implementing in situ quarterly pediatric mock codes increased staff nurse compliance using pals skills after implementing rounds of quarterly scenarios

[design and implementation of an interdisciplinary pediatric mock](#) - Nov 28 2022

web jul 15 2020 the aims of the study were to assess the impact of a mock code simulation program on patient outcome for children with cardiopulmonary arrest in a tertiary

pals megacode scenarios acs algorithms com - Feb 17 2022

web aorn has developed scenarios of high priority topics with the goal of promoting and facilitating clinical learning through multidisciplinary simulation each scenario includes

light in architecture the intangible material worldcat org - Nov 05 2022

web part 1 the role of light in architecture 1 the importance of light 2 light and geography 3 light as an instrument for abstraction part 2 working with light in

light in architecture the intangible material google books - Jun 12 2023

web light in architecture the intangible material elisa valero ramos amazon com tr kitap

light in architecture the intangible material softcover abebooks - Aug 02 2022

web nov 11 2015 scope light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating

light in architecture the intangible material paperback - Jan 07 2023

web summary part 1 the role of light in architecture light and perception light and geography light as an instrument for abstraction part 2 working with light in

light in architecture the intangible material elisa valero ramos - Oct 24 2021

light in architecture the intangible material elisa - Aug 14 2023

web translated and carefully updated from the best selling spanish book la materia intangible this full colour edition explains why light is so fundamental to human perception how its

light in architecture the intangible material elisa valero ramos - Nov 24 2021

web aug 30 2019 light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day

light in architecture the intangible material google play - Feb 08 2023

web light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating how a greater

light in architecture the intangible material elisa valero ramos - Sep 22 2021

light in architecture the intangible material routledge - Jul 13 2023

web aug 9 2019 translated and carefully updated from the best selling spanish book la materia intangible this full colour edition explains why light is so fundamental to human

light in architecture ribaj riba journal - Mar 09 2023

web nov 11 2015 light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating

light in architecture the intangible material - Mar 29 2022

web light in architecture the intangible material 11 plummer henry and le corbusier cosmos of light the sacred architecture of le corbusier 12 andrew hanson prof

materialization of light tulane university - Jan 27 2022

web nov 17 2021 light in architecture the intangible material elisa valero ramos attention the website might contain information not suited for the underage audience a

light in architecture the intangible material bookshop - Apr 29 2022

web select search scope currently catalog all catalog articles website more in one search catalog books media more in the stanford libraries collections articles journal

light in architecture the intangible material amazon com tr - May 11 2023

web nov 1 2015 light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating

light in architecture the intangible material searchworks catalog - Feb 25 2022

web light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating how a greater

light in architecture the intangible material the construction - Oct 04 2022

web light in architecture the intangible material by valero ramos elisa at abebooks co uk isbn 10 185946596x isbn 13 9781859465967 riba publishing 2015 softcover

light in architecture the intangible material nasis - Sep 03 2022

web elisa valero ramos author light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day

light in architecture the intangible material riba books - Apr 10 2023

web light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating how a greater

[light in architecture the intangible material anna s archive](#) - Jul 01 2022

web light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating how a greater

crc light in architecture the intangible material globalspec - May 31 2022

web light in architecture explores the role and use of light in and around buildings from the time that stonehenge was built through to the present day illustrating how a greater

pdf light in architecture by elisa valero ramos perlego - Dec 26 2021

web light in architecture the intangible material elisa valero ramos education system leader demonstrate the effective and responsible use of data to address the biggest

light in architecture on apple books - Dec 06 2022

web the role of light in architecture and how it can achieve particular objectives or experiences upon human perception

addressing the problem of building around pre existing