CITIZEN SCIENCE

PUBLIC PARTICIPATION IN ENVIRONMENTAL RESEARCH



JANIS L. DICKINSON AND RICK BONNEY

FOREWORD BY RICHARD LOUV AFTERWORD BY JOHN W. FITZPATRICK

<u>Citizen Science Public Participation In Environmental</u> <u>Research</u>

Catharina Landström

Citizen Science Public Participation In Environmental Research:

Citizen Science Janis L. Dickinson, Richard E. Bonney, Jr., 2012-04-07 Citizen science enlists members of the public to make and record useful observations such as counting birds in their backyards watching for the first budding leaf in spring or measuring local snowfall The large numbers of volunteers who participate in projects such as Project FeederWatch or Project BudBurst collect valuable research data which when pooled together create an enormous body of scientific data on a vast geographic scale In return such projects aim to increase participants connections to science place and nature while supporting science literacy and environmental stewardship In Citizen Science experts from a variety of disciplines including scientists and education specialists working at the Cornell Lab of Ornithology where many large citizen science programs use birds as proxies for biodiversity share their experiences of creating and implementing successful citizen science projects primarily those that use massive data sets gathered by citizen scientists to better understand the impact of environmental change This first and foundational book for this developing field of inquiry addresses basic aspects of how to conduct citizen science projects including goal setting program design and evaluation as well as the nuances of creating a robust digital infrastructure and recruiting a large participant base through communications and marketing An overview of the types of research approaches and techniques demonstrates how to make use of large data sets arising from citizen science projects A final section focuses on citizen science s impacts and its broad connections to understanding the human dimensions and educational aspects of participation Citizen Science teaches teams of program developers and researchers how to cross the bridge from success at public engagement to using citizen science data to understand patterns and trends or to test hypotheses about how ecological processes respond to change at large geographic scales Intended as a resource for a broad audience of experts and practitioners in natural sciences information science and social sciences this book can be used to better understand how to improve existing programs develop new ones and make better use of the data resources that have accumulated from citizen science efforts Its focus on harnessing the impact of crowdsourcing for scientific and educational endeavors is applicable to a wide range of fields especially those that touch on the importance of massive collaboration aimed at understanding and conserving what we can of the natural world **Environmental Participation Catharina** Landström, 2019-12-13 This book introduces environmental participation as a distinct field comprising diverse practices It presents examples of public participation specifically in environmental science decision making and expertise The first chapter introduces the science studies perspective and the key concepts that underpin the argument for approaching such a range of practices as a coherent field The following three chapters explore a wide range of practical examples of how the public can participate in all three domains Drawing on her experience with a variety of transdisciplinary projects Landstr m discusses topics including the coproduction of knowledge about flooding community involvement with radioactive waste disposal and collaborative water quality modelling She then goes on to cover citizen science and social movement expertise

as environmental participation practices The concluding chapter reflects on the challenges as well as future opportunities of environmental participation This book is aimed at readers from a variety of academic and non academic backgrounds and will be a great interest to social and natural scientists students and practitioners Handbook of Citizen Science in Ecology and Conservation Christopher Andrew Lepczyk, Owen D. Boyle, Timothy L. V. Vargo, 2020 Handbook of Citizen Science in Ecology and Conservation is the first practical and comprehensive manual that provides step by step instructions for creating natural science research projects that involve collaboration between scientists and the general public As citizen science projects become increasingly common there is a growing need for concrete best practices around planning and implementing successful projects that can allow project leaders to guide and gauge success of projects while ensuring the collection of high quality data Based on a variety of case studies from several citizen science projects this is the definitive reference quide for all potential citizen science practitioners ranging from professors and graduate students to staff at agencies and nongovernmental organizations Citizen Science Contributions to Biology and Environmental Education Dina Tsybulsky, Tali Tal, 2025-10-15 This edited volume explores the exciting and increasingly important role of citizen science in biology and environmental education This comprehensive collection provides valuable insights on how to design implement and explore citizen science educational initiatives Featuring contributions from leading experts the book provides a range of research perspectives and pedagogical tools to facilitate the incorporation of citizen science into the classroom It showcases contemporary examples worldwide highlighting the research aspect of citizen science educational projects This book is a valuable resource for researchers educators and individuals interested in citizen science and its contribution to biology and environmental education It provides readership with state of the art information on the latest advances in research and practice in the field and encourages an active participation in citizen science endeavors **Science by the People** Aya H. Kimura, Abby Kinchy, 2019-09-13 Longlisted for the Fleck Prize from the Society for Social Studies of Science 4S Citizen science research involving nonprofessionals in the research process has attracted both strong enthusiasts and detractors Many environmental professionals activists and scholars consider citizen science part of their toolkit for addressing environmental challenges Critics however contend that it represents a corporate takeover of scientific priorities In this timely book two sociologists move beyond this binary debate by analyzing the tensions and dilemmas that citizen science projects commonly face Key lessons are drawn from case studies where citizen scientists have investigated the impact of shale oil and gas nuclear power and genetically engineered crops These studies show that diverse citizen science projects face shared dilemmas relating to austerity pressures presumed boundaries between science and activism and difficulties moving between scales of environmental problems By unpacking the politics of citizen science this book aims to help people negotiate a complex political landscape and choose paths moving toward social change and environmental sustainability Citizen Science Susanne Hecker, Muki Haklay, Anne Bowser, Zen Makuch, Johannes Vogel, Aletta Bonn, 2018-10-15 Citizen science the

active participation of the public in scientific research projects is a rapidly expanding field in open science and open innovation It provides an integrated model of public knowledge production and engagement with science As a growing worldwide phenomenon it is invigorated by evolving new technologies that connect people easily and effectively with the scientific community Catalysed by citizens wishes to be actively involved in scientific processes as a result of recent societal trends it also offers contributions to the rise in tertiary education In addition citizen science provides a valuable tool for citizens to play a more active role in sustainable development This book identifies and explains the role of citizen science within innovation in science and society and as a vibrant and productive science policy interface. The scope of this volume is global geared towards identifying solutions and lessons to be applied across science practice and policy The chapters consider the role of citizen science in the context of the wider agenda of open science and open innovation and discuss progress towards responsible research and innovation two of the most critical aspects of science today Citizen Science in Ecology and Conservation Christopher A. Lepczyk, 2020-04-28 Handbook of Citizen Science in Ecology and Conservation is the first practical and comprehensive manual for creating implementing or improving natural science research and monitoring projects that involve collaboration between scientists and the general public As citizen science projects become increasingly common project leaders are seeking information on concrete best practices for planning and implementing projects practices that allow them to guide and gauge success while also ensuring the collection of high quality data and rewarding experiences for volunteers In this handbook citizen science practitioners from around the world and with decades of experience provide step by step instructions insights and advice and they explore real world applications through case studies from a variety of citizen science projects This is the definitive reference guide for anyone interested in starting or improving a citizen science project with ecological or conservation applications from professors and graduate students to agency staff and nongovernmental organizations **Analyzing the Role of Citizen Science in Modern Research** Ceccaroni, Luigi, Piera, Jaume, 2016-10-25 As the need for sustainable development practices around the world continues to grow it has become imperative for citizens to become actively engaged in the global transition By evaluating data collected from various global programs researchers are able to identify strategies and challenges in implementing civic engagement initiatives Analyzing the Role of Citizen Science in Modern Research focuses on analyzing data on current initiatives and best practices in citizen engagement and education programs across various disciplines Highlighting emergent research and application techniques within citizen science initiatives this publication appeals to academicians researchers policy makers government officials technology developers advanced level students and program developers interested in launching or improving citizen science programs across the globe Closing the Knowledge-Implementation Gap in Conservation Science Catarina C. Ferreira, Cornelya F. C. Klütsch, 2022-01-03 This book aims to synthesize the state of the art on biodiversity knowledge exchange practices to understand where and how improvements can be made to close the knowledge

implementation gap in conservation science and advance this interdisciplinary topic Bringing together the most prominent scholars and practitioners in the field the book looks into the various sources used to produce biodiversity knowledge from natural and social sciences to Traditional Ecological Knowledge and Citizen Science as well as knowledge mobilization approaches to highlight the key ingredients that render successful conservation action at a global scale By doing so the book identified major current challenges and opportunities in the field for different sectors that generate mobilize and use biodiversity knowledge like academia boundary organizations practitioners and policy makers to further develop cross sectorial knowledge mobilization strategies and enhance evidence informed decision making processes globally

Participatory Sensing, Opinions and Collective Awareness Vittorio Loreto, Muki Haklay, Andreas Hotho, Vito D.P. Servedio, Gerd Stumme, Jan Theunis, Francesca Tria, 2016-05-13 This book introduces and reviews recent advances in the field in a comprehensive and non technical way by focusing on the potential of emerging citizen science and social computation frameworks coupled with the latest theoretical and modeling tools developed by physicists mathematicians computer and social scientists to analyse interpret and visualize complex data sets There is overwhelming evidence that the current organisation of our economies and societies is seriously damaging biological ecosystems and human living conditions in the short term with potentially catastrophic effects in the long term. The need to re organise the daily activities with the greatest impact energy consumption transport housing towards a more efficient and sustainable development model has recently been raised in the public debate on several global environmental issues Above all this requires the mismatch between global societal and individual needs to be addressed Recent advances in Information and Communication Technologies ICT can trigger important transitions at the individual and collective level to achieve this aim Based on the findings of the collaborative research network EveryAware the following developments among the emerging ICT technologies are discussed in depth in this volume Participatory sensing where ICT development is pushed to the level where it can support informed action at the hyperlocal scale providing capabilities for environmental monitoring data aggregation and mining as well as information presentation and sharing Web gaming social computing and internet mediated collaboration where the Web will continue to acquire the status of an infrastructure for social computing allowing users cognitive abilities to be coordinated in online communities and steering the collective action towards predefined goals Collective awareness and decision making where the access to both personal and community data collected by users processed with suitable analysis tools and re presented in an appropriate format by usable communication interfaces leads to a bottom up development of collective social strategies

Immerse yourself in heartwarming tales of love and emotion with is touching creation, **Citizen Science Public Participation In Environmental Research**. This emotionally charged ebook, available for download in a PDF format (
Download in PDF: *), is a celebration of love in all its forms. Download now and let the warmth of these stories envelop your heart.

http://antonioscollegestation.com/public/detail/fetch.php/cherokee_jeep_zj_manual.pdf

Table of Contents Citizen Science Public Participation In Environmental Research

- 1. Understanding the eBook Citizen Science Public Participation In Environmental Research
 - The Rise of Digital Reading Citizen Science Public Participation In Environmental Research
 - Advantages of eBooks Over Traditional Books
- 2. Identifying Citizen Science Public Participation In Environmental Research
 - 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 Citizen Science Public Participation In Environmental Research
 - User-Friendly Interface
- 4. Exploring eBook Recommendations from Citizen Science Public Participation In Environmental Research
 - Personalized Recommendations
 - Citizen Science Public Participation In Environmental Research User Reviews and Ratings
 - \circ Citizen Science Public Participation In Environmental Research and Bestseller Lists
- 5. Accessing Citizen Science Public Participation In Environmental Research Free and Paid eBooks
 - Citizen Science Public Participation In Environmental Research Public Domain eBooks
 - Citizen Science Public Participation In Environmental Research eBook Subscription Services
 - o Citizen Science Public Participation In Environmental Research Budget-Friendly Options

- 6. Navigating Citizen Science Public Participation In Environmental Research eBook Formats
 - o ePub, PDF, MOBI, and More
 - Citizen Science Public Participation In Environmental Research Compatibility with Devices
 - Citizen Science Public Participation In Environmental Research Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - o Adjustable Fonts and Text Sizes of Citizen Science Public Participation In Environmental Research
 - Highlighting and Note-Taking Citizen Science Public Participation In Environmental Research
 - Interactive Elements Citizen Science Public Participation In Environmental Research
- 8. Staying Engaged with Citizen Science Public Participation In Environmental Research
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Citizen Science Public Participation In Environmental Research
- 9. Balancing eBooks and Physical Books Citizen Science Public Participation In Environmental Research
 - Benefits of a Digital Library
 - o Creating a Diverse Reading Collection Citizen Science Public Participation In Environmental Research
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Citizen Science Public Participation In Environmental Research
 - $\circ\,$ Setting Reading Goals Citizen Science Public Participation In Environmental Research
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Citizen Science Public Participation In Environmental Research
 - Fact-Checking eBook Content of Citizen Science Public Participation In Environmental Research
 - 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

Citizen Science Public Participation In Environmental Research Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In todays fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Citizen Science Public Participation In Environmental Research PDF books and manuals is the internets largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a userfriendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free Citizen Science Public Participation In Environmental Research PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual

property rights. Platforms offering free downloads often operate within legal boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Citizen Science Public Participation In Environmental Research free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAQs About Citizen Science Public Participation In Environmental Research Books

What is a Citizen Science Public Participation In Environmental Research 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 Citizen Science Public Participation In **Environmental Research 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 Citizen Science Public **Participation In Environmental Research 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 Citizen Science Public Participation In Environmental Research **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 Citizen Science Public Participation In Environmental Research 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 Citizen Science Public Participation In Environmental Research:

cherokee jeep zj manual

chevrolet silverado 1500 repair manual 2003

chess informant nr 7

chevy blazer manual

cherishment a psychology of the heart

chevrolet camaro owners manual 1983 free

chevrolet prizm repair manual

chemistry workbook answer guide

chemistry the science in context third edition

chevrolet one ton truck service manual

chevrolet g30 van service manual from chevroletpd

chemistry zumdahl 8th edition study guide

chen zhen without going internationalized

chevrolet history 1955 1957 pictorial history series no 3

chevrolet pickup manual

Citizen Science Public Participation In Environmental Research:

Amazon.com: Conceptual Physics (11th Edition) ... Hewitt's book is famous for engaging readers with analogies and imagery from real-world situations that build a strong conceptual understanding of physical ... Amazon.com: Conceptual Physics: 9780321787958 ISBN-10. 0321787951 · ISBN-13. 978-0321787958 · Edition. 11th · Publisher. Pearson · Publication date.

July 4, 2011 · Language. English · Dimensions. 8.5 x 1.2 x 10.9 ... Conceptual Physics (11th Edition) - Hewitt, Paul G. Conceptual Physics (11th Edition) by Hewitt, Paul G. - ISBN 10: 0321568095 - ISBN 13: 9780321568090 - Addison-Wesley -2009 - Hardcover. Conceptual Physics - 11th Edition - Solutions and ... Our resource for Conceptual Physics includes answers to chapter exercises, as well as detailed information to walk you through the process step by step. With ... Conceptual Physics, Books a la Carte Plus ... Conceptual Physics, Hardcover 11th edition. Hewitt, Paul G. Published by Addison Wesley. ISBN 10: 0321776739 ISBN 13: 9780321776730. eBOOK-Paul-G.-Hewitt-Conceptual-Physics-11th-Edition- ... Phil Wolf, coauthor of the Problem Solving in Conceptual Physics book that accompanies this edition, is on page 547. Helping create that book is high school ... Conceptual Physics by John A. Suchocki, Paul G. ... ISBN: 0321568095. Author: Hewitt, Paul G. Conceptual Physics (11th Edition). Sku: 0321568095-3-30798995. Condition: Used: Good. Qty Available: 1. ISBN 9780321568090 - Conceptual Physics 11th Find 9780321568090 Conceptual Physics 11th Edition by Paul Hewitt et al at over 30 bookstores. Buy, rent or sell. Conceptual Physics by Paul G. Hewitt | 9780321568090 Conceptual Physics (11th Edition). by Paul G. Hewitt. Hardcover, 737 Pages, Published 2009. ISBN-10: 0-321-56809-5 / 0321568095. ISBN-13: 978-0-321-56809-0 ... Conceptual Physics | Rent | 9780321568090 Conceptual Physics11th edition; ISBN-13: 978-0321568090; Format: Hardback; Publisher: Addison-Wesley (10/26/2009); Copyright: 2010; Dimensions: 8.7 x 10.9 x 1 ... Strangers Among Us by Montgomery, Ruth Their mission is to lead us into an astonishing new age. They are walk-ins, and there are tens of thousands of them on this planet. From the Back Cover. a walk- ... Strangers Among Us by Ruth Montgomery Walk-ins. Ruth informs us that there are spiritually advanced beings who take over the bodies of people who are ready to go.to go as in die. Not from old age ... A Stranger Among Us A Stranger Among Us is a 1992 American crime drama film directed by Sidney Lumet and starring Melanie Griffith. It tells the story of an undercover police ... Stranger Among Us (TV Series 2020 When one of their own is found tortured and killed, a tight circle of Chicago doctors wonders if one of their own is a murderer. The Strangers Among Us Part philosophical exploration, part touching memoir, all head and heart, The Strangers Among Us is a must for animal lovers, artists, and book lovers alike. Strangers Among Us book by Ruth Montgomery A WORLD BEYOND An Extraordinary Description of the Afterlife, the Results of a Series of Messages... Ruth Montgomery, from: \$5.19. The Strangers Among Us PAPERBACK - Caroline Picard Part philosophical exploration, part touching memoir, all head and heart, THE STRANGERS AMONG US is a must for animal lovers, artists, and book lovers alike. Strangers Among Us Almost one hundred and thirty years ago an eccentric explorer with little formal education and no experience answered what he believed was a "call from God" to ... Strangers Among Us: Tales of the Underdogs and Outcasts Nineteen science fiction and fantasy authors tackle the division between mental health and mental illness; how the interplay between our minds' guirks and the ... Toward a Composition Made Whole - Project MUSE by J Shipka · 2011 · Cited by 604 — Toward a Composition Made Whole challenges theorists and compositionists to further investigate communication practices

and broaden the scope of ... Toward a Composition Made Whole... by Shipka, Jody - Amazon Shipka presents several case studies of students working in multimodal composition and explains the strategies, tools, and spaces they employ. She then offers ... Toward a Composition Made Whole Toward a Composition Made Whole challenges theorists and compositionists to further investigate communication practices and broaden the scope of writing to ... SHIPKA (2011) - UMBC's English Department Toward a Composition Made Whole challenges theorists and compositionists to further investigate communication practices and broaden the scope of writing to ... Toward a Composition Made Whole on JSTOR The workshop took place in a living-learning community on campus that catered to students who favored creative, hands-on approaches to instruction and were open ... Toward a Composition Made Whole This approach, Shipka argues, will "illumine the fundamentally multimodal aspect of all communicative practice" (p. 39) and enables us to resist a logocentric ... Toward a Composition Made Whole - Document - Gale by TM Kays · 2012 — The framework the author proposes focuses on activitybased learning incorporating multimodal and mediate aspects of text. Fascinating and useful, the framework ... Toward a Composition Made Whole - Jody Shipka To many academics, composition still represents typewritten texts on 8.5" x 11" pages that follow rote argumentative guidelines. In Toward a Composition ... Toward a Composition Made Whole by Jody Shipka In Toward a Composition Made Whole, Jody Shipka views composition as an act of communication that can be expressed through any number of media and as a path ... Kairos 19.2: Dieterle, Review of A Composition Made Whole by B Dieterle · 2015 — Toward a Composition Made Whole advocates for a broadened definition of composition to include nonprint, non-linear texts and asks composition teachers to ...