

Dear 4-H Professional,

Welcome to the *4-H Science in Urban Communities Promising Practices Guide*. This resource is the product of many dedicated urban 4-H professionals across the country. We appreciate and applaud the work they are doing to deliver quality 4-H Science programs to urban youth in a variety of settings.

Our contributors often spoke of a “journey,” “small steps,” and “beginning where you are now” when describing the *process* of developing and sustaining urban 4-H Science programs. We believe the metaphor of a journey is an easily understood way to discuss the process of bringing quality 4-H Science programming to urban youth audiences. We’re happy you’ve decided to join us on what we’re sure will prove to be an amazing and rewarding journey.

The first step in every successful journey is to know your starting point; therefore we’ll begin by surveying the landscape. 4-H professionals today are faced with many challenges to sustaining current programming. Public monies are shrinking, requiring us to cobble together funding from nontraditional sources to support programs. In many states 4-H professionals have increasing or even multi-county responsibilities. In addition, the overall shift in volunteering from “lifers” to episodic involvement challenges program implementation.

We recognize that asking 4-H professionals to add “just one more thing” to an already overflowing plate will undoubtedly send more than one screaming into the night. However, with nearly 90% of the U.S. population currently living in urban or suburban areas, we *also* recognize that *urban youth desperately need access to high quality 4-H Science programs*.

We *know* you’re only one person . . .

We *know* you don’t have enough funding . . .

We *know* there are not enough hours in the day . . .

We *know* you need a magic bullet . . .

Do we have a magic bullet? *No*.

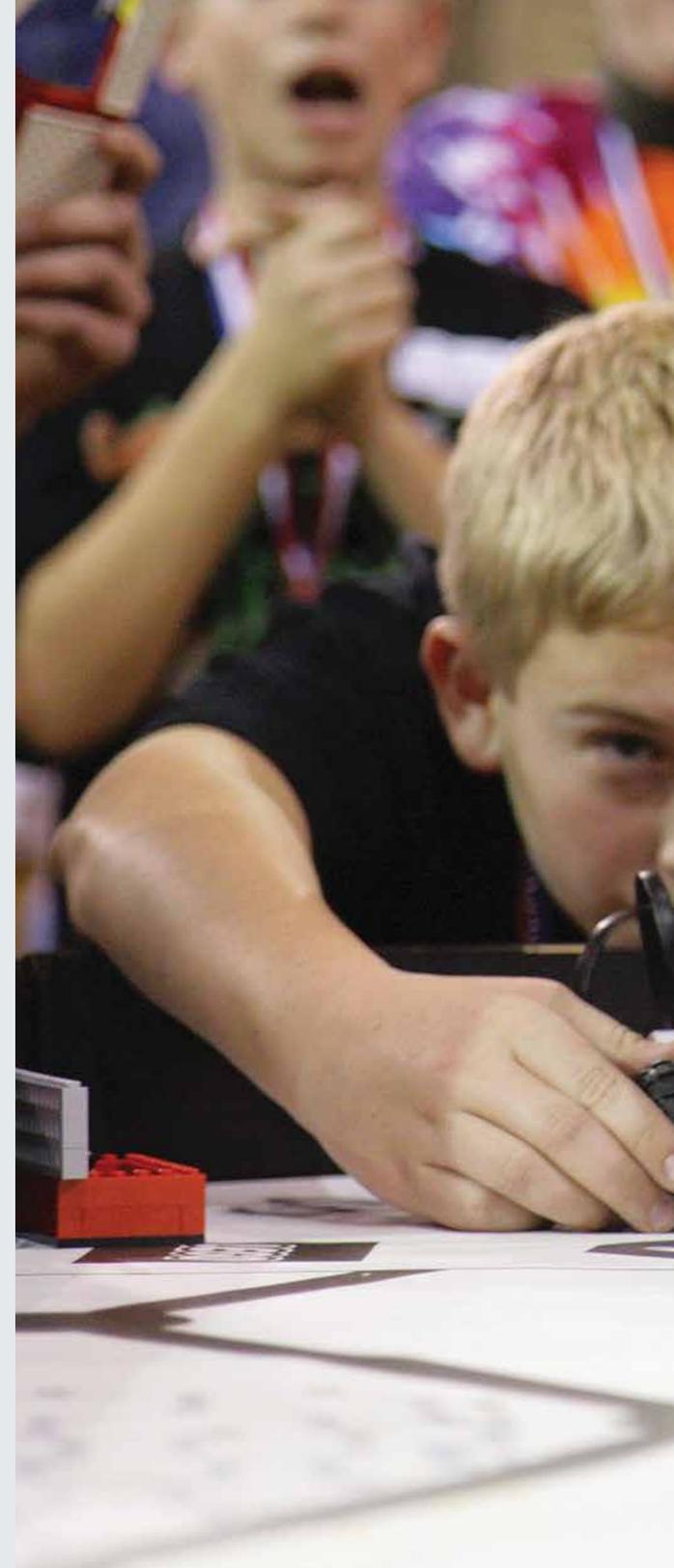
What we *do* have to offer is much better – because you need an *arsenal*. We believe that the promising practices contained in this guide will provide you with the tools you need (compass, maps, resources, and yes – even clothing suggestions) to help you plan, implement, reflect upon, and share an exciting journey into what for many of you will be a new world – a world where urban youth have access to content and context rich 4-H Science programs!

At the risk of sounding cliché, we’ll remind you that a journey of 1,000 miles begins with a single step. But this journey is *not* a solo endeavor! 4-H professionals across the country are already in various stages of their journeys – and they welcome you as their travel companion. While our primary goal is to provide a wealth of information to help you succeed in this world of urban 4-H Science programming; it is also our hope that this guide will be the impetus for forming a thriving Community of Practice where 4-H professionals can come together and share their successes, challenges, and most importantly – support and encouragement.

Let us begin . . .

Chad Ripberger, *Project Director*

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Introduction

The development of this resource has certainly been a journey for all involved (see *Project Design* below for more information). It was by turns challenging, uplifting, thought-provoking – and always exciting. We’ve asked ourselves: What does the successful (urban) 4-H professional look like in the 21st century? How does she work? What does he do? What skills do they have? What makes them successful – indeed – how *do* they define success?

Countless discussions, meetings, emails, and terabytes of data later we know the answer: The successful urban 4-H professional of the 21st century thinks and acts like – an **entrepreneur!**

Develop an Entrepreneurial Spirit

Think about it. What does a successful entrepreneur do? She raises capital, secures staff, develops partnerships, assumes risk, delegates responsibility, requires accountability, and so forth. His goal is to grow the enterprise, and views challenges as opportunities to exploit. First and foremost, however, successful entrepreneurs *begin with the end in mind*. She has a plan – a *strategic* plan – and she uses it to guide her journey in the appropriate direction.

And therein lies the challenge. The successful urban 4-H professional of the 21st century must be willing to embark upon a journey that will ultimately result in a transition from 4-H Event and Volunteer Manager to Executive Director of your local 4-H Youth Development program. These “new” urban professionals must be fully engaged in resource development. Our successful contributors exemplify the spirit of entrepreneurial trailblazers by using a variety of mechanisms to obtain the support needed to implement and sustain programs, including grants, subcontracts, and in-kind contributions. They are fully engaged in “being at the table” – building awareness of 4-H and 4-H Science in any and all venues – and they welcome opportunities to develop and sustain successful partnerships with other youth serving organizations, corporations, city governments, and so forth.

Just to clarify – an entrepreneurial spirit does *not* imply abandoning traditional 4-H roles, values, or concepts. Indeed, the rallying cry for 4-H Science is – *informal science education in the context of positive youth development*. 4-H is, and always will be about the *Essential Elements – Belonging, Mastery, Independence, and Generosity*. 4-H will continue to hold events and manage volunteers – but – the entrepreneurs among us will delegate more of their traditional responsibilities as they shift to providing programmatic vision to, and building programmatic capacity within, their organizations.

We’ve identified four things *entrepreneurial* urban 4-H professionals *do* to achieve success: (a) embrace program design, (b) promote partnerships, (c) build programmatic capacity, and (d) tell their 4-H Science story. These items make up the bulk of the promising practices in the *4-H Science in Urban Communities Promising Practices Guide*.

Embrace Program Design

Conversation between Alice and the Cheshire Cat:

‘Would you tell me, please, which way I ought to go from here?’

‘That depends a good deal on where you want to get to,’ said the Cat.

‘I don’t much care where –’ said Alice.

‘Then it doesn’t matter which way you go,’ said the Cat.

– Lewis Carroll, *Alice’s Adventures in Wonderland*

Successful travelers know their final destination (*begin with the end in mind*). They are alert for signs, mile markers and other indicators or benchmarks of progress. In the same way, *successful* entrepreneurs know where they want to go – and how they’re going to get there. Successful entrepreneurs use *business plans* to guide them to their destinations: Successful 4-H professionals use *Logic Models*!

The *4-H Science in Urban Communities Promising Practices Guide* begins with *Section I - 4-H Science Core Principles and Program Design*. The chapters within this section will help you determine your destination and explore alternate routes to get there. The emphasis is on developing and sustaining comprehensive, high quality informal science education programs (as opposed to one-time events or activities), and in identifying your unique programmatic niche or focus (training, resources, program design, implementation, etc.).

There are four chapters in this section that address the content and context of quality 4-H Science programs. The purpose of the first chapter, *4-H Science Program Design - 4-H Science Checklist*, is threefold: (a) to introduce the *4-H Science Checklist*; (b) to provide promising practices to support each of the seven criteria of the *4-H Science Checklist*; and (c) to promote *4-H Science 101*, a scripted, four-hour training that can also serve as a crucial resource for developing “science ready” programs. *Inquiry Based Learning Approaches* contains promising practices to help program planners and facilitators implement successful inquiry based 4-H Science programs. *Providing Youth Authentic Opportunities to Practice and Share Science Abilities* reminds 4-H professionals to plan for such opportunities during the program design stage, and provides venue and activity suggestions.

The most robust program designs will fail to achieve expected results if program facilitators are not adequately trained or supported to consistently (and correctly) deliver programs. The final chapter, *Training Others to Deliver High Quality Science Programming*, addresses this issue of fidelity of implementation.

Promote Partnerships

The successful entrepreneur understands that creating strategic partnerships with like-minded organizations can be richly rewarding for everyone involved. A solid partnership easily doubles (or more) the “sum of its parts.” Strong partners are committed to sharing the journey (as well as resources!). They complement or support each others’ strengths and weaknesses. Sustainable partnerships have good communication networks, distribute rewards and recognition equitably, and ultimately reach or even exceed mutually agreed upon goals and objectives.

The importance of promoting partnerships to successful 4-H Science programming was underscored by the initial survey of the 4-H system (see *Program Design* below for more information). Almost all respondents indicated the only way to achieve success in an era of shrinking budgets and increased service demands was to *partner, partner, partner*. 4-H professionals need to identify youth development and science partners who support informal science learning (in the context of positive youth development) and who are able to provide complementary resources.

Perhaps the most overlooked “partners” in any discussion about partnerships are the 4-H professionals’ state level partners. Extension and University leaders must be sincerely committed to providing *continuous* and *tangible* support to urban 4-H Science programming. To expect 4-H professionals to achieve success in urban settings *without* providing the ways and means to do so sets the stage for unrealized opportunities.

Section II - Partnerships, Resource Development, Program Growth and Sustainability provides a plethora of promising practices to help you promote mutually beneficial partnerships. This section begins with a vital introduction that includes *Overarching Principles* for creating sustainable partnerships. This information is *not* duplicated within the ensuing





chapters, and therefore should not be overlooked.

The six chapters in *Section II* are each devoted to a different type of partnering organization. The first two chapters focus on more traditional 4-H partners. *Partnering with Afterschool Providers* outlines promising practices to help you develop and sustain successful 4-H Science afterschool programs, while *Partnering with Summer Program Providers* addresses summer camp and summer day program partners.

The next three chapters introduce potential partners who may be new to many 4-H professionals. *Partnering with City Government and City Parks and Recreation*, *Partnering with Colleges and Universities and Campus-Based Scientists*, and *Partnering with Science Centers and Museums* each contain practical information and ideas for developing and sustaining successful relationships with these entities. The final chapter in this section, *State Level Practices to Advance Urban Programming*, provides concrete suggestions for strengthening state level Extension and University support for urban 4-H programs and professionals.

Build Programmatic Capacity

Entrepreneurs know they cannot be everywhere nor do everything by themselves. They rely upon outstanding staff to achieve and maintain success. They understand the importance of recruiting/selecting the right man or woman for the job, and provide continuous support to help staff do their best work. 4-H professionals also know they cannot do everything themselves. How well we navigate our road to successful urban 4-H Science programming depends upon our commitment to building programmatic capacity – in this case – recruiting/selecting and supporting the right associate, collaborative, and/or volunteer staff for the job!

Staffing, Recognition, and Marketing is the third and final section in the *4-H Science in Urban Communities Promising Practices Guide*. The first three chapters in this section provide exemplary promising practices to support building programmatic capacity. *Staffing with Content Rich Volunteers* will help 4-H professionals extend their reach by maximizing their ability to recruit and retain science professionals and serious science-based hobbyists. The purpose of *Staffing with AmeriCorps Members* is to help program planners understand how AmeriCorps members can be utilized to develop and sustain programs. *Staffing with Teenagers and Teens as Cross-Age Teachers* provides suggestions about how to locate, recruit, and sustain teens interested in working with 4-H Science programs.

Tell Your 4-H Science Story

One of the hallmarks of successful entrepreneurs is their ability to successfully communicate with others (partners, shareholders, customers, etc.) They – or more likely their support staff – are adept at showcasing achievements and marketing and branding their products and services. (The successful entrepreneur would *never* brag about being “the best kept secret” in the business world!) Explorers throughout history fully appreciated the importance of documenting and sharing the excitement of their discoveries with their stakeholders. Failure to document their successes would have resulted in lack of support for future explorations!

As 4-H professionals make inroads into the world of urban 4-H Science programming, they have the unique opportunity to disseminate the 4-H Science story while shaping public perception about who 4-H is and what 4-H “does.” The final two chapters in *Section III – Staffing, Recognition and Marketing* underscore the importance of sharing the 4-H Science story. *Recognizing Youth and Showcasing Programmatic Efforts* will help 4-H professionals understand the value of providing youth appropriate, meaningful recognition and of showcasing programmatic efforts. *Marketing and Branding 4-H in Urban Communities* makes a strong case for consistent branding of all 4-H programs and provides some basic ideas for

marketing and branding your 4-H Science programs.

The journey to provide urban youth with content and context rich 4-H Science programming requires the 21st century urban 4-H professional to engage in a personal journey to cultivate an entrepreneurial, trailblazing spirit. Reading this guide is but the first step of what we know will be an exciting – and rewarding journey for all.

Project Design

The *4-H Science in Urban Communities Promising Practices Guide* is a truly collaborative work. An advisory team, consisting of 4-H professionals and informal science education and youth development partners, met at the St. Louis Science Center to set the stage for this resource. After much deliberation and perusal of existing resources, the team delineated 15 content areas for inclusion in the guide and determined the appropriate formats for this resource – electronic publication, supporting website, and short video segments to highlight selected content areas.

The advisory team developed an electronic survey to learn more about existing urban 4-H science programs. State 4-H program leaders and 4-H science liaisons were asked via email to participate in the survey. Respondents were also asked to nominate 4-H professionals from their states who were currently implementing urban 4-H Science programs to serve as contributors to this resource.

Of the 4-H professionals nominated, 18 were asked to contribute to the resource based upon their exemplary work in the field. These women and men represent a diversity of urban communities (Sacramento, Houston, Kansas City, Minneapolis, New York City, etc.), geographic regions (northeast, north central, south, west), target audiences (young women, Latino, Lakota Indian, African American, etc.), programs (marine science, robotics, hydroponics, geospatial, wetlands conservation, aerospace, etc.) and delivery modes (4-H Afterschool, summer programs, camps, clubs, etc.).

What these 18 men and women have in common, however, is the *entrepreneurial spirit and passion* required to be a successful 4-H professional in urban communities today. It is not an overstatement to say that these contributors brought a wealth of knowledge and experiences to this undertaking, which is why the *4-H Science in Urban Communities Promising Practices Guide* is so content rich. Rarely in the authors' experiences has such a diverse group functioned with such singleness of mind.

The contributors were asked to each select five of the pre-determined content areas based upon their expertise, and for each area to provide a summary of their efforts, promising practices, suggested resources, and video highlighting their reflections in their chosen areas. Conference calls were scheduled to discuss and build consensus around promising practices for each content area. Contributors were invited to participate in any content area call, regardless of whether it was one of their selected areas. A summary document organized by themes was compiled from the promising practices submitted by the contributors. The relevant summary document was distributed prior to each conference call, and served as an organizing tool for the discussion. Each call lasted from 1-2 hours, followed by a 1-2 hour debriefing between the authors.

The information provided from the conference calls, as well as other documents and resources submitted by the contributors were used to produce the content included in this resource. The video segments were selected based upon raw video received from the contributors. The raw footage was indexed by content, and six content areas were selected for inclusion as highlight video segments. Photographs were chosen from those submitted by the contributors to illustrate “talking points” and add interest to the videos.





How to Use this Resource

The *4-H Science in Urban Communities Promising Practices Guide* includes three complementary resources: (a) the primary electronic publication, (b) a website, and (c) highlight video segments.

Electronic Publication

The focus of this publication is on the promising practices, which are divided into three major sections: *4-H Science Core Principles and Program Design; Partnerships, Resource Development, Program Growth and Sustainability; and Staffing, Recognition, and Marketing*. Each section includes several chapters devoted to specific content areas, and each chapter includes:

- *Chapter introduction* – provides important context for the promising practices that follow.
- *Promising practices* – the heart of each chapter; majority of chapters include subsections on program planning and evaluation, training, and support.
- *Case studies* – vignettes submitted by contributors that highlight practices discussed within the chapter.
- *Resources* – websites and publications/documents that may be helpful to the readers.

It is worth noting that *Partnerships, Resource Development, Program Growth and Sustainability* includes a special introduction that contains overarching principles for this section. This introduction is often referenced in the chapters, and contains information critical to developing and sustaining partnerships and programs.

The publication concludes with *Contributor Bios, Program Descriptions (Sustained 4-H Science Programs and Promising 4-H Science Programs)*, and a master list of all *Resources* contained within the chapters.

The electronic publication can be accessed for online viewing from the *4-H Science in Urban Communities* website (<http://urban4hscience.rutgers.edu>). It is also available for download as a single PDF document or as individual chapters. The publication can be read front-to-back, specific chapters can be read as needed, or chapters can be printed for use in trainings.

Project Website

The supporting website (<http://urban4hscience.rutgers.edu>) for this resource includes all the content from the electronic publication, plus PDF documents, a master list of resources, and the highlight video segments. Links can be made to the website for trainings – or links can be sent to program partners, funders, key stakeholders, and so forth to support programming efforts.

Highlight Video Segments

There are six video segments included as part of this resource: *Project Overview; 4-H Science Program Design - 4-H Science Checklist; Providing Youth Authentic Opportunities to Practice and Share Science Abilities; Training Others to Deliver High Quality Science Programming; Partnering with Afterschool Providers; and Staffing with Teenagers and Teens as Cross-Age Teachers*. The videos are located on the *Videos* page of the website (<http://urban4hscience.rutgers.edu/videos.html>) as well as in the relevant chapters. These video segments could be sent to program staff and partners, and could be used to add interest and excitement to relevant 4-H Science presentations and trainings.

This resource is brought to you by 4-H, through the generous support of Noyce Foundation.