# Welcome!

- Please introduce yourself, organization, and Collaborative/State in the chat box.
- What is one way you are thinking of using Citizen Science/Inquiry resources?

May 11, 2017

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

Afterschool Alliance | AccessSTEM | SciGirls | American School Counselor Association | Google | Student Research Foundation

# Goals

- Provide more information about the Cornell Lab project
- Describe inquiry and citizen science
- Answer any questions about the project and application

# Agenda

- Describe citizen science and available projects
- Describe inquiry and its benefits
- Overview of the “Inquiry through Citizen Science” Project
  - Project benefits, requirements, and timeline
- Q&A

# Cornell Lab of Ornithology
# Inquiry Citizen Science Project Team

**Jennifer Fee**
Manager of K-12 Programs

**Jennifer Shirk**
Director of Field Development

**Kelly Schaeffer**
Education Specialist

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

# Cornell Citizen Science Collaborative
## *Habitat Connections*, 2016

# Integrating Inquiry through Citizen Science Collaborative

Jennifer Fee

Manager of K-12 Programs

# TheCornellLab of Ornithology

**Our mission:**

**To interpret and conserve the earth's biological diversity through research, education, and citizen science focused on birds.**

**BirdSleuth K-12 helps educators bring the power and engagement of citizen science and inquiry to their students**

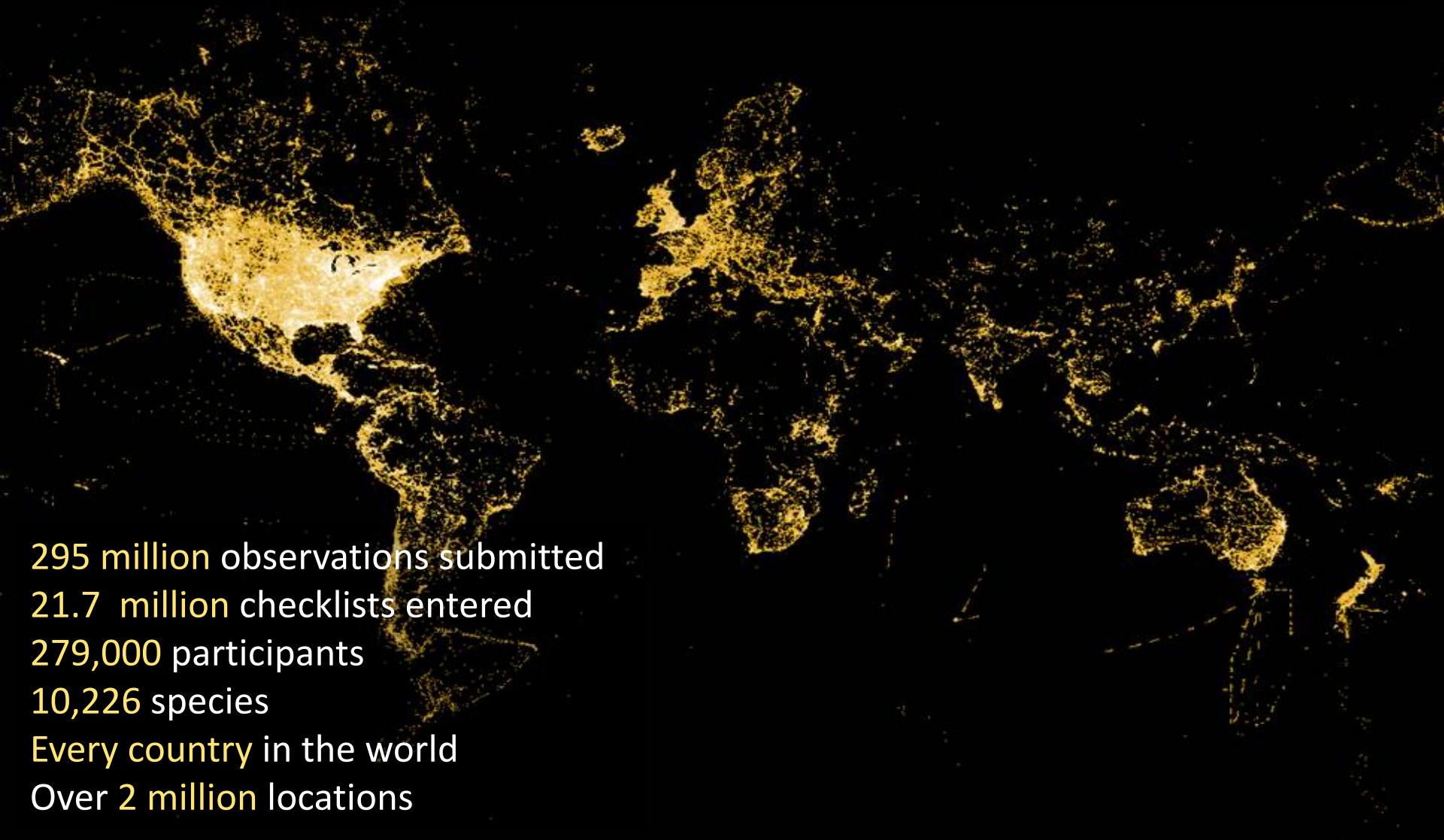
# What is “citizen science?”

***Projects in which volunteers partner with scientists to answer real-world questions.***

The Cornell Lab of Ornithology
BirdSleuth K–12

Girls Collaborative Project

**In citizen science, people everywhere report observations of natural events using basic, scientific protocols.**



295 million observations submitted
21.7 million checklists entered
279,000 participants
10,226 species
Every country in the world
Over 2 million locations

# Citizen Science Projects:

from ladybugs to warblers, and everything in between!

GREAT LAKES WORM WATCH

GREAT World Wide STAR COUNT

eBird

Project FeederWatch

JOURNEY NORTH

International Pellet Watch

MINNESOTA Frog & Toad Calling Survey

jellywatch.org What's in your ocean?

Project BudBurst www.budburst.org

CoCoRaHS Community Collaborative Rain, Hail & Snow Network

The Lost Ladybug Project

IceWatch USA™

# CLO Citizen Science Projects

1. Identify and observe birds
2. Collect data
3. Enter data online
4. Retrieve and view online data


eBird

Project FeederWatch

The Great Backyard Bird Count

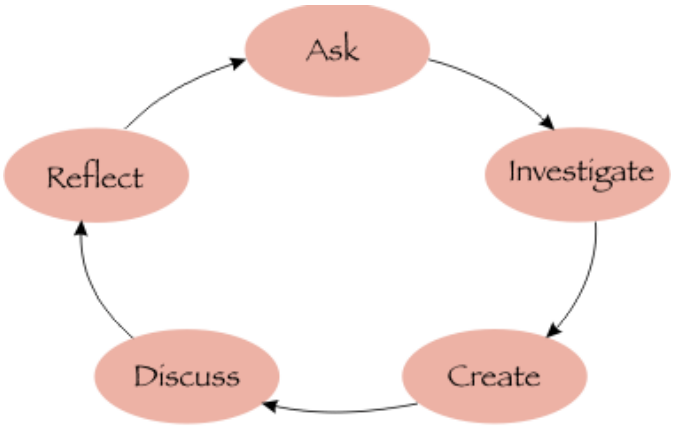
NestWatch

# Great for Educators!

- Exciting and real-world
- Opportunity to study wild animals
- Low cost, year-round activity
- It helps!
- Sparks kids' curiosity
- Connects kids locally

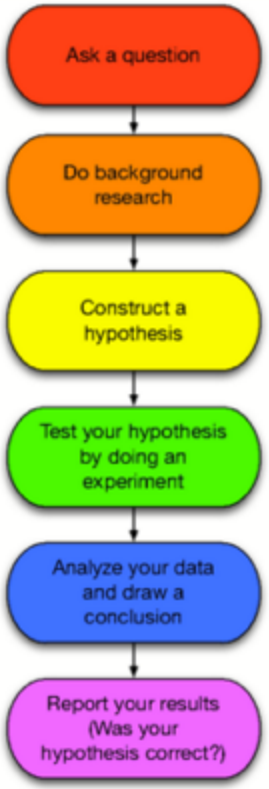
# What is “inquiry?”

LET’S CHAT!






The Scientific Method



# Inquiry…

- Asking and answering own questions (authenticity)
- Develops science practices (STEM skills)

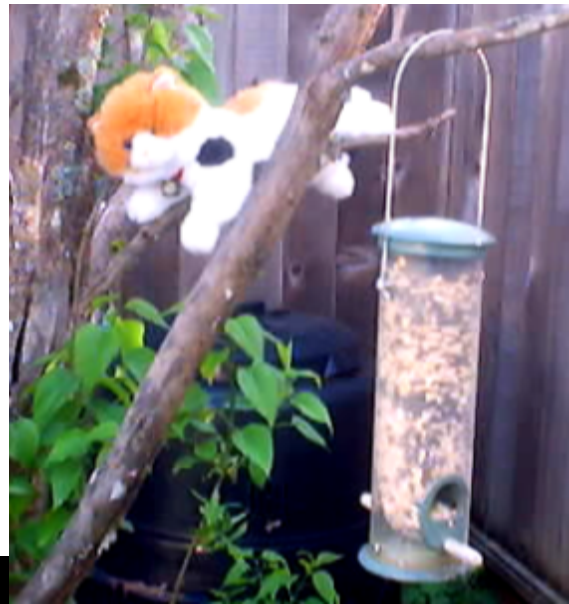
# “Investigations”


## Nature Connection

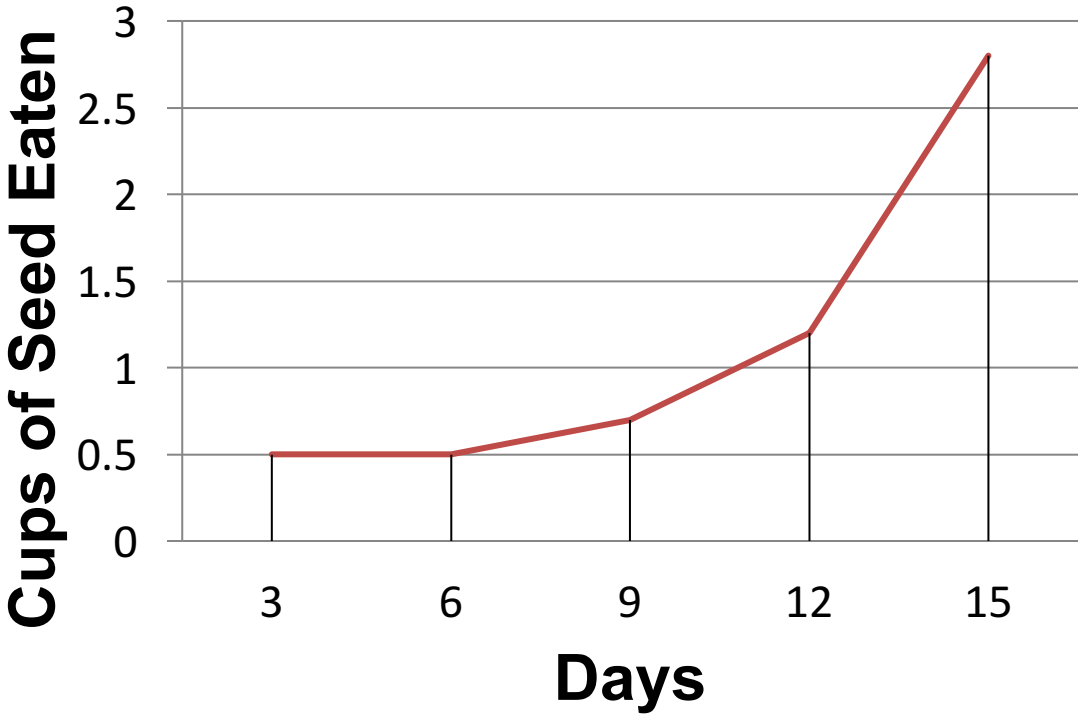
## Citizen Science

## Inquiry


**The cat is a good guard**



The cat is a good guard, but I thought the birds would learn the cat was fake!



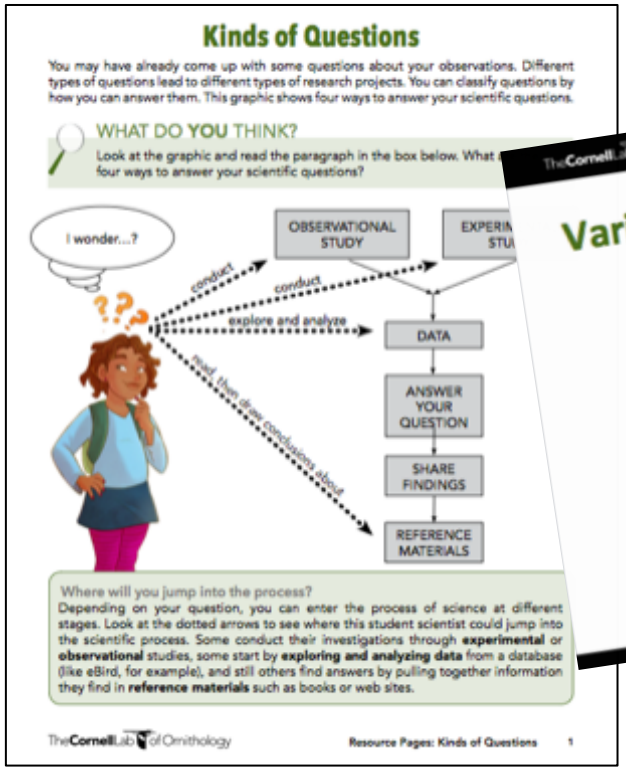

# Great for Girls (SciGirls Seven)

1. Girls benefit from **collaboration**....
2. Girls are motivated by projects they find **personally relevant and meaningful**.
3. Girls enjoy hands-on, **open-ended projects and investigations**.
4. Girls are motivated when they can **approach projects in their own way**…
5. Girls' confidence and performance improves in response to specific, positive feedback on things they can control….
6. Girls gain confidence and trust in their own reasoning when encouraged to **think critically.**
7. Girls benefit from relationships with **role models and mentors**.

# Benefits of Program

- Free access to *Integrating Inquiry* Course
- Curricula and materials
- Ongoing support
  (access to experts in citizen science, inquiry, bird studies)
- 2 CEU credits from Cornell University

> High quality, equitable experiences to deliver to youth



## Unit Timeline: one week, a semester, or a year-long project... it's up to you and your students!

- Observe and Wonder
- What is Science?
- My Investigation
  - Testing Hypotheses
  - Show Me the Data
  - Share My Investigation

# Integrating Inquiry for Educators: Developing Student Science Practices

Edit this post

Courses / Integrating Inquiry for Educators: Developing Student Science Practices

## Greetings Educators!

We've designed this self-paced course to help educators **explore the process of inquiry and scientific investigation,** especially as inspired by **outdoor observations and citizen-science participation**. Our popular *Investigating Evidence* curriculum is the "textbook" for the course.


You can purchase the course with printed curricula/handouts or opt for the electronic version that you can download and/or print yourself. Feel free to explore *Investigating Evidence* at www.birdsleuth.org/investigation. You can also elect to

## Welcome to the course!


## After Lesson 1, you will be able to...

1. Describe "citizen science" accurately in your own words.
2. Describe "inquiry" accurately in your own words.
3. Explain reasons educators use citizen science and inquiry in their teaching/programs.
4. Describe how citizen science and inquiry are related.

Throughout the lesson, please be sure to complete all readings, assignments, and discussion questions.

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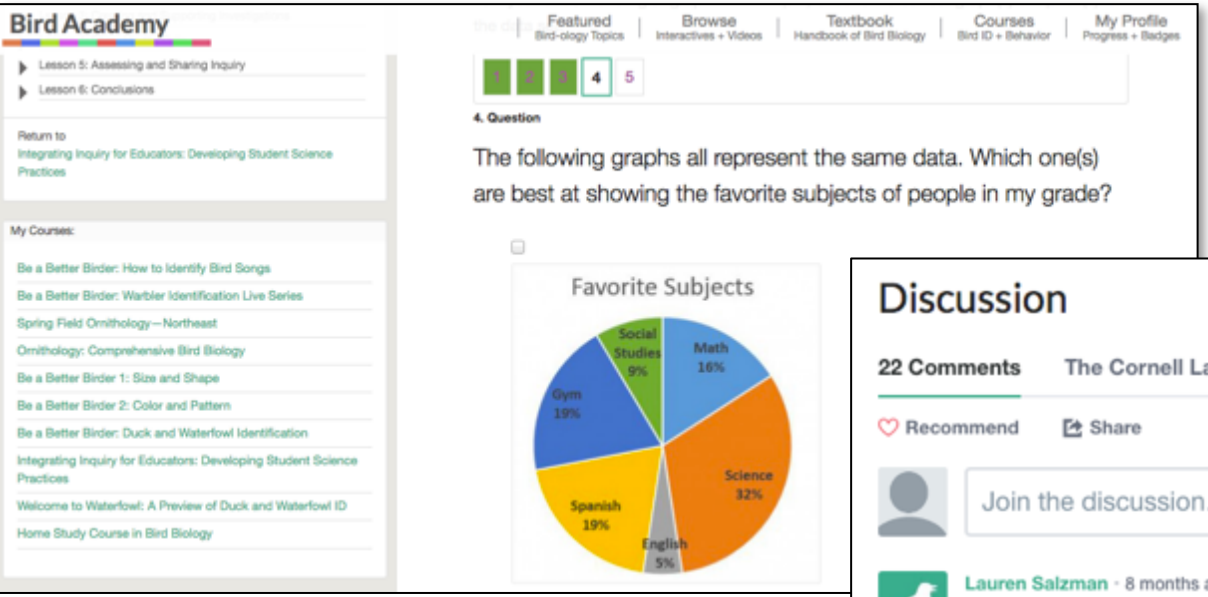
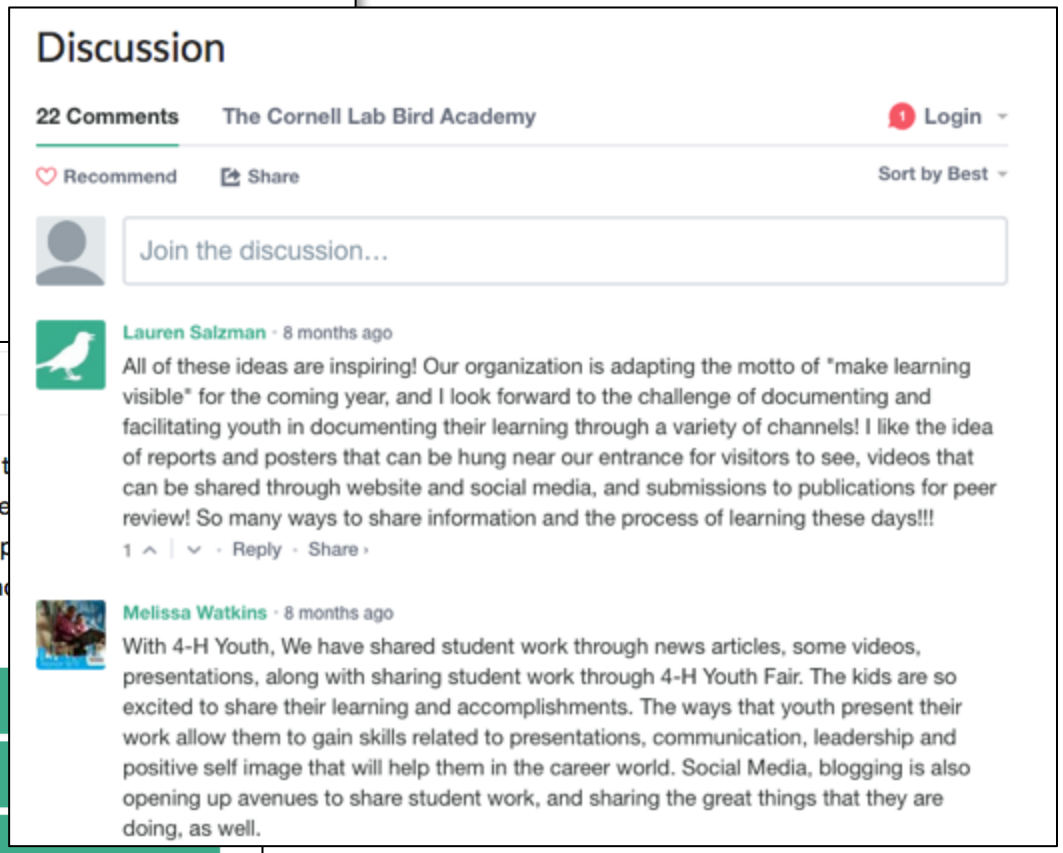
# BirdSleuth K–12




**Topic Progress:**

Showing off your learners' work can be very rewarding. The recognition t
spotlighting youth talents and creativity can inspire them to greater achie
be as simple as adorning the halls outside your classroom with student p
complex like supporting learners in publications, science fairs, blogs, an
are four ways to share learners' work. Click on each kind to learn more.

- *BirdSleuth Investigator*
- Create a Video
- Science Fair Poster
- Newspaper Articles

# Program Requirements

- Complete the *Integrating Inquiry Online Course* (June-July, 20 hours)
- Engage ~20 students in the activities (May-October, 20+ hours)
- Participate in evaluation activities (including pre and post surveys for yourself and the students you teach)

# Timeline

**Application and Launch**

- May 11 > Informational Webinar
- May 15 > Applications due
- May 17 > Accepted applications announced
- May 17-22 > Educator pre-surveys

**Course**

- May 22 > Start "Integrating Inquiry" Course (20 hours of content)
- May-June, TBD > Conference call/discussions for all available educators
- July 14, 2017 > Deadline to finish course

**Teaching and Evaluation**

- June-September > Collect pre-assessment youth survey
- May-October > Implement citizen science and investigations with youth
- October 27 > Deadline to collect and submit post-assessment youth survey
- November 1, 2017 > Educator post-survey

# How will you integrate inquiry into your programs?

- Who are you planning to engage in this project?
- Are there local partnerships that could arise from participating in this project?
- Are there other ideas you'd like to share?

# QUESTIONS?

## Keep in Touch!

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