

DISCOVERY CHALLENGE

6th-8th Grade, Curriculum Notes

Developing
Research
Skills

Learning
About Career
Possibilities

Serving in
the
Community

Improving
Presentation
Skills



Day #1 Planning and Activity

4-H REPRESENTATIVE/VOLUNTEER OVERVIEW



A 4-H volunteer, or Purdue Extension educator, will visit every classroom a minimum of 5 class periods. A 6th or 7th day may be required, if all presentations will not fit within one class period. Between 4-H visits, the classroom instructor will spend a minimum of one period, after each of days 2-4, in order to allow in-class work time and follow-up. In the case of research and visual aids, more than one work day between 4-H visits may be appropriate.

All presentations will be given by one student using a electronic media visual aids. (Exceptions will be made as needed in the case of students with IEPs and schools without adequate technology.)

In addition, students whose presentations meet high standards may be invited to participate in a district-level competition.

Indiana Discovery Challenge

TABLE OF CONTENTS

- 01 INTRODUCTION AND CAREER RESEARCH**
 Help students use the Indiana Career Explorer and other sources to discover interesting career possibilities.
- 02 DOING "GOOD" RESEARCH**
 Teaching students to "think" about the information they find and evaluate source credibility.
- 03 RESEARCH ORGANIZATION AND INTRODUCTIONS**
 Helping students organize their research and work on strong introductions.
- 04 VISUAL AIDS**
 Adding visual interest to presentations.
- 06 JUDGING**
 Helpful guidance for judges in the classroom.

Prior to "Day #1" make sure that students have access to Indiana Career Explorer, Inspire, and have Google access to: "Docs," "Slides," "Sites," and "Drive."

Day #1: (4-H Educator/Volunteer)

Do introductions! Discuss the fact that in addition to the presentation, students are expected to plan, a community service project. If students have recently performed community service, they may document their service instead of additional planning. If planning or documenting, students should present the where, when, who, and how of the project. In addition, students should state which of their workforce skills will be/were improved during this project. (15 mins)

Tell students that they will be picking a career to research and present, along with a related topic of interest. They are NOT allowed to pick professional sports players as a career, as the odds are horrible against making it to "pro." (See handout "Athletic Odds" if you need additional data. For instance, the chances of a high school basketball player going pro is 1 in 3,333. The term "pro" includes those who never get above the G-league.)

However, students may pick professional sports related professional fields, such as: sports medicine, training, physical therapy, accounting, sports management, etc. All topics and careers must be "school appropriate."

Open computers and help students set up an account under "K-12" in Indiana Career Explorer
<https://indianacareerexplorer.com/#SplitModal>

Complete Sign-In and Set-Up Profiles (5 to 10 minutes)

Under the user settings (drop-down, top right, user name, pick "settings"), scroll down the left side and click (under organizational settings) the opt-in for "Indiana 4-H."

Have students take a "Career Interest Assessment" (5-10 minutes).

After students review the top three industries related to their interest assessment, they should pick three careers of interest to them from the list and start to research the following:

- Educational Requirements
- Entry-Level Salary
- Job Openings (Indiana)

Any three of the top expected tasks
 Any "Common Knowledge Skills & Abilities" needed to get a foot in the door"

Students should keep notes on their top career picks in "Google Docs," if available. If not, simple written notes will do.

DAY #1 FOLLOW-UP AND DAY #2



Note: If the three highlighted career clusters are not of interest, students have the following options: 1. Retake the Career Interest Assessment and see if other options populate, 2. Click "Browse All Industries" and look at other areas, or 3. Go to bls.gov and research another specific job of interest. At the BLS site, students can take notes on most of the same information that is found in the Indiana Career explorer; however, the BLS site has more of a US, not Indiana, set of data.

Day 1.5 (Instructor Leads)

Allow career research time. Tell students that all research needs to be properly cited in their presentation! So, keep track of citations while doing the research.

Tell students that the presentation is on a general subject and then the students will fit their chosen profession into that larger topic for at least a minute of their presentation. Hand out, "Presentation-Subject-List" and have students commit to their career choice and presentation topic. For instance, if the student decides on a career of "drone pilot," their topic will be something like "recreational drones," "digital agriculture," or "first responders." As long as the topic is school appropriate and relates to the career, it should be fine.

The classroom instructor is welcome to limit topics. As such, teachers are encouraged to limit presentation topics to those related directly to their class subject.

Day 2: (4-H Educator/Volunteer)

Tell students that all research needs to be properly cited in their presentation! So, keep track of citations while doing the research. In addition students need to use their own words in their presentation!



Research (Good vs. Bad Sources):

Discuss lessons from each video after each is played.

Video On Sources and Reliability:

www.youtube.com/watch?v=q1k8rcYUmb0&t=186s

Video On Scientific Studies and Reliability:

www.youtube.com/watch?v=G61_qloAWnw&t=184s (Children's Hospital Phil.)

Deep Fake Video CBC Kids:(

www.youtube.com/watch?v=IOyrbsNcXt8

Show Snopes and check credibility of basic rumors (i.e. NASA never landed on the Moon)

Snopes: www.snopes.com

News Source Reliability:

Check for bias at www.adfontesmedia.com (not perfect; but a start)—Go To Interactive Chart and look at where the news sources fall. Zoom into the two squares on each side (often a zoom will work well using two fingers on a mousepad) of middle/balanced. Those will be the most reliable sources. Zoom into some of the sources outside of the two middle squares and let students know that using these sources is risky.

DAYS #2 AND #3

Show Students Indiana's Most Trusted Site: (Again, not perfect)

INSPIRE (Inspire.in.gov)—Use The Search Bar

Things to look for: Research Starters, Periodicals, Encyclopedias, Books, Peer-Reviewed Articles, Videos.

Show the built-in citation maker for INSPIRE: Found at top of source as a quote sign "

If that fails, try Citation Machine (www.citationmachine.net/apa). Students may need to use "Create Manual Citation" and fill in the blanks.



Allow students to start their research and help them find facts about their topic (if time is available).

Day 2.5 (Instructor Leads)

Day for students to research topic, make sure to use "Docs" for notes/citations, if possible. Remind them, if they use "copy and paste" they will need to rewrite the materials, in their own words, for their presentation. The only exception are short quotations...and those quotes will need quotation marks.

Day 3.0 (4-H, Educator/Volunteer)



Utilizing a "Speech Organization Worksheet" (handout). Help students arrange their notes. As a hint, they could assign a highlight color to each piece of research that falls into one of the organizational areas: Intro, Four Supporting Areas, and Conclusion. For example, everything that might work in the first supporting area might be highlighted green. Explain that the last supporting area (before the conclusion) will deal with what they learned about a related career.

Have students fill in their introduction, and share their draft introduction with the class for comment. Hand out the judging rubric.

Day 3.5 (Instructor Leads)

Handout and review the "Public Speaking Summary" sheet. Emphasis should be placed on bold topics.

Allow students to complete their "Speech Organization Worksheet."

Day #4: Visual Aids

Day 4.0 (4-H, Educator/Volunteer)

With students, review their progress on research and the organizational worksheet.

Depending on the preference of the volunteer or classroom instructor, students may use Google "Slides" or Google "Sites" to prepare their visual aids for their presentation. Depending on that preference, proceed to do **either "A" OR "B" not both.**

A. If the preference is "Slides" little instruction should be given. Show the "Minerals Rock" title slide and sources/works cited slide to the students and remind them that all "Slides" presentations need a title slide with the title of the project and their name. Sources/works cited slides are also required.

Allow students to use the rest of their time preparing slides. You should walk around and ask to see their title slide and check how they are doing with sources. If they claim to be done with their presentation, ask if they have note cards ready. If they do, have them present against a stopwatch to see if their presentation falls within the recommended time.

B. If, instead, you want to use Google "Sites," before class make sure that students have access to the app and use this period as a workshop.

Start by showing the example web site outline found here:

sites.google.com/view/discoverychallenge/introduction

This is an example of an outline someone might make to discuss robots. A completed site will need more information. All images on this site are produced by AI; thus, we have no copyright fears at this time.

Have students sign on to "Sites" on their Google Workspace. Have them click on "Template Gallery" and view existing templates. Then, have them open the templates "Professors."



On the top bar, backspace to remove Dr. Goodwell's name. Replace it with the student's name.

Click on the "Pages" drop down, on the right-side of the site.

Under the drop-down, you can change the name of each page by double-clicking the old name or going to the three dots, picking "Properties," and then changing the name. Click change "Bio" to "Introduction."

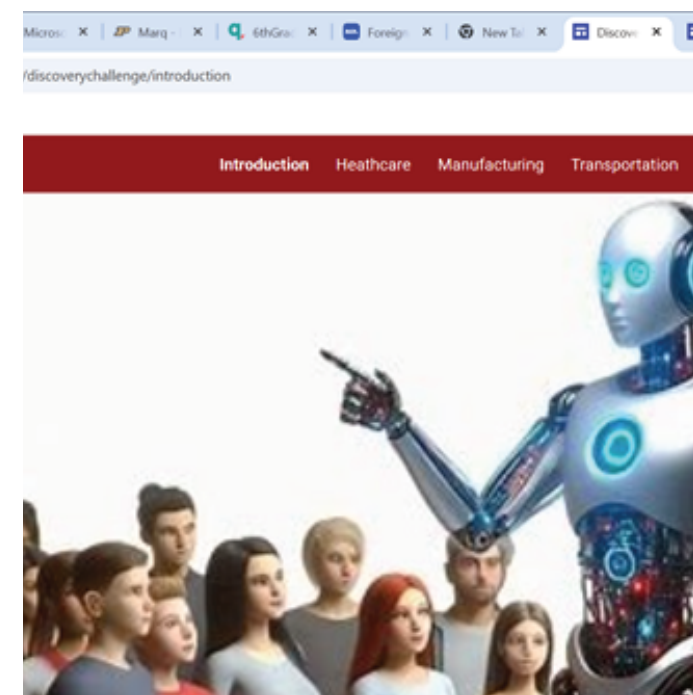
Click on "Teaching" and change it to "Support 1"

Click on "Writing" and change it to "Support 2"

Click on "Interviews & Media" and change it to "Support 3"

Click on "Office Hours" and change it to "Career Information"

To add pages, Under the pages option to the right, click "+" and add pages for your conclusion, sources/works cited, and community services pages.



For the final version of a visual aid, students are welcome to use different names for their links, and can use different templates and page titles.

For the purpose of the in-school presentation, students are allowed to use copyrighted visual aids (however, the source data related to the photo should be included in sources). Students should be encouraged to use AI to "make" visual aids; as these tend not to break copyright rules (as of 2025). In addition, various internet sites are available with non-copyrighted or free to use photographs. Of course, students can use their own photos, as long as they are school appropriate.

If their site is going to be "published" onto the internet, photos must not be copyrighted, unless you have permission from the photo creator. Links to photos or videos online **ARE** allowed, even if they are copyrighted. If using a video, keep it short, as time is very limited and the projector we are using for the presentation may, or may not, have a speaker.

Day 4.5 (Instructor Leads)

Help students to complete their presentations or web sites. Each page should have at least one visual along with basic bullet points, to keep the presentation on track.

DAY #5+ JUDGING SCORE SHEET

Indiana 4-H Discovery Challenge Scorecard, Grade 6-8, Judges Name: _____

Name of Presenter	1.	2.	3.
Topic			
Logical Flow (10 pts.) Presentation flows well and is easy to follow. 9-10 = Excellent 6-8 = Good 5 = Needs Improvement (NI)			
Topic Research (15 pts.) Presentation is research-based, accurate and supports the topic. Works cited required. 13-15 = Excellent 8-12 = Good 7 = Needs Improvement (NI)			
Subject Coverage (10 pts.) Subject is well covered and audience knowledge is increased. 9-10 = Excellent 6-8 = Good 5 = Needs Improvement (NI)			
Presentation Delivery (15 pts.) Notes used appropriately, enthusiasm shown, voice clear, facing audience. 13-15 = Excellent 8-12 = Good 7 = Needs Improvement (NI)			
Visual Aids (15 pts.) Easy to see, support research, cited. 13-15 = Excellent 8-12 = Good 7 = Needs Improvement (NI)			
Career Research (10 pts.) At least 1-minute spent giving detailed research about a related career. Sources required. 9-10 = Excellent 6-8 = Good 5 = Needs Improvement (NI)			
Time (10 pts.) 10 = 4-6 minutes 9 = 3 to 3:59 min. or 6:01 to 7 min. 8 = 2 to 2:59 min. or 7:01 to 8 min. 6 or 7 = 1 to 1:59 min. 5 = Under 1 Minute, Over 8 Min.			
Community Service Plan (10 pts.) General Plan, Few Details = 1-4 Who, What, How, Where Answered = 5-8 Plus, How This Will Build Work Skills = 9-10			
Appearance (5 pts.) Clean and appropriately dressed. 5 = Excellent, 4 = Good, 3 = NI			

White = 49-65, Red = 66-87, Blue = 88-100

JUDGING HINTS

Logical Flow: Is the structure easy to follow and avoids "bunny trails."

Topic Research: If no works cited/sources are listed in the presentation, the grade is 7. If they give the name of a search engine (Google, Kiddle, etc.) instead of actual web sites, the score is an 8. If they just give the web sites without normal citation data, points can go up to 12. If multiple sources are shown and the citations look to be in a correct format, 15 points should be awarded. Points should be deducted for use of non-credible sources (down to a minimum score of 7).

Subject Coverage: This is a somewhat subjective measure. If the average elementary student would have learned something from the presentation, scores in the 6-8 range are appropriate. If average adults would have learned multiple points from the presentation, 9-10 points should be awarded.

Presentation Delivery: 7 should be awarded when it is apparent that the student did not prepare for the presentation. If words have been repeatedly used that the student does not know, a 9 would also be appropriate. 11-13 points can be awarded for students who seem to know their presentation; however, they don't look up at the audience enough, don't project their voice adequately, use their visual aids to read off of--instead of glancing at them to keep track of their presentation, etc. 14-15 points are reserved for strong presentations, often with note cards.

Visual Aids: 7 is reserved for students who have done little with their slides or sites. Usually these students have less than 3 slides. 8-12 points should be used for students who have slides that can be easily read, have photographs or other graphic images, and don't have multiple paragraphs of wording. 13-15 points are reserved for those visual aids that are well laid out, easy to read and follow, and show an investment of time and energy.

Career Research: As long as at least one minute of the presentation related directly to career research, use the grading suggestions from the score card. Career Research sources can be mixed with the other presentation sources/works cited. If less than a minute of the presentation was directly related to a career, the score should be no more than 8, regardless of sources.

Time: Please use a stopwatch and follow the suggested point values.

Community Service: Follow suggested point values

Appearance: In the school setting, most students should be given a 5. However, students wearing pajamas (unless related to the topic), hoods (over their heads), inappropriate designs (drugs, smoking, alcohol, etc.) should receive lower scores. For a hood over the head, drop one point. Inappropriate clothing, drop all points.

"Everything is hard before it is easy."
Johann Wolfgang von Goethe

VOLUNTEERS NEEDED

COME HELP INDIANA STUDENTS BUILD SKILLS FOR LIFE

The Indiana 4-H Youth Development Program relies heavily on adults who care about the positive development of youth across the state. All volunteers must complete a volunteer application, screening process and participate in training provided by 4-H educators. To start your volunteer certification for Project Achievement, contact Bill Decker at wdecker@purdue.edu.

4-H Discovery Challenge Volunteers:

- Never pay for volunteer membership.
- Don't need any 4-H experience.
- Are welcome to help with other 4-H activities.
- Annually refresh their training on youth protection.
- Know the value of positive role models.



Extension

LET'S STAY TOGETHER.

BILL DECKER, 4-H REGIONAL EDUCATOR
wdecker@purdue.edu

([HTTPS://EXTENSION.PURDUE.EDU/4-H/GET-INVOLVED/DISCOVERY-PROGRAMS.HTML](https://extension.purdue.edu/4-h/get-involved/discovery-programs.html))