

# DISCOVERY CHALLENGE

## 3rd Grade, Curriculum Notes

### INTRODUCTION

Help students understand project requirements and timeline.

### LEARNING "GOOD" RESEARCH TECHNIQUES

Train students to become better consumers of information.

### PRESENTATION STRUCTURE

Assist students as they bring their research together to form a presentation.

### VISUAL AIDS

Coach students to "show-off" their work.



## 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 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.

Due to this being the first time that some students will do a research-based presentation, third-grade classes are allowed some flexibility in the presentation format. For example: if requested by the instructor, traditional single presentations, partner projects, audio recording of presentations, time lines, etc. are acceptable third-grade presentation formats. The 4-H representative will vary presentation formats only if requested by the classroom instructor.

Indiana Discovery Challenge

## TABLE OF CONTENTS

---

02

### DAY #1: PROJECT INTRO

Provide a framework for students to understand what is expected from Discovery Challenge and introduce them to their subjects.

03

### DAY #2: RESEARCH AND NOTE TAKING

Teaching students to "think" about the information they find and how to avoid the pitfalls of plagiarism while taking notes.

05

### DAY #3: PRESENTATION STRUCTURE

Taking research notes and converting them into a structured presentation.

06

### DAY #4: VISUAL AIDS

Adding visual interest to presentations.

07

### DAY #5+: JUDGING

Judging hint and processes.

“

**There are two  
types of speakers:  
those that are  
nervous and those  
that are liars.**

**Mark Twain**

”

# DAY #1, INTRODUCTION



A week or so prior to class, ask the instructor if they would prefer the third grade do presentations on National Parks,

famous engineers and inventors, or (if in a library rotation) they would prefer to assign a non-fiction book to each student.

Depending on the need of the instructor/school either print out two master topic copies (one with each topic cut into strips and one intact) or have the instructor make a list of nonfiction books assigned to each student.

On the day of the first class, introduce yourself and 4-H. Discuss the goals of Discovery Challenge: building note-taking, research, and presentation skills, while increasing student self-confidence. After a brief question and answer period, ask the class: "If I asked you to make a 2-3 minute presentation, with slides, on an assigned topic; how many of you think you could do a good job?" If a high percent of students raise their hands, tell them, "Then you are in luck; because that is what we are doing!" If few raise their hands, say; "Great, then we can all learn how to do good presentations together."

Have each student pick a topic slip from a box, hat, bowl, etc. Go to the master list of parks, scientists/engineers (unless the instructor has assigned books); and, ask the students write their name under the subject they drew from the "hat." Of course, if students are being provided with books, skip the hat drawing. Let them know that you will provide them with written "research" for scientists and engineers, or a web site for national parks, or a library book (if that is the preference of your instructor partner) the next time you visit.

Hand out and review the parent brochure with the competition rubric, paying special attention to the requirements for the presentation. Let students know that there is another column that we are not showing in the rubric. The hidden column will cover poorly done presentations. As we don't expect any poorly done work, we are not sharing that part of the rubric with them. Make sure to tell the students to take this brochure home to their parents/guardians. Let them know that the next time you meet, they will be starting to do "research." Unless they want to look up their topics for fun, they will not have any homework until you see them again.

If time allows, show students a video of another student doing a strong presentation from a prior year. Discuss with the students why this was a good presentation.

# Day #2:

## Research & Note Taking

### Plagiarism: (May Be Shortened)

Ask students if they have ever heard the word "plagiarism." If so, ask them to define the word. They may get all or part of a good definition worked out; however, if they don't, use this one: "Plagiarism is stealing someone else's words or work without giving them credit." See if the students can come up with examples. If not, present them with some real-world questions about plagiarism.

1. Is this plagiarism? You are running late getting your project completed; so, you copy and paste a story from the internet and turn it into your teacher? (Yes)

2. Is this plagiarism? You put something President Washington said into your paper. It is set into quotation marks, and you say it is from President Washington. (No)

3. Is this plagiarism? You research diseases of aging. You get lots of great information from a book and restate everything from the book in your own words. However, you don't

tell the reader that the ideas and information came from a specific book and author. (Yes)

4. Is this plagiarism? You research how lightning bugs light up. You make sure to write everything in your own words, and you give credit to the sources where you found your information. (No)

So, how do we avoid plagiarism? Easy, you make sure to use good sources, translate what they are saying into your own words, and give credit to your sources. Very short quotes directly from a source or person can be used as long as that material is in quotation marks (or indented if over 5 lines), and you give credit to the person being quoted.

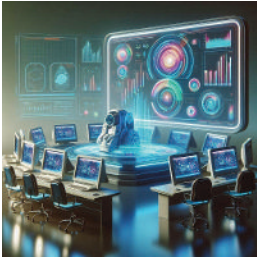
### Taking Research Notes:

**Discuss:** A big mistake many people make while taking notes from a source is to write/type/copy everything down from the source. This takes lots of extra time and really does not help you narrow down the important parts of your presentation. In addition, it makes it more likely that you will accidentally plagiarize your source. Focus on using summary statements on notes and only using quotes when paraphrasing the work would not be adequate. Help students work through the "**takingnotes**" handout.



## AI Research: (Can Cut If Needed For Time)

Discuss: We are well into the age of "Artificial Intelligence," (AI). Can you tell me what we can do with AI? Should we use it to write our presentation for us? NO



Often AI does not significantly change the wording from sources; thus, you may be guilty of plagiarism without intending to "cheat." Sometimes, AI will make up sources. For a research-based project, fake sources earn failing grades. Often the data AI uses is out of date or even simply wrong. If the computer has been fed bad data, you can only get bad data from the AI. Lastly, the fun of doing a presentation is displaying your creativity and thought. At the end of any presentation, you should have something of which to be proud. If a computer created the presentation, and all you did was to read what the computer wrote, will you feel a sense of accomplishment?

If you search on Google, the first paragraph you see was developed by AI...don't use it as a source!

### Research:

Provide the required materials for student research: scientist/engineer short bio, the NPS web site, [nps.gov/findapark/index.htm](https://nps.gov/findapark/index.htm) , or their assigned book.

**If using the NPS site**, show students how to first find their park and then the "Learn About The Park" and "Plan Your Visit" tabs. Most parks, not all, have these two tabs. If a student has these tabs, recommend that their presentation be based off of the sub-tabs "History and Culture," "Nature," and "Things to Do." If their park does not have these three sub-tabs, let students know that they are free to use any tabs on their park's site, but only use three tabs total for their notes.

**If you are using the scientist/engineers materials**, let students know that they should be taking notes on: 1. theories/inventions/innovations the person is most associated with, 2. interesting life facts about the person, and 3. anything else from the research materials that they think is interesting.

**If you are using books**, tell students to find the three most important areas (period of person's life, etc.) on which to focus in their presentation. Students can use the table of contents as an outline for their presentation structure and notes.

# DAY #3

## PRESENTATION STRUCTURE

### Before Class

Make copies of the "Research Organization" and "Presentation Structure" files. Work with the teacher in order to eventually show/post the "Five Part Presentation". Otherwise, you will want to have enough of these copied to place on tables for reference.

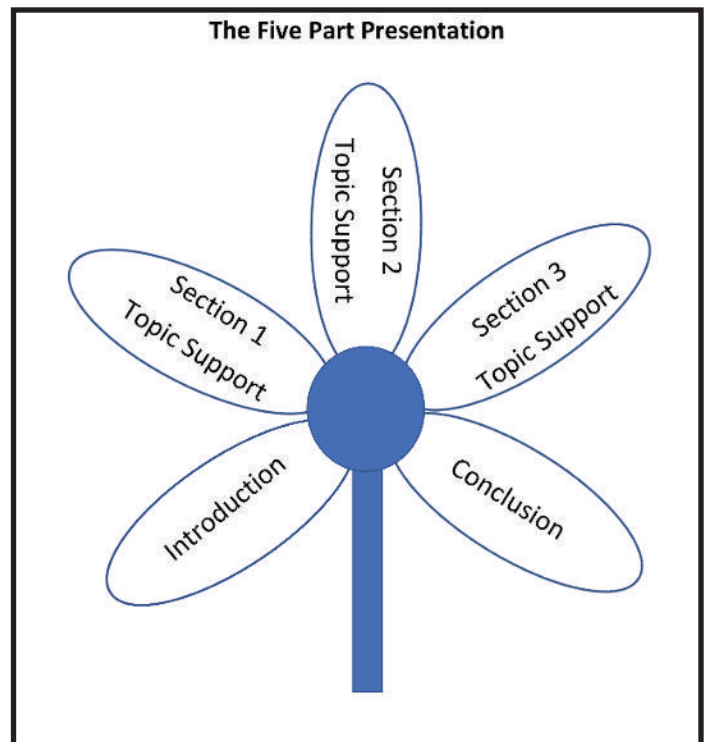
### Have Handouts Ready

Start with the projection, "Five Part Presentation." Explain that their speech will have five parts, just like the flower. Like the flower on the page, if a presentation is missing any of these parts it will just look and sound "weird."

Discuss the handout "How to Build A Presentation." Give special attention to each bullet. This should help the students understand what is meant by the five parts of a presentation.

Have the students review their research and arrange (by writing a bullet point) the research they plan to use on the correct flower petal of the "Research Organization" handout. For instance, an interesting fact for their introduction should go on the lowest pedal on the left of the stem. Walk the classroom, observe and give input on students' presentation structure.

Last, provide the students with the "Presentation Structure Table" and have them further develop their presentation outline using full sentences. At the very



least, work with them on writing their source/citation and introduction statements.

On the "Presentation Structure Table," I have provided two sample citations. If a student is using the NPS web site, all they will need to do is change the name of the national park and update the URL (web address) to reflect their site. For example, if they are working on the Yucca House site, their citation would be: U.S. Department of the Interior. (n.d.). *Yucca House National Monument (U.S. National Park Service)*. National Parks Service. <https://www.nps.gov/yuho/index.htm> .

For scientists and engineers, students only need to change the name in quotes. For example, if they are working on Booker T. Washington, the citation will be: "Booker T. Washington." Salem Press Primary Encyclopedia, 2020, Topic Overviews K-5. While not a perfect citation, it simplifies the process for 3rd grade students.

If time is short, the instructor can follow-up with the remainder of this table on another day. The table should be completed before your return.

# Day #4, Visual Aids

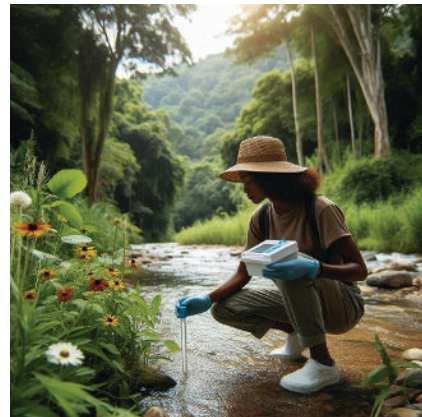
Show students the PowerPoint (or you can alternately use the pdf version)

“Designing Slides...” Walk them through some of the good and bad attributes of the slide shown.. Discuss fonts and font size. Nobody wants to see a PowerPoint with 11 point fonts.

Hand out the “Draft Visual Aids” handout Ask students, “Could your introductory slide just be a written-out question? Yes! Could it be a drawing or a photo? Yes! What else could it be?” Have them design/draw a “visual map” (draft) of their “cover” slide (subject, name, picture or graphic) on the first rectangle. After they have designed the “cover” slide, have them look at their presentation notes and decide on at least one visual from supporting area, along with conclusion and citation slides. Ask them to map out the rest of their slides on the handout. The last slide should include their sources/citations. They can use more slides as needed for their final presentation.

To wrap up, hand out and review the

competition rubric with the class, paying special attention to the requirements for the presentation. Provide one last hint, “notes are allowed in your hands during the speech. They are best written or typed on index cards; however, sheets of paper are acceptable. This is a great place to put quotes and helpful material that might not be on your slides. Remember to look up from your notes when you are not using them.”



Appropriate visual aid for a presentation on water pollution

**"Visual aids should aid your speech,  
not replace it."**

**Scott Berkun**



# Day #5+, Judging

Allot sufficient time to judge all students. This may be accomplished by visiting for multiple days. Before you arrive, have available a stopwatch, or a phone app that will keep track of time. Have more than enough judging sheets for every member of the class and a couple of writing utensils.

During presentations, you are welcome to tell students when to begin and start can your timer. Do not interrupt the presentation. Do not call time, unless they are over 5 minutes! Do not ask questions of the presenter. In grades 3-5, citation format mistakes should not be judged against the student; however, lack of citations should reduce available points within the "Research" section of the rubric.

During and after the presentation, fill out the score sheet. Do not wait until the end of all presentations to consider your scores. Try your best to judge only according to the rubric. Do not judge the speaker against another student's work. If there are ties in the final scores, do not go back and attempt to re-score them in order to determine placing. "Ties" are allowed!

## **Frequently Asked Questions:**

1. Should I brief the students before judging? Yes, remind students how the judging process will proceed, remind them (and anyone else in attendance) to clap at the end of every presentation, remind them not to talk or make noise during presentations. Unless it is an emergency, they should wait to ask for passes, etc. until the class is between presentations.
2. Are parents allowed to attend the presentation? There is no rule against them attending; however, defer to the classroom instructor. A small classroom can't take the addition of 60 parents.
3. Who gets to see the score sheets? You and the instructor. The instructor may use them for grades, completion marks, or helpful critique, after you leave the room.
4. How strict should I be about scoring? If you feel that there is a reason to deduct points, do so! If everyone gets a blue ribbon, we will be unable to decide who should be invited to the regional competition. That being said, if you could "go either way" between two scores, err on the side of the presenter.
5. Dress? We ask students dress appropriately for their presentations (no pajamas!). Out of respect to the presenter, the judge should dress in something approximating "business casual." Certainly, "old school" business attire is welcome; however, we want our judges to be comfortable. In cases where a school lacks sufficient climate control, please adjust your attire accordingly and give the students some latitude. Of course, students wearing inappropriate clothing (such as references to illegal acts, drugs, or alcohol) should loose all points under "Appearance."

# 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 Discovery Challenge, contact Bill Decker at [wdecker@purdue.edu](mailto: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 EDUCATOR  
DISCOVERY PROGRAMS  
[wdecker@purdue.edu](mailto: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))