DISCOVERY CHALLENGE

4th Grade, Curriculum Notes

FINDING THE SPARK

Help students pick a subject that they find truly interesting.

LEARNING "GOOD" RESEARCH TECHNIQUES

Train students to become better consumers of information.

ORGANIZING THE PRESENTATION

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

VISUAL AIDS

Coach students to "show-off" their work.

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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 and 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 an electronic media visual aid ("Slides," etc.). Exceptions will be made as needed for students with IEPs and schools without digital resources. In addition, students whose presentations meet high standards may be invited to participate in a district-level competition.

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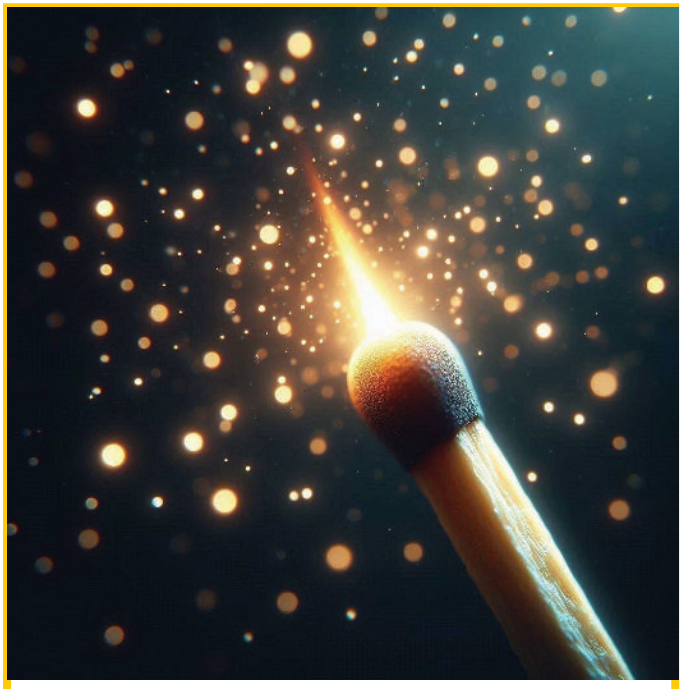
A talk is a voyage with purpose and it must be charted. The man who starts out going nowhere, generally gets there.

Dale Carnegie

DAY #1, THE SPARK



Introduce yourself. Discuss the goals and timeline of Discovery Challenge. After a brief question and answer period, ask the class to think about, not answer out-loud, the following questions: “What makes you happy?” “What would you like to learn how to do or make?” “If you opened a store, what would you sell?” “What is your favorite thing to do?” “What science topics interest you?" “What historical figure would you like to know more about?” Ask students to keep their answers in mind, while thinking about something they would be interested enough to research and present to the class.

If the first set of questions didn't provide students an idea for their topic, suggest that they think about what job they might like one day, what foods they love, and what animals they think are cool. Almost all of those things are "school appropriate", and will make a good topic. If students ask, they can **not** bring animals or food to their presentation.

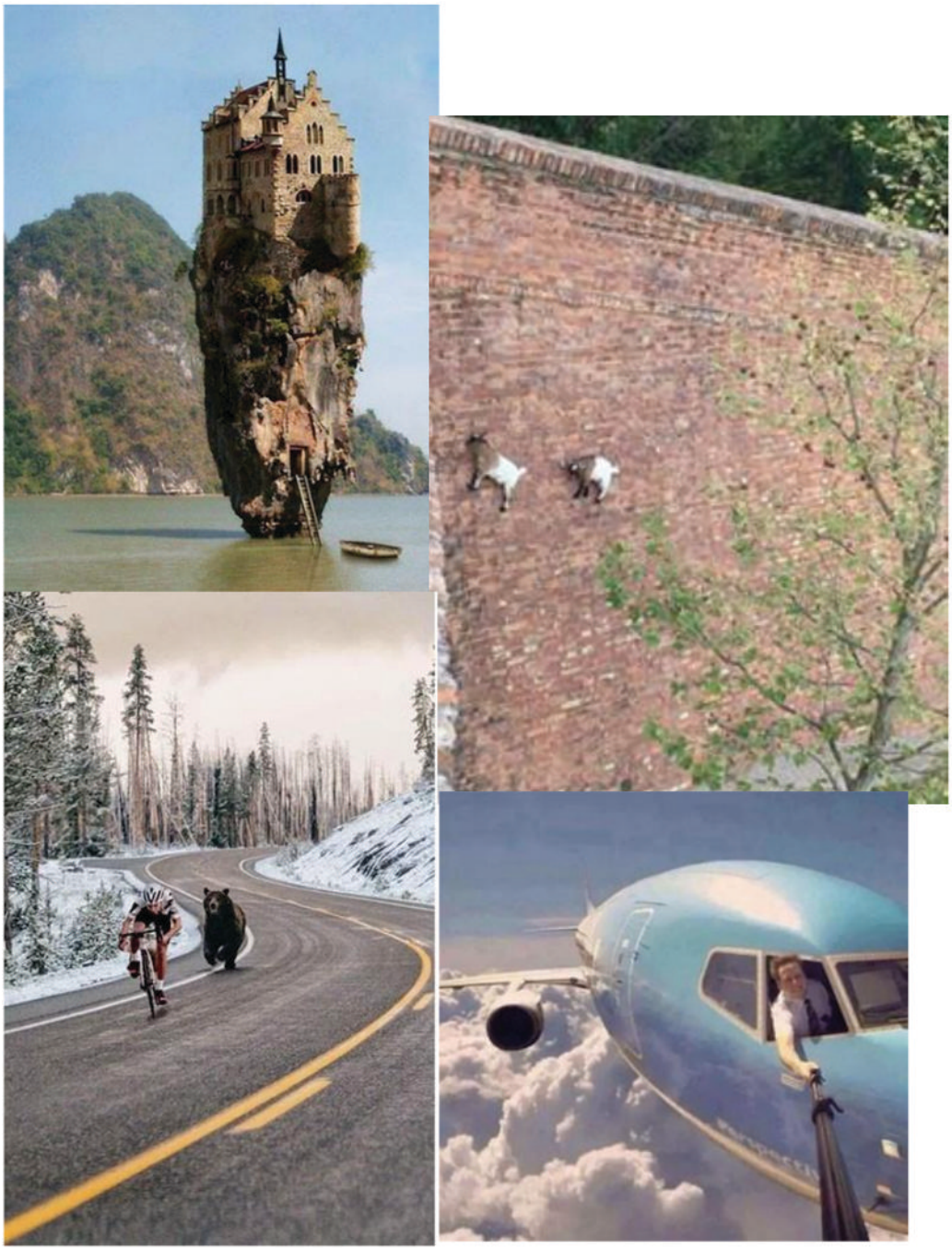
Discuss the difference between wide and narrow topics; and suggest that it is much easier to research and present on a narrow topic. Give an example, such as, “Wouldn’t it be easier to give a good presentation on George Washington’s contribution to the Constitution rather than present on the entire history of colonial America?” Allow students a few minutes to narrow their topic. Ask for students to share their topics with the class. Praise those who seem to have topics that are narrow enough to allow some depth in their presentation. For those who still have wide topics, ask other students to suggest how that subject can be narrowed. Have students turn in their written topics at the end of the class period or the beginning of the second day/week of Discovery Challenge.

Hand out and review the parent brochure/mini rubric with the class. Pay special attention to the requirements for the presentation and encourage students to take the brochure home. As an alternative, have the instructor/school post the brochure on their web page.

Day #2: "Good Research"

Which Of These Photos Is Real?

A. Castle On The Rock
B. Goats Climbing A Brick Wall
C. Bear Chasing Cyclist
D. The Dumbest Co-Pilot Ever



If students have not signed up for their subject yet, begin circulating the "Presentation Subject" worksheet. Have each student write their name and final project topic. **Remind them, this subject will not be changed.**

Show, "Which of These Photos Is Real." Let the students give reasons why each photo might be a fake and have them vote by raising their hands as to which photo is real. The answer: "B" is real, those are really goats climbing a nearly vertical brick wall. All of the other photos are a combination of at least two photos.

Good Sources:

Discuss, "So, where did these photos come from? They were all on social media like Facebook, X, and TikTok. Think about it, they were all posted as being real, and some of them may have fooled you. That means, it is easy to be fooled by photographs, videos, and written sources. Thus, we need to be very careful about what sources we use in our presentations."

Hand Out:*"Is This a Good Source?"* think sheet to students and help them by summarizing high-points. It will be helpful to be familiar with this sheet prior to class.

Plagiarism: (Can 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 totally succeed, 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)

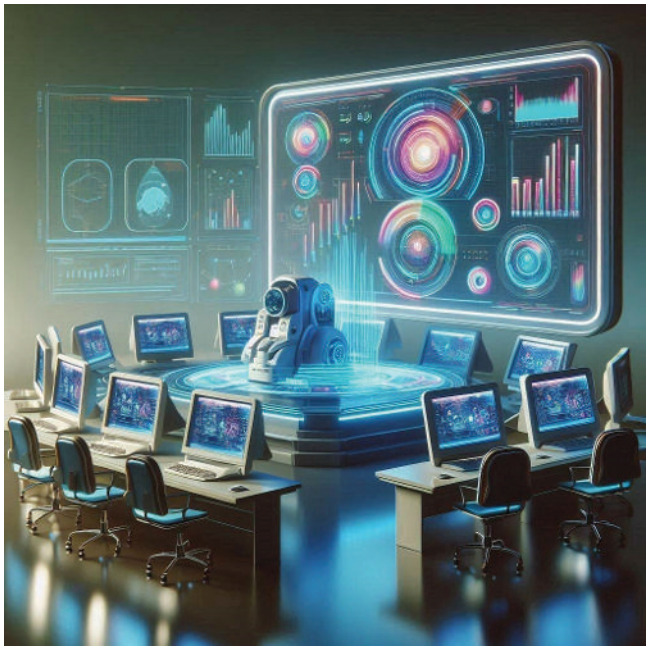
So, how do we avoid plagiarism? Easy, you make sure to use good sources, translate what they are saying into your own words, and give credit to your sources. Very short quotes directly from a source or person can be used as long as that material is in quotation marks (or indented if over 5 lines long), and you give credit to whoever is 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. So, what are our alternatives? (Ask the class) Focus on using summary statements on notes and only using quotes when paraphrasing the work would not be adequate. Students also need to have basic citation materials written into their notes (source title, page numbers, etc.) These citations should eventually appear in alphabetical order on a "Works Cited" slide at the end of their presentations. Citations can also be worked into each slide, instead of using a "Works Cited."

AI Research: (Can Skip AI, If Time Is Short)

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



Here is why...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. 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. When you first search for something on Google, you will see a little summary paragraph on your topic, don't use it...it is 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, you should not feel a sense of accomplishment?

Research:

Provide the sheet of "Helpful Research Sites" and have students look up "cats" on Kiddle. Make sure they are comfortable using the search engine **and actually opening sources**. Remind them, "Kiddle is a search engine...not a source. You need to write down the name and address of the actual site you use. Don't just write "Kiddle" on your works cited page." Then, allow them to start their research; saving facts and sources on a Google Doc, or similar, app. Hand-written notes are always acceptable.

DAY #3: RESEARCH ORGANIZATION/ INTRODUCTIONS

Before Class

Print copies of "Presentation Structure Table" before class.

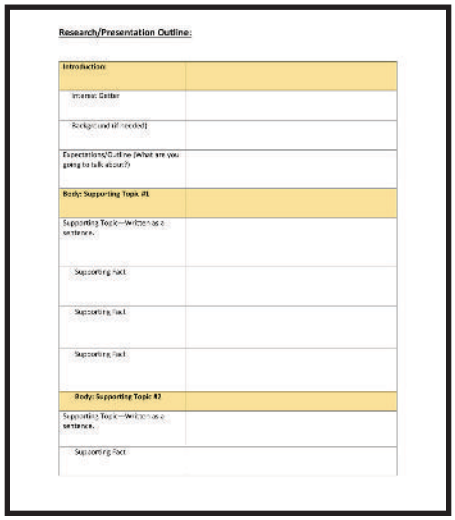
Have Your Handouts Ready

Discuss the handout (may post on school site instead of 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.

Push the point that we can take random research points and, using the five-part structure, put things in an order that makes sense.

Project, or handout, "Introductions That Get Attention." Have the students tell you what about these introductions makes them interesting. Explain, if you want someone to pay attention to your presentation, you need to capture their interest from the first line of their introduction.

Have students retrieve whatever research they have completed. This is a good time to remind students about the need for sources to be listed with all research. Make a point of telling them that Google and Kiddle are NOT sources--they are search engines. Students need to list any individual sites or books that they used for research.


Research/Presentation Outline:

Introduction:

Interest Getter

Background (if needed)

Expectations/Outline (what are you going to talk about?)

Body: Supporting Topic #1

Supporting Topic—written as a sentence.

Supporting fact

Supporting fact

Supporting fact

Body: Supporting Topic #2

Supporting Topic—written as a sentence.

Supporting fact

Handout "Presentation Structure Table." Have the students review their research and write a draft of the first sentence of their introduction in the box next to "Interest Getter." Allow students to share their first sentence with the class and see if the class thinks that the introduction is an attention grabber.

Have students continue by writing their topic for each body section in the top bar of each of the three body sections. Students should use "bullet points" to arrange individual research points under each body topic. Walk the classroom, observe, and give input on students' presentation structure.

Last, let the students know that they will likely have those same "bullet points" on their slides instead of complete sentences. They are allowed to write complete sentences on this organizational handout, however, those sentences should not appear on the slides.. If time is short, the instructor can follow-up with this table on another day. Let students know that this table must be completed by the next time you return to the class.

Day #4, Visual Aids

Show students the PowerPoint (or you can alternately use the pdf version...however, animations will not work on the pdf) "Bad Slides." Walk them through the bad attributes shown on the slides. Discuss fonts and font size. Nobody wants to see a PowerPoint with 11 point fonts. Ask them if they can think of anything else that would look bad on a slide.

Hand out the "Draft Visual Aids" handout (it should have two pages). Tell students, "Think about that catchy introduction you have been working on. Can you design a slide/poster that would allow you to use that introduction and catch your audience's attention? Could the slide/poster just be a question? Yes. But, it could be even more interesting if you used interesting photos, graphics, fonts, or even the right animation. Think about your introduction slide (your name and subject...at least) and draw it in the first rectangle on your handout." After they have designed the introductory slide, have them look at their presentation structure table and decide on at least one visual for each presentation part. Ask them to map out (draft) the rest of their slides on the handout, at least 5 total are required. They can use more slides/posters, up to 10 or more, as needed for their final presentation. If time allows, ask students to share one visual they may be using for a slide/poster.

To wrap up, review the competition rubric with the class, paying special attention to the requirements for the presentation. This can be posted online for students to review. 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. Don't **read** your speech from your slides or notes!"

"*Hearing something a hundred times isn't better than seeing it once*"

Chinese Proverb

Day #5+, Judging

Presentation Day(s), Grade 4 and 5

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 ask questions of the presenter. If you don't see citations during the presentation, you are welcome to ask the presenter for them after the end of their presentation. 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. (See: "District Judging Helpful Thoughts" for more detail.)

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 rescore 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, remind them to speak up when presenting. 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? The instructor is welcome to the scores; however, we ask the judge not to give them directly to students. 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'," we will be unable to decide who should be invited to other events. That being said, if you could "go either way" between two scores, err on the side of the presenter.
5. How should I dress for presentations? We ask students dress appropriately for their presentations. 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 if they don't look "crisp." Of course, students wearing inappropriate clothing (such as references to illegal acts, drugs, or alcohol) should loose all points under "Appearance."

THANK YOU FOR BEING PART OF 4-H!

Day #5+, Judging

Indiana 4-H Discovery Challenge Scorecard
Grades 4 & 5

Judges Name: _____

Name of Presenter	1.	2.	3.
Topic			
Logical Flow (15 pts.) Presentation flows well and is easy to follow. 13-15 = Excellent 8-12 = Good 7 = Needs Improvement			
Research (20 pts.) Presentation is research-based, accurate and supports the topic. 17-20 = Excellent 11-16 = Good 10 = Needs Improvement			
Subject Coverage (20 pts.) Subject is well covered and audience knowledge is increased. 17-20 = Excellent 11-16 = Good 10 = Needs Improvement			
Presentation Delivery (15 pts.) Notes used appropriately, enthusiasm shown, voice clear. 13-15 = Excellent 8-12 = Good 7 = Needs Improvement			
Visual Aids (15 pts.) Easy to see, support research, cited. 13-15 = Excellent 8-12 = Good 7 = Needs Improvement			
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. 7 = 1 to 1:59 min. or 8:01 to 9 min. 6 = Over 9 Minutes 5 = Under 1 Minute			
Appearance (5 pts.) Clean and appropriately dressed for presentation. 5 = Excellent 4 = Good 3 = Needs Improvement			
Total Score			

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

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.

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LET'S STAY TOGETHER.

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

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