

2021 Sample Question Pool for Judging Science Fair Projects

First of all – these are kids (even the high school kids). When you find the limit of their understanding, do not push further. This is to be a **positive exchange**. We hope that students will walk away from this having had a great time talking about their project. We want to encourage them in STEM research!

Introductory questions:

Where did you get the idea for your project?

Why are you interested in this?

Why is this project important to you?

If this is a multi-year study or continuation: What did you do differently this year versus last year?

Why is this project important? (the student may not have cured cancer, or solved a food or water shortage, but if it is step toward that direction, do they recognize the big picture?)

To Judge the Research Question or Problem **and** the Design and Methodology:

What is the purpose/objective of your study? What background research did you do?

What are some previous studies of others? What have others done before? What is/are your controls? Independent and dependent variables?

Which parts of the work did you do yourself? Which parts did you get help doing? What assistance did you receive from others? Who helped and how?

Explain your procedure. (What did you do? Why did you do that? How does that work?)

Why did you choose to measure that? How did you come up with that scale (for students that invent their own measurement or color key)

What instruments did you use for measurements? What are possible sources of error?

Are there other approaches you might have taken to your research?

What was the hardest part of your research?

To Judge Execution – Data Collection, Analysis, and Interpretation

What did you measure?

If no data: are you proposing new methodology? Explain your thinking.

If they are using public data, what is new or different about your analysis?

How did you calculate that?

How did you make your graphs or charts?

Why did you choose the statistical analysis you did? What does it mean? (Older students should have an understanding of the use and limits of the statistics used in their project. High school kids should not use t-score for everything... including if they have only 3 sample points!)

How many times did you repeat your tests?

On what did you base your conclusions? Do your conclusions follow from your results?

Are there any other approaches you might have taken to your research?

How much time did your study take?

What instruments did you use for your measurements?

Do your results indicate further study is needed?

Who helped with your project?

Do you think you could continue this project on your own?

What would you do differently if you repeated your work now?

What is the next step? What will do you next? (Or what WOULD you do if you had more time?)

What would you do next? What's the next step?
Of what value is your project to society? (Practical Application)
What are possible sources of error or bias?
What are limitations of your research?

To Judge Creativity:

Why is this project important to you?
Where did you get the idea for your project?
What did you enjoy most about your project?
Of what value is your project to society? (practical application)
What problems arose during your investigation? How did you overcome them? Did you modify any of the procedures you found in literature? Why or why not? Explain why you made any modifications – what they were and why you tried that. Do your results indicate further study is needed?
What did you come up with that was new, unique, or creative in this project?
What would you do differently if you did your study again?

To Judge the Poster Presentation:

Check to see if the material is organized, with clear graphics and legends
Check to see if supporting documentation is available
Look at the board: Is the spelling, neatness, and grammar correct?

To Judge the Interview Presentation:

Ask questions about the basic science related to the project. (If a student has no concept of what lift is, perhaps they haven't done their homework before designing and testing airplane wings.)
Why is this study important or relevant?
What did each member of a team project contribute to the team effort?
What would you do next if you had more time or wanted to continue?