

2027 SPARK Application

Tell us about a scientific observation, question, or problem that you have found yourself thinking about when you did not have to. What made it interesting to you, and what did you do or what would have do to learn more about it?

Maximum 150 words

Tell us about something you were trying to learn, build, investigate, or solve that did not work the way you expected. What did you try next, and what did you learn from the experience?

Maximum 150 words

Describe a time when someone gave you feedback that changed how you approached a problem or task. What was the feedback, what did you do with it, and what happened afterward?

Maximum 150 words

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Significant activities or responsibilities from grades 9-12

Experience or Responsibility 1 of 4

Activity or responsibility

Category

Grade(s) - select all that apply

Select category

9

10

11

12

If you chose Other, please write it in:

Approximate hours per week

Approximate weeks per year

Your role (maximum 50 words)

Experience or Responsibility 2 of 4

Activity or responsibility

Category

Grade(s) - select all that apply

Select category

9

10

11

12

If you chose Other, please write it in:

Approximate hours per week

Approximate weeks per year

Your role (maximum 50 words)

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Significant activities or responsibilities from grades 9-12

Experience or Responsibility 3 of 4

Activity or responsibility

Category

Grade(s) - select all that apply

Select category

9

10

11

12

If you chose Other, please write it in:

Approximate hours per week

Approximate weeks per year

Your role (maximum 50 words)

Experience or Responsibility 4 of 4

Activity or responsibility

Category

Grade(s) - select all that apply

Select category

9

10

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12

If you chose Other, please write it in:

Approximate hours per week

Approximate weeks per year

Your role (maximum 50 words)

Experiences and Opportunities

Experience reflection - *maximum 125 words*

Which experience or responsibility listed above has taught you the most about how you approach learning, problem solving, responsibility, or working with others? What did it teach you?

Opportunity and context - *maximum 175 words*

What opportunities to explore science or research have been available to you so far, and what opportunities have you wanted but have not had access to? What would participation in SPARK allow you to experience or learn that you cannot readily access now?

Scientific Reasoning Exercise

Select one Mayo Clinic scientist below and review their research. Using what you learn, propose a scientific question and experiment. The listed scientists are examples only, are not confirmed mentors, and selecting one does not mean you are applying to that laboratory. IMPORTANT: Students must not contact the listed scientists or their laboratories.

[Abba C. Zubair, M.D., Ph.D.](#)

[Cui Tao, Ph.D.](#)

[Eduardo N. Chini, M.D., Ph.D.](#)

[Debabrata Mukhopadhyay, Ph.D.](#)

[Keith L. Knutson, Ph.D.](#)

[Pam J. McLean, Ph.D.](#)

Select a scientist

Question - *approximately 40 words*

What scientific question would you like to answer?

Hypothesis - *approximately 40 words*

What do you predict, and why?

Scientific Reasoning Exercise - continued

Experiment - *approximately 100 words*

Describe an experiment that could test your hypothesis. What would you compare or measure? If appropriate, what control or comparison group would you use?

Expected results and interpretation - *approximately 70 words*

What result would support your hypothesis? What result would make you question or reject it?

Significance and next question - *approximately 50 words*

Why would the result matter? What question might you investigate next?