



## Engineering Design Challenge Activity Educator Feedback Form (Retrospective Survey)

**Instructions:** As a current instructor of the NASA Education Engineering Design Challenge (EDC) Activity, you've been selected to take part in this questionnaire to test a future survey for clarity and comprehensibility. The questions below ask about your experiences with the NASA EDC you instructed in the Fall of 2016. Your answers to these questions will help us learn more about the activity, including what worked well and what we may improve on. Please complete the questions on this survey to the best of your ability. This survey is voluntary. You do not have to take the survey or answer any questions you do not want to. Also, your responses are confidential, meaning that your name will never be tied to your responses and no one will know how you responded to these questions.

We also want to validate the estimate for how long it takes to complete this survey. **Therefore, we ask that you please note the time that you start this survey because we will ask at the end how long it took to complete this survey.**

**Thank you very much for your help!**

**If you wish to participate in this survey, please continue.**

**Privacy Notice:** This is an official NASA application hosted on SurveyMonkey.com. This is not a government application, the application is controlled and operated by a third party. NASA's Web Privacy Policy does not apply to this application. NASA will not maintain, use, or share Personally Identifiable Information (PII) that becomes available through the use of this third party application unless expressly stated and consent is obtained from the user. For additional information on NASA's Third-Party Privacy Notice please go to [http://www.nasa.gov/about/highlights/HP\\_Privacy.html](http://www.nasa.gov/about/highlights/HP_Privacy.html).

**Paperwork Reduction Act Statement:** This information collection meets the requirements of 44 U.S.C. §3507, as amended by section 2 of the Paperwork Reduction Act of 1995. You do not need to answer these questions unless we display a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 2700-0159 and expires 04/20/2018. We estimate that it will take 20 minutes to read the instructions and answer the questions. Send only comments relating to this time estimate to: [richard.l.gilmore@nasa.gov](mailto:richard.l.gilmore@nasa.gov).

*First, we'd like to ask some questions about the NASA Engineering Design Challenge (EDC) implementation.*

1. What is the name of the site where the NASA EDC was implemented?

2. Has your site previously implemented an inquiry-based STEM program or activity? (Select One)

- Yes
- No
- I Don't Know

3. Have you instructed any previous NASA EDC before? (Select all that apply)

- Parachuting onto Mars
- Why Pressure Suits?
- Packing up for the Moon
- Crew Exploration Vehicle (CEV) Design
- BEST sUAS Engineering Design Challenge
- No, I have not instructed any of the NASA EDCs listed above before

4. Did you instruct the current NASA EDC? (Select all that apply)

- Parachuting onto Mars
- Why Pressure Suits?
- Packing up for the Moon
- Crew Exploration Vehicle (CEV) Design
- BEST sUAS Engineering Design Challenge
- No, I didn't instruct any of the NASA EDCs listed above (**Skip to #9**)

5. How was the NASA EDC selected? (Select One)

- Chosen by students
- Assigned to students

6. How many students worked on the NASA EDC?

_____
<b># of students at the start</b>

_____
<b># of students at the end</b>

7. How much time did it take for your students to complete the NASA EDC, including instructional time, sessions with NASA scientists or engineers, planning, building, and video presentation?

\_\_\_\_\_

# of sessions

\_\_\_\_\_

# of minutes  
per session  
(on average)

8. Approximately how much time did it take you to prepare for the NASA EDC, including trainings, interactions with NASA scientists or engineers, and personal preparation?

\_\_\_\_\_

# of days

Next, we'd like for you to rate your comfort and knowledge level for teaching STEM topics.

9. How comfortable are you in teaching the following STEM content areas?		Very Uncomfortable	Slightly Uncomfortable	Slightly Comfortable	Very Comfortable
a. Science					
	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Technology					
	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Engineering					
	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Mathematics					
	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. How knowledgeable are you in the following STEM topics?		Not at all Knowledgeable	Slightly Knowledgeable	Somewhat Knowledgeable	Very Knowledgeable
a. Science	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Technology	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Engineering	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Mathematics	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Next, we'd like to ask about your beliefs in your STEM teaching efficacy.*

11. Please indicate the degree to which you agree with each statement below.		Strongly Disagree	Disagree	Agree	Strongly Agree
a. I am continually finding better ways to teach science/engineering.	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Even when I try very hard, I do not teach science/engineering as well as I do other subjects.	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I know the steps necessary to teach science/engineering concepts effectively.	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. I am not very effective in monitoring science/engineering experiments.	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. I generally teach science/engineering ineffectively.	<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<i>After the EDC:</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Please indicate the degree to which you agree with each statement below.	Strongly Disagree	Disagree	Agree	Strongly Agree
f. I understand science/engineering concepts well enough to be effective in teaching science or engineering.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. I find it difficult to explain to students why science/engineering experiments work.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. I am typically able to answer students' science/engineering questions.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. I wonder if I have the necessary skills to teach science/engineering.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Given a choice, I would not invite the principal to evaluate my science/engineering teaching.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. When a student has difficulty understanding a science/engineering concept, I am usually at a loss to how to help the student understand it better.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. When teaching science/engineering, I usually welcome student questions.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. I do not know what to do to turn students on to science/engineering.				
<b>Before the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>After the EDC:</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Next, we'd like to ask you about your experiences with the NASA EDC face-to-face professional development training.**

**12. Did you attend a face-to-face professional development training? (Select One)**

- \_\_\_ Yes  
 \_\_\_ No (skip to # 14)

13. Please rate the extent to which you agree with the following statements regarding the face-to-face professional development training you received on the NASA EDC.	Strongly Disagree	Disagree	Agree	Strongly Agree
a. The training materials (i.e., facilitation guide) met my needs to successfully implement the NASA EDC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. The DoS Program Planning Tool and Training Handbook met my needs to successfully implement the NASA EDC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. The Y4Y website and associated resources met my needs to successfully implement the NASA EDC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Overall, the training met my needs to successfully implement the NASA EDC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Next, we'd like to ask you about your experiences with the NASA EDC professional development webinars.**

**14. Did you attend an available professional development webinar? (Select One)**

- Yes
- No (skip to # 18)

**15. What professional development webinar did you attend? (Select all that apply)**

- Making the Most of the NASA Engineer and Scientist Connections to Students
- Review of the Engineering Design Process
- NASA science topics relating to the EDC activity
- Evaluation Webinar
- DoS Program Planning Tool Webinar

**16. Did you have any technical problems attending the professional development webinar?**

- Yes
- No

**17. Please rate the extent to which you agree with the following statement:**

The webinar(s) met my needs to successfully implement the NASA EDC.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

Now, we'd like you to rate the quality of the NASA EDC technical assistance.

**18. How many times did you request technical assistance via phone or e-mail after the training?**

- Never (skip to #20)
- Once
- 2-5 times
- 6-9 times
- 10 or more times

**19. Did you find the technical assistance helpful to your implementation of the NASA EDC?**

- Yes, somewhat helpful
- Yes, a great deal helpful
- No, not helpful at all

**20. Did you have any technical issues communicating with the NASA scientist or engineer (sometimes called subject matter experts or SMEs)?**

- N/A I did not try to communicate with SME (If N/A, skip to #22)
- Yes
- No

**21. How many times did you communicate with the NASA scientist or engineer (sometimes called subject matter experts or SMEs) during the NASA EDC?**

- Once
- 2 times
- 3 times
- more than 3 times

Additionally, please let us know what was successful about your implementation of the NASA EDC, what challenges you faced, and what you would change about the training and the activity to make it more successful in the future.

**22. Please describe what was successful about your implementation of the NASA EDC.**

**23. Please describe any challenges you had implementing the NASA EDC.**

24. What suggestions do you have for successfully implementing the NASA EDC in the future (e.g., changes in training, content, structure, etc.)?

*Finally, we'd like to ask some questions about you.*

25. Are you ... (Select only one)?

- Female
- Male

26. Are you Hispanic or Latino/Latina?

- Yes
- No

27. What is your Race (One or more categories may be selected)?

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White or Caucasian

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**---End of Test Survey---**

**Please provide feedback on your experience with this survey by answering the following questions.**

1. How many minutes did it take you to read the instructions and answer the questions?

\_\_\_minutes

2. Please indicate the level to which you agree or disagree with each statement.	Strongly Disagree	Disagree	Agree	Strongly Agree
a. The survey instructions were clear.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. The questions were easy to understand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**3. Do you have any additional comments or feedback on the instructions, questions, or survey navigation?**

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***Thank you for participating in this survey!***