Supplemental Table 1. Assessment for students in grades four and five.

Topic knowledge – correct answers are in bold.

1. Which of these statements about vital signs is true?
    A. Vital signs tell us if our body is working properly.
    B. Vital signs tell us when it is safe to cross the street.
    C. Vital signs can help determine why someone is not feeling well.
    D. Vital signs tell us if our body is working properly and vital signs can help determine why someone is not feeling well.
    E. I don't know.
2. What is the main function of the heart?
    A. It breaks down nutrients in our food.
    B. It pumps blood throughout your body.
    C. It protects you from infections.
    D. It allows you to hear sounds.
    E. I don't know.
3. True or False - Blood carries oxygen and nutrients to cells so they can function properly.
    A. True
    B. False
    C. I don't know
4. True or False - Blood carries waste products to organs that get rid of them.
    A. True
    B. False
    C. I don't know
5. Which of the following is true about the process of breathing?
    A. You breathe in carbon dioxide and breathe out oxygen.
    B. You breathe in oxygen and breathe out carbon dioxide.
    C. You breathe in oxygen and breathe out carbon monoxide.
    D. I don't know.
6. Which vital sign monitors how well the heart is working?
    A. Temperature
    B. Blood pressure
    C. Weight
    D. Respiratory rate
    E. Height
    F. I don't know
7. Which vital sign monitors how well the lungs are working?
    A. Temperature
    B. Blood pressure
    C. Weight
    D. Respiratory rate
    E. Height
    F. I don't know

8. Which system is the brain part of?
    A. The solar system
    B. The digestive system
    C. The nervous system
    D. The respiratory system
    E. I don't know

9. What does the brain control?
    A. Movement
    B. Our senses
    C. Problem solving
    D. All of the above
    E. I don't know

10. Which of these is not part of the nervous system?
    A. Brain
    B. Spinal cord
    C. Stomach
    D. Nerves
    E. I don't know

11. True or False - The brain is made up of nerve cells called neurons.
    A. True
    B. False
    C. I don't know

12. When muscles contract (or squeeze) what do they produce?
    A. Sugar
    B. Electricity
    C. Oxygen
    D. Water
    E. I don't know

STEM careers and tasks – correct answers are in bold.

13. Select all of the jobs where a person would use a lot of science, technology, engineering, and math.
    A. Computer programmer
    B. Police officer
    C. Doctor
    D. Musician
    E. Bus driver
    F. Professional athlete
    G. Engineer
    H. Dentist

14. Select all of the activities that people do in their jobs that use a lot of science, technology, engineering, and math.
    A. Seeing patients in a hospital and making sure they are healthy
    B. Playing musical instruments in a band

C. Writing a computer program
D. Protecting people and making sure no one is breaking the law

15. Select all of the activities that people do in their jobs that use a lot of science, technology, engineering, and math.
    A. Driving kids to school in a bus everyday
    B. Inventing, designing, and building things
    C. Playing sports
    D. Conducting an experiment that uses chemicals

Interest and engagement statements Likert scale rating (1 = disagree; 2 = not sure; 3 = agree).

16. It is important for people to learn about science, technology, engineering, and math.
17. Science, technology, engineering, and math help to improve peoples' lives.
18. I enjoy learning about science, technology, engineering, and math.
19. I talk about science, technology, engineering, and math with my family.
20. I talk about science, technology, engineering, and math with my friends.
21. When I grow up, I would like to do a job that involves a lot of science, technology, engineering, and math.

Supplemental Table 2. Assessment for students in grades six.

Topic knowledge– correct answers are bold.

1. Which of the following statements are true? Select all correct answers.
   - **A. Vital signs tell us if our body is working properly.**
   - **B. A blood pressure cuff is used to monitor how well the heart is working.**
   - **C. Blood carries waste products to organs that get rid of them.**
   - D. You breathe in carbon dioxide and breathe out oxygen.
   - **E. Respiratory rate monitors how well the lungs are working.**
2. Choose the word from the list below that best completes each of the following statements:
   - A. _____ is a type of cell that makes up the organs of the nervous system. (**neuron**)
   - B. _____ is a bundle of nerves that runs down the middle of your back. (**spinal cord**)
   - C. _____ allows you to control how you respond to sights and smells. (**brain**)
   - D. _____ is produced when your muscles contract or squeeze. (**electricity**)

   Answer choices

brain	electricity	heart	oxygen
nerve	neuron	spinal cord	spine

Interest and engagement statements Likert scale rating (1 = strongly disagree; 2 = disagree; 3 = undecided; 4 = agree; 5 = strongly agree).

3. I enjoy participating in after-school or summer activities involving science, technology, engineering, and math.
4. I like learning about science.
5. I would like to have a job related to science, technology, engineering, and math.
6. I plan to graduate high school.
7. I plan to go to college to learn more about science, technology, engineering, and math.
8. My family supports my interests.
9. I am motivated to do well in school.
10. Science, technology, engineering, and math help to improve peoples' lives.
11. It is important for people to learn about science, technology, engineering, and math.
12. Science is hard for me.

Supplemental Table 3. Family survey questions.

1. Did you participate in the family science night and/or field trip to Seattle Children's Research Institute with your child?
2. If you were not able to attend the family science night and/or field trip please describe any barriers that prevented you from attending.
3. Did you discuss with your child their experience at the family science night and/or field trip?
4. Do you feel the family science night and/or field trip was valuable for your child and/or you?
5. Please rate how beneficial you felt the family science night activities were for you and your child. (very, somewhat, not at all)
    a. Quiz show with clickers
    b. Vital Signs onboard the Science Adventure Lab
    c. Patient simulator demonstration
6. Please rate how beneficial you felt each of the following field trip activities were for you and your child. (very, somewhat, not at all)
    a. Question and answer session with scientists
    b. "Make a rainbow" in the laboratory
    c. Lungs and Asthma
    d. Educational Computer Games
    e. Anatomy of the Brain
7. If you were able to participate in any of the family events, how do you now feel about talking to your child about science and/or science, technology, engineering, and/or math (STEM)? (more confident, about the same, or less confident)
8. From your perspective, what would you identify as the best outcome or benefits to your child from participating in the family science night and/or the field trip? Please share any specific examples of how these events have impacted your child.
9. What science connection(s) to health is your child making now that they did not make before the family science night and/or field trip?
10. Do you have any suggestions about how the family science night and/or the field trip could be improved?
11. Please select the event (family science night, field trip, both events) that you feel had the greatest impact on your child and describe why you feel this event had the greatest impact on your child.

Supplemental Table 4. Teacher survey questions.

1. Do your students receive science education throughout the year other than what is provided through this project? Please provide details on the program(s) and activities.
2. Was this the first year you participated in the Science Adventure Lab SEPA project?

Modules on the Science Adventure Lab

3. How helpful were the animated videos in preparing your students for their experience onboard the Science Adventure Lab? (very, somewhat, not at all)
4. Was the level of the content taught onboard the Science Adventure Lab appropriate for your students?

Family science night

5. Please describe any barriers that prevented your school from hosting a family science night.
6. So that we can learn how to make the family science night accessible to everyone, please select the reason that best describes why you were not able to attend. (I had a conflict with the day/time, illness, or other: please describe)
7. Do you feel that family science night was valuable for your students, families and/or you? Explain if answered "No" or "I don't know".
8. We understand that not all families were able to attend the family science night at your school, what barriers do you feel prevented families from attending?
9. Please rate how beneficial you felt each of the following family science night activities were. (very, somewhat, not at all)
    a. Quiz show with clickers
    b. Vital Signs onboard the Science Adventure Lab
    c. Patient simulator demonstration
10. Did you and/or other staff provide incentives for students and families who attended the family science night? (e.g. food, childcare for younger siblings, reduced homework, etc.) Please describe.
11. Do you feel these incentives were effective in increasing the number of students and families who attended family science night?

Field trip to Seattle Children's Research Institute

12. Did you participate in the field trip to Seattle Children's Research Institute?
13. Do you feel this experience was valuable for your students, families, and/or you? Explain if answered "No" or "I don't know".
14. Please rate how beneficial you felt each of the following field trip activities were. (very, somewhat, not at all)
    a. Question and answer session with scientists
    b. "Make a Rainbow" in the laboratory
    c. Lungs and Asthma
    d. Educational Computer Games
    e. Anatomy of the Brain

Project overall

15. Please describe any challenges you had with planning for and conducting the pre and post assessments in your classroom, family science night, and/or the field trip.
16. After participating in the project, how do you feel about talking to your students about science and/or science, technology, engineering, and/or math (STEM) careers? (more confident, about the same, or less confident)
17. Please select the project component that you feel had the greatest impact on your students. (Having a second visit onboard the Science Adventure Lab, family science night at your school, field trip to Seattle Children's Research Institute, or all components impacted my students equally)
18. From your perspective, what would you identify as the best outcome or benefits to your students from participating in the project? Please share any specific examples of how the project has impacted your students.
19. What science connection(s) to health are your students making now that they did not make before participating in the project?
20. What suggestions do you have for improvements in the Science Adventure Lab visits, family science night, field trip?