

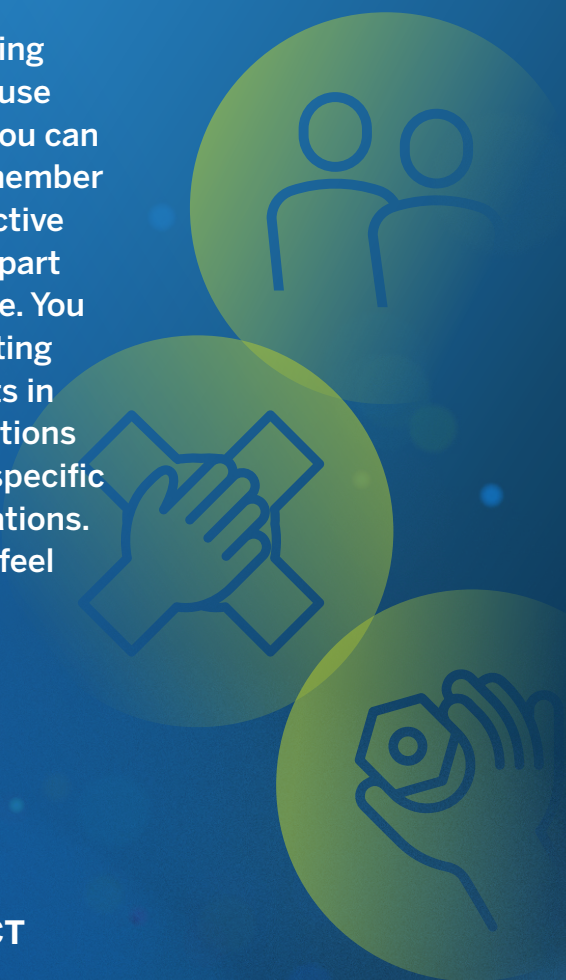
ASPIREIT TOOLKIT

IMPACT AND REFLECTION

Even though you are busy developing and running your program, it's important to take time to pause and pay attention to how things are going, so you can make improvements and measure impact. Remember that evaluation and reflection can be an interactive and enjoyable process that becomes a natural part of your program, rather than feeling like a chore. You can approach it in a more formal way by collecting data through surveys where you compile results in charts or graphs, or through informal conversations and techniques that might result in quotes or specific ideas that lead to immediate program modifications. These two methods can be combined, too! So, feel free to experiment depending on your needs.

Click on a title below to jump to that section.

- // REFLECTIVE PRACTICE
- // DEBRIEFING ACTIVITIES
- // DEMONSTRATING LEARNING
- // USING SURVEYS TO MEASURE IMPACT



REFLECTIVE PRACTICE

We are all lifelong learners, which means that it is important for us to take time to reflect on each experience in order to learn from it and extend that learning to other situations in the future. This involves developing systems and habits for documenting and reflecting on how the program is going, as well as refining the program to make it stronger. Reflection can be a daily practice for individuals, but you should also periodically reflect as an entire implementation team, too.

The overarching framework introduced below is the same one you will use with your participants. It can be important to point out that you are all learning together. Just as you ask participants to think about and process what they learned, let them know that you will be doing the same as you work to build more self-awareness and continuously improve your program. Keep a notebook or journal for written reflections that you can refer back to in the future.



DEBRIEFING ACTIVITIES

We uncover new meaning and solidify our learning when we reflect on an experience we have. To ensure your participants are having a meaningful experience that will stick with them, you want to support them in reflecting on the activities, and in turn, the fun, growth, and sense of belonging they experience in the computer science space you help to create. Below are questions you can use to help participants make sense of what they are experiencing. You can ask these in a formal way at the end of each program or informally, one on one, throughout the experience.



DEMONSTRATING LEARNING



In addition to debriefing activities through questions you ask in the moment, participants can demonstrate what they know through a number of hands-on and engaging activities. We list some examples below:

- **EXIT TICKET:** Have participants write/communicate something they learned on a piece of paper that they must turn in before leaving.
- **WHIP AROUND:** Group up in a circle and toss around a soft object; have each participant share one thing they learned/loved when they get the object.
- **POST-IT NOTE SCALE:** Make a scale on the board or wall with statements like, “I feel more confident in...” or “I understand...” and have participants place their post-it notes demonstrating how true that statement is for them.
- **JEOPARDY:** Play a version of jeopardy (or another question/answer game) to emphasize key learning points.
- **FOUR CORNERS:** Label each corner of the room as A, B, C, D, or Strongly Agree, Agree, Disagree, Strongly Disagree. Ask a multiple choice question or make a statement and have each participant head to the corner that most represents their answer.



USING SURVEYS TO MEASURE IMPACT

Surveys are another great tool for collecting data and being able to compile it to show administrators, partners, funders, etc. the impact you have made or the change you have seen over time. The resources outlined below look at data across three areas to measure impact:



- **CONFIDENCE IN COMPUTING SKILLS** - Believing in yourself and your own capabilities is an important part of taking the next step towards a career in computing. Having confidence can help not only with persistence, but also when faced with biases or struggles throughout your career path.
- **SOCIAL SUPPORT FOR COMPUTING** - Research shows that in order to persist, young people benefit from a support network. How do peer mentors and the welcoming community of participants created through your program contribute to a social support system? Does your program include role models or mentors so participants can start to see a possible path towards a future career?
- **INTENT TO PERSIST IN COMPUTING** - Did participation in your program cause participants to seek out more computing electives in high school? Sign up for another computer camp or afterschool program? Major in a computing-related field in college? Continue on as a professional working in IT?

When creating a survey, you may want to collect demographic information as well. But, it's important to be clear about when and how to collect demographic data, as well as the terminology you use in order to be as inclusive as possible. To learn more, review our demographics guide.



- [Demographics Guide](#)

RETROSPECTIVE PRE/POST EVALUATION (FOR PARTICIPANTS IN GRADES 4-12)

A retrospective pre/post evaluation design provides you with valuable information about the impact of your program on different areas of interest. This design is recommended if you have a program that lasts for longer than two days so that you can reasonably see a change in learning. In this design, participants are asked to think back to their feelings/skills/beliefs before your program began and compare them to their current feelings/skills/beliefs on the last day of your program.

This survey contains a few questions geared at measuring the quality of your program, but focuses on items that measure the areas described above: Intent to Persist in Computing, Social Support for Computing, and Confidence in Computing Skills. This is the main reason for using a retrospective pre/post design for your evaluation. By using this design, you will be able to assess the impact your program had on these important areas over time. In addition, we provide a list of Optional Survey Questions that you can include if you want to learn more about different aspects of your participants' experiences.



- [Retrospective Pre/Post Survey - Grades 4-12](#)
- [Optional Survey Questions - Grades 4-12](#)

POST-ONLY EVALUATION (FOR PARTICIPANTS IN GRADES K-12)

A post-only evaluation design is most appropriate for a one- or two-day program, for programs serving K-3 participants, or if you are not interested in tracking change over time. The post-only survey contains questions geared toward measuring the quality of your program. For participants in grades 4-12, the survey also contains questions that measure the areas described above: Intent to Persist in Computing, Social Support for Computing, and Confidence in Computing Skills. In addition, we provide a list of Optional Survey Questions that you can include if you want to learn more about different aspects of your participants' experiences.



- [Post-only Survey Grades 4-12](#)
- [Post-only Survey Grades K-3](#)
- [Optional Survey Questions- Grades 4-12](#)