Professional Development Situation: Meeting
Skill Focus: Preparing STEM Learning Opportunities
Time Required: 30 minutes

Organizing Your Computer Science Activities

Participants will discuss challenges and develop strategies for organizing materials and managing computer science activities.

Agenda

Introduction and welcome —2 minutes
See the skill in action—10 minutes

- You're a Computational Thinker video-based learning module

Strategies for managing computer science activities – 10 minutes
Sharing personal strategies – 8 minutes

Materials

- For Facilitator:
  - Computer with internet connection and online meeting tool (i.e. Zoom)
- For Participants:
  - Computer with internet connection and online meeting tool (i.e. Zoom)
  - Paper (for taking notes while brainstorming)
  - Pen or pencil
- Managing Challenges handout

Before the Session

- **Read this meeting guide** to become familiar with the content and allow time to personalize the activities to your presentation style. Review the videos.
    - *Italics indicate text that can be read aloud or emailed to the participants.*
- Develop a list of possible questions or concerns participants might have during the meeting and how you would respond. Review any key terms or ideas that might be unclear.
- Practice with the online meeting tool. Be comfortable using the whiteboard and setting up breakout rooms where the participants can work in small groups.
- Send a reminder about the meeting. Determine if any participants require accommodations (sight, hearing, etc.).
    - *The next professional development opportunity to enhance our computer science skills will be on DATE at TIME. We will be using (online meeting tool, e.g., Zoom). This session will focus on how computational thinking is taught and strategies for managing computer science activities. During the meeting, you may want to have paper handy for taking notes. Please bring a copy of the attached document to the meeting. I am happy to answer any questions you have and am looking forward to the virtual meeting with you. I can be reached at CONTACT INFO.*
- Two or three days before the meeting, send another email with the worksheet on brainstorming strategies for managing computer science activities so participants can bring a copy to the meeting.

Session Outline

Introduction and Welcome (2 min)

- **Welcome participants** to the meeting.
- **Introduce the focus** of this session
    - *Today we are focusing on the skill of preparing for success in STEM when doing computer science activities. We will start with a video that demonstrates the skill. Then we will brainstorm and work together to discuss challenges and strategies for managing computer activities.*

See the Skill in Action (10 min)

- Que up the You're a Computational Thinker vide-based learning module.
- Watch the overview video in Step 1.
- Ask participants to pay attention to the following questions during the skill video:

  - *When preparing computer science learning opportunities what does Dagen think about or plan ahead of time?*
  - *How does Dagen help students form a STEM identity?*
  - *How do the questions Dagen asks help youth form a STEM identity?*
- Watch the skill video in Step 3.
- Ask participants to discuss the questions above.
- Watch the video again if needed.
- Ask participants to brainstorm ideas to the following questions and have participants type their ideas in the chat box for others to read.
  - *How would you help youth develop a STEM identity?*

    We are going to work together to brainstorm strategies for managing computer science activities. You can all enter text on the whiteboard. Don't worry for now if ideas overlap, we'll be able to save them all. Share strategies that you saw in the videos, or that you use in your own programs.
- Make sure you don't delete the whiteboard because you will need it again later.

Manage your Computer Science Activities (10 min)

- Participants should have their copy of the "Managing Challenges" handout in front of them.
  - *Now we are going to look at some challenging scenarios that can occur during computer science activities and work together to devise different ways to manage the challenges. Please spend the next two minutes reading the scenarios on your own. Then I'll put everyone in breakout rooms and assign which scenario your group will focus on.*
- As participants are reading the handout, divide them into groups of 3-4 people and assign each group a breakout room and a scenario. You may need to do this during the video if you have a large group.
  - *As you know, there is more than one way to manage the challenges of working with young people. With your group, you will brainstorm 2-4 different ways to manage your scenario. We will come back together in 8 minutes at _____ [time] to share one of your ideas and discuss all the scenarios. You can use your handout to write down your ideas.*
  - *In your small group, introduce yourself by sharing:*
    - *Your name*

        - *One technology you've used today (e.g., cell phone, electric toothbrush, microwave)*
        - *How you used the technology.*
    - *Are there any questions? (resolve questions) Great. We will come back together 8 minutes from now at _____ [time].*
- Send participants into their breakout rooms and give them time to work.
- Bring the participants back together. You may want them to signal you with a raised hand or thumbs up to let you know they are ready to continue.
- Have each group share one of their ideas in the chat box and have participants review the list and look for three things:
    - *Which idea is the best fit for how you like to lead activities?*
    - *Which idea is the most cutting edge or innovative?*
    - *Which idea would make the greatest improvement in quality of computer science activities you facilitate?*
- Emphasize that there is more than one right way to react to challenging situations. Planning, preparing and thinking ahead are key to managing challenges.

Sharing Personal Strategies (8 min)

- Open the whiteboard that was used previously to brainstorm strategies for managing computer science activities.
    - *Let's look at this list we brainstormed earlier. Do you think we've covered everything? Are there new ideas that emerged in your small groups? What additional strategies do we want to add to our list?*
- Depending on the size of the group, you can turn on microphones and take turns talking or participants can just type in the chat box. For smaller groups, invite individuals to participate: "{NAME], do you have any ideas?"
    - *Thank you for your active participation in this session. Remember, it is up to you to take what you learned today and actually use it to help the young people you work with. I will download our whiteboard and the ideas in the chat and pull together all the great ideas we discussed today and send them to you so you have all this information in one email.*

After the Session

- Before you end the webinar, save contents from the whiteboard and chat. Compile the strategies into a document to send to participants.

- Email the participants:
    - *Thank you for your participation in the recent Click2Science meeting "Managing Your Computer Science Activities". I hope you found it useful to your practice. Here are the strategies we came up with for managing computer science activities. Please let me know if you have any questions. You can reach me at CONTACT INFO.*

Want to Earn Credit? Click2Science has teamed up with Better Kid Care to provide continuing education units. Check it out at: http://www.click2sciencepd.org/web-lessons/about

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Managing Challenges

After youth have been working at the computer, how do you bring the group back together? -1 idea: If the youth aren't using headphones use a sound to get their attention	How do you ask youth questions that will enhance their learning? -1 idea: Don't tell students the answer, rather ask open-ended questions that they answer
What do you do if you don't have enough computers for an activity you want to do? -1 idea: put youth into groups of two and one person types and/or uses the mouse, the other student reads information and helps them figure out what to do	What do you do if a youth has a problem you don't know how to solve? -1 idea: Tell the youth to see if they can figure out the answer and tell you the next day
What if your computers are not working and the activity you planned for the day requires them? -1 idea: Have a backup activity that you prepped so you can do that one instead	What if you want to go to a website for an activity and your school or program's firewall is blocking the site? -1 idea: check the websites you want to use on the school computers ahead of time and talk to the tech person about unblocking that site