

**Professional Development Situation: Meeting****Skill Focus: Preparing STEM Learning Opportunities****Time Required: 20 minutes**

# PREPARE AND PLAN

Participants will prepare materials and contingency plans for common STEM activities in order to prepare high-quality STEM learning opportunities.

## Agenda

Planning a Learning Opportunity—30 minutes

- [STEM Planning Template](#)
- [Common Out-of-School STEM Activities](#)

## Materials

- Computer with internet connection
- Projector and speakers
- One copy of [STEM Planning Template](#) for each participant
- One copy of [Common Out-of-School STEM Activities](#) for each participant.

## Before the Session

- **Read this meeting guide** to become familiar with the content and allow time to personalize the activities to best suit your presentation style. Read informational materials.
  - *Italics indicate text that can be read aloud or emailed to participants.*
- Send reminder email about the meeting. Determine if any participants require accommodations (sight; hearing; etc.).
  - *The next professional development opportunity to enhance our STEM skills will be on DATE at TIME at LOCATION. Our focus for this session will be “Preparing STEM Learning Opportunities”. Let me know if you require any accommodations to participate in the training. I am happy to answer any questions you have and look forward to seeing you at the workshop. I can be reached at CONTACT INFO.*

- Gather all materials needed for the session.
- Develop a list of possible questions participants might have during the meeting. Create potential responses to be explored through informal conversation. Review any key terms or ideas that may be unclear.
- On the day of the session, test the audio and video equipment.

## Session Outline

### Planning a Learning Opportunity (20 min)

- Introduce the task for the day.
  - *Today we will be looking at popular STEM activities and thinking through the materials management elements of the activities. You might think about this as building a “Plan B” or “Plan C”.*
- Pass out the [STEM Planning Template](#) to participants. Read through it together with special emphasis on the before, during, and after activity sections. Then call attention to the learning objective.
  - *Now we are going to split into three groups with different types of activities.*
    - *Group A: You are facilitating an activity with laptops where youth need to use modeling software to manipulate DNA.*
    - *Group B: You are facilitating an activity outside in a meadow near your program.*
    - *Group C: You want the youth to build an apparatus for heating water over a fuel source (like fire or gas).*
  - *You will make the “**Plan A**” for preparing your lesson. Make sure the materials you need are appropriate, safe, and engaging. You have the option to use the STEM Planning Template if you want to, but it’s not required. When you’re done with Plan A, you will need to spend the majority of your time writing a Plan B for some scenarios I will pass out to you. We’ll share out in about 20 minutes.*
- Give participants 5 minutes to work before passing out the [Plan B Scenarios](#). They may use the [planning template](#) if they want to but it is optional.
- Give participants 15 minutes to work with the Plan B Scenarios. Give a 2-minute warning before the share-out.
- Ask participants to introduce their activity plan and share out what they would do to mitigate the challenges of their kind of activity. Encourage the rest of the group to also share what they might do.
- As a final reflection, ask the group to share what kinds of “aha” moments they had during this activity. You can go one-by-one or popcorn out a few.

## After the Session

- Email the participants:
  - *Thank you for your participation in the recent Click2Science training on “Preparing STEM Learning Opportunities”. I hope you found it useful and applicable to your practice. Consider sharing your thoughts with a co-worker, supervisor, or friend. 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>

## STEM Planning Template

Date:		# of Youth:	
Activity Name:		Age of Youth:	
<b>Learning Outcomes</b>			
<i>STEM Practices</i>		<i>STEM Concepts</i>	
After this activity, youth will know <u>how to</u> :		After this activity, youth will know <u>that</u> :	
<b>Lesson Design</b>			
Introduction (Hook)			
_____ minutes			
		Materials needed for this step:	
Activity			
_____ minutes			
		Materials:	
Reflection or Assessment			
_____ minutes			
		Materials:	

## Plan B Scenarios

### Group A: Technology

- None of the laptops are charged from the afterschool group that meets on Mondays. You only work on Tuesdays and Wednesdays. What can you do today and every week?
- The internet goes down.
- You find out the website you want to use is blocked by your firewall.

### Group B: Outdoors

- It rains.
- One of your youth has to use a knee scooter because they broke their foot. The scooter doesn't work on uneven terrain.

### Group C: Building a Fire

- You learn that open fires are not allowed at your site.
- None of the youth finish in time for testing.
- All of the youth finish an hour early.