

Interactive Learning Facilitation: STEAM Inquiry Clinics (description)

This 2-hour workshop aims to engage participants in interactive learning through the creation and facilitation of STEAM challenges. Participants will form small groups and develop challenges that require critical thinking, problem-solving, and collaboration. They will also act as challenge coaches, guiding their peers through the problem-solving process and fostering a supportive learning environment.



By the end of this workshop, participants will have gained practical experience in creating and facilitating STEAM challenges, enhancing their skills in interactive learning, critical thinking, and collaboration.

Description of Activity "STEAM Challenge Showdown":

Participants form small groups and create STEAM challenges for one another. Participants should be required to think critically, solve difficulties, and collaborate in order to complete the tasks. As challenge coaches, they guide their peers through the problem-solving process, encourage conversation, and establish a supportive learning atmosphere. It is also a highly creative task.

Agenda:

1. Introduction and Overview (15 minutes)

- Introduce the concept of interactive learning and its importance in STEAM education.
- Briefly explain the activity "STEAM Challenge Showdown" and its objectives.

2. Team Formation and Challenge Creation (30 minutes)

- Form small groups of 3-4 participants.
- Each group creates a STEAM challenge that requires critical thinking, problem-solving, and collaboration.
- Groups write down their challenges and the materials needed on a whiteboard.

3. Challenge Swap and Problem-Solving (30 minutes)

- Groups swap challenges with each other.
- Each group attempts to solve the challenge presented by another group, using the materials listed.
- One member from each group acts as the "Challenge Coach," guiding the team through the problem-solving process.

4. Group Discussion and Reflection (20 minutes)

- Groups come together to discuss the challenges, the problem-solving strategies employed, and the role of the Challenge Coach.
- Open the floor for participants to share their experiences and what they learned from the activity.

5. Presentation and Feedback (15 minutes)

- Each group presents their original challenge and discusses how the other group approached it.
- Peer and instructor feedback focusing on the creativity and complexity of the challenges, as well as the effectiveness of the Challenge Coach.

6. Conclusion and Takeaways (10 minutes)

- Summarize key learnings and the importance of interactive learning in STEAM education.
- Encourage participants to apply these techniques in their own learning or teaching environments.

Additional Notes:

- Facilitators should be prepared to step in as Challenge Coaches if needed.
- Ensure that all participants understand the importance of interactive learning and the role of the Challenge Coach.

Goals:

- Enhance Interactive Learning Skills: Equip participants with the skills to engage in interactive learning, particularly in the context of STEAM education.
- Foster Critical Thinking and Problem-Solving: Encourage participants to think critically and solve complex problems through hands-on STEAM challenges.
- Promote Collaboration: Facilitate teamwork and collaboration among participants as they work together to solve challenges and act as Challenge Coaches.
- Develop Facilitation Skills: Train participants to act as Challenge Coaches, guiding their peers through the problem-solving process and fostering a supportive learning environment.
- Encourage Creativity: Stimulate creative thinking by having participants design their own STEAM challenges.
- Apply Real-World Skills: Enable participants to apply the skills learned in real-world STEAM education settings, either as learners or educators.

Workshop Outputs:

- STEAM Challenges: Each group will create a unique STEAM challenge that requires critical thinking, problem-solving, and collaboration. These challenges can serve as a resource for future educational activities.

- Challenge Solutions: Documented approaches and solutions to the challenges presented, which can be used as case studies for problem-solving methods in STEAM education.
- Challenge Coach Experience: Participants will gain experience in the role of a Challenge Coach, which involves guiding a team through problem-solving and encouraging effective communication.
- Group Discussions and Reflections: A compilation of insights and learnings discussed during the group reflection session, which can be used for further study or improvement of the workshop.
- Peer and Instructor Feedback: Detailed feedback on the creativity and complexity of the challenges, as well as the effectiveness of the Challenge Coach, which can be used for personal development and improvement of future workshops.
- Digital Templates and Evaluation Criteria: Participants will have digital access to templates for creating STEAM challenges and criteria for evaluating challenges and Challenge Coach effectiveness.

By the end of the workshop, participants will leave with practical experience and resources that can be applied in various STEAM educational settings, enhancing their skills in interactive learning, critical thinking, problem-solving, and collaboration.

STEAM Category:

- All

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