2024 National Order of the Arrow Conference

Session: Hackathon 101: Unleashing Innovation

Lead Trainer Name: Mikael Mawdsley
Contact Email: Awesome.misha.m@gmail.com
Contact Phone: 669-309-7220
Session Length: 45 minutes

Session Description

This course equips youth and adults with essential skills for active participation in the thrilling 2024 NOAC Hackathon. Gain valuable insights into problem-solving strategies, technology integration, effective group dynamics, Hackathon rules, and related topics. This session is designed to empower every participant with the knowledge and tools necessary to thrive in the fast-paced, collaborative environment of the 2024 NOAC Hackathon

Learning Outcomes

Outcome 1: Understand how the OA Hackathon at NOAC 2024 will be conducted

Outcome 2: Explore Effective Group Dynamics

Outcome 3: Explore Problem Solving Strategies

Theme Connection: Seek New Heights

[The theme of the 2024 NOAC is Seek New Heights, emphasizing the drive for excellence that characterizes the OA and our daily lives. How will your session incorporate this theme?]

[Theme Connection Description]

Facility and Material Needs

[Please put all material and facility needs in this section. We recommend completing this portion last after the rest of the lesson plan is completed. **The more specific you are with your material and facility requests, the better we can accommodate!**]

Facility Needs

Is this session remote delegate-compatible? (ie. can the material be engagingly taught via live stream)	Yes - but as the session is intended for Hackathon participants, probably not of interest.
Does this session need audio/video (AV) capabilities? (ie. projector)	Yes - Projector and amplification if sessions are large
Are there any other specific facility needs for this session? (ie. movable chairs, panel-style seating, etc.)	No

Material Needs

[Please put "NOAC Training Committee" under "Source" if you need a material and cannot source it yourself - we will try to source it for you. Please note that we would strongly prefer training materials to be in a digital format and would advise against flipcharts and other physical materials. If you need microphones, extension cords, etc., please also specify those needs here.]

Material	Quantity	Source

Session Preparation Steps

[Please list all steps you or another trainer would need to take to be prepared to teach this session. For example, if the trainer needs to add personal experiences, print handouts, or prepare items for a game, those should be listed here. **The goal is for someone to be able to read this syllabus and understand how to teach your session in the future!**]

Step 1: [step 1]

Step 2: [step 2]

Step 3: [step 3]

Additional Staff Members

[If you are having additional trainers assist you with your session, please fill out their contact information below. Please note that due to the conference sell-out, we are limited in our ability to register additional staff members on the training committee. We recommend that your additional trainers come from contingents or other staff members that can break from their duties to facilitate the session.]

Trainer Name	**Email**	**Phone #**
Brandon Peterson	brandon.m.peterson@outlook.com	763-607-1081
Kevin Fischer		

Lesson Plan

[The main body of your presentation should be here. Remember to adjust the timing for each session as you add/edit topics. **Remember, be as specific as possible - the goal is for someone to be able to read this syllabus and understand how to facilitate your session in the future!**]

Helpful Templates:

Activity

Copy and paste this box wherever you have an activity in this session!

Materials Needed: [materials]
Length of Activity: # [min]
Activity Description: [description]

Trainer Action

If at any point the trainer needs to complete an action (play a video clip, prompt questions, etc.) copy paste this box and edit this text to specify what!

Introduction **2 minutes**
Slides [01]-[10]

- Introduce Training Team
- Introduce Learning Objectives
- Define "Hackathon"

Topic 1 Team Building **15 minutes**
Slides [###]-[###]

- Team Development
    - 4 Stages of Team Development
        - Forming
        - Storming
        - Norming
        - Performing
    - Coming together as a team quickly
        - **Introductions:** Spend some time getting to know your teammates. Make sure to talk about why you're interested in participating, and

highlight previous experiences or strengths.
- **Define Clear Goals:** Clearly outline the team's objectives, desired outcomes, and timelines.
- **Foster Trust and Collaboration:** Encourage open communication, active listening, and mutual respect among team members. Facilitate team-building activities to build rapport and trust quickly.
- **Delegate and Empower:** Assign tasks and responsibilities based on individual strengths and expertise. Empower team members to take ownership and make decisions within their assigned roles.
- **Set Milestones and Track Progress:** Establish clear milestones and track progress regularly. This will help you identify and address any challenges or roadblocks early on.

Topic 2 Goal Setting **10 minutes**

Slides [25]-[32]

- SMART Goals
  - Specific
    - Well defined, clear, and unambiguous
  - Measurable
    - Quantifiable
    - Ability to collect tracking information
    - How do we know we are done?
  - Achievable
    - Within our ability to complete, not impossible
    - Not impossible
    - Within reach, realistic
  - Relevant
    - Fits into the scope of the team's work
    - A relevant goal is one that aligns with your values and priorities, and that you're passionate about.
  - Timely
    - With a clearly defined timeline or deadline

Topic 3 Problem Solving Strategies **10 minutes**

Slides [##]-[##]

- **Brainstorming:** Gather your team and generate as many ideas as possible without

judgment.
    - Use a shared space to record ideas
      Everyone on the team should be able to see the workspace where ideas are recorded.
    - Have a plan for organizing ideas
    - Have a clearly defined topic for the brainstorming session
        - Set ground rules
        - Quantity over Quality
        - No Judgment
    - Everyone's ideas count
    - At the end of the session, define next steps
- **Mind Mapping:** Visually represent your ideas and their relationships to each other. Mind mapping is a way to diagram interrelated ideas. They have many uses. Mind maps create a structure for your ideas that is easy to navigate, visually pleasing, and contextually significant. They allow you to break down complex ideas into understandable branches of information.
    - Your central idea is the key idea, topic, or problem you are trying to solve.
    - Associations are the nodes that relate to the central topic, and other associations. Usually, these are brief, 1-2 words.
    - Branches are the connections between ideas. They are critical to organizing your map. Mind maps have many uses, including organizing the ideas generated in a brainstorming session.
- **Design Thinking:** Empathize with the user, define the problem, ideate solutions, prototype, and test.
    - Empathize: Understand users' needs and feelings by putting yourself in their shoes and observing them in their environment. You can consult experts and immerse yourself in the user's experience.
    - Define: Identify the needs and problems.
    - Ideate: Develop potential solutions.
    - Prototype: Create a tangible solution that can be tested. Prototypes can be simple sketches or more complex wireframes. They allow you to test ideas and changes, and verify the user experience.
    - Test: Test the solution
- **The 5 Whys:** Ask "why?" five times to drill down to the root cause of a problem.
    - Slide deck has an example chart to analyze.
    - The chart shows scouts bsa enrollment in a single council (it's from 2008, so it is likely out of date, but the author suspects it still holds; still, don't decide any actions based on this chart.
    - Ask Participants:
        - What trend is observable from this data? *Try to distill a consensus trend quickly.*
        - Why might this trend be happening? *Try to quickly bring the class to consensus on an answer to explore*

        - Why?
    - Example discussion:
        - Trend: There are fewer older youth in the Scouts BSA program.
        - Why 1: Scouts leave the program over time, and we don't enroll new scouts
        - Why 2: leave: Unit program is boring, peer pressure, interpersonal conflict
        - Why 3: Program is boring: Repetitive, Focused on younger scouts, no ownership by youth members
        - Why 4: Focused on younger scouts: There's more of them, scout skills are an easy program for the unit to engage on.
        - Why 5: Scout Skills: canned curriculum
    - Note that not every problem lends itself to 5 degrees of interrogation. You might find a root cause sooner or need additional 'whys'. But 5 is a fairly decent benchmark for examination. You might also notice that there might be several root causes.
- **Assumption Reversal:** Challenge your assumptions about the problem and explore alternative perspectives.
    - Define assumption: something we believe to be true; hopefully based on prior experience, often serves as shortcut to understanding, and can function as guide rails, or a ruts.
    - We are sometimes blinded by our own perspective.
    - Ask yourself "Why do I believe this is true"
    - Example: New members sash and dash
        - It's likely that the class will have opinions
        - ask them to challenge their assumptions
- **Constraints:** Embrace constraints as opportunities to think outside the box
    - define constraints: something out of scope for the team solving a problem
    - examples: authority, money, time, physical laws of the universe.
- **Prototyping:** Build a quick and dirty prototype to test your solution.
- **Feedback:** Seek feedback from others and iterate on your solution.
- **Other Resources:**
    - 18f.gsa.gov/guides

Technology Integration **0 minutes**

Slides [##]-[##]

- Build vs Buy
    - How unique is our need?
    - How do we support this in the future, especially as volunteers cycle?
- Communications Platforms
    - Discord

    - Slack
- Cloud workspaces
    - Google Workspace
    - Office 365
- Often tools might expose a RESTful or other API
- If nothing else, there's always flat text files

Hackathon Rules

Rules may vary between events. Most hackathons

- General Rules
    - Theme and Scope
        - Generally: Hackathons will usually have a theme, and might provide a project scope, or target a particular technology stack.
        - NOAC 2024: How we can use technology to make the OA better for everyone
    - Code of Conduct
        - NOAC 2024: Scout Oath and Law
    - Eligibility
        - Generally: Hackathon organizers might target specific groups, or be open to everyone
        - NOAC 2024: Select NOAC 2024 Delegates
    - Time Limit
        - Generally: Hackathons usually have a time limit, often 24-48 hours
        - NOAC 2024: 20 hours
    - Team size
        - Generally: Hackathons usually require teams to balance workload and encourage collaboration
        - NOAC 2024: 5 person assigned teams
- Judging Criteria
    - Generally: Hackathons are often competitive, and if they are will provide a judging criteria
    - NOAC 2024:
        - Problem Statement: Clarity, Specificity, Flexibility without vagueness, Conciseness
        - Rationale: Relevancy to users, how well solution fits into existing

landscape
- Solution Statement: A concise description of the chosen solution
- Execution: Detailed explanation and prototype
- Presentation: How well the team presents to the solution to the judges

Additional Topics as Needed **0 minutes**

Slides [##]-[##]

- Sub-topics, key points, activities, and trainer actions

Appendix: Resources and Source Material

[Please add all referenced sources or handouts that would be useful to share with session attendees.]

Resource	**Link**
Order of the Arrow, Mission & Purpose	Available online at: https://oa-bsa.org/about/mission-purpose