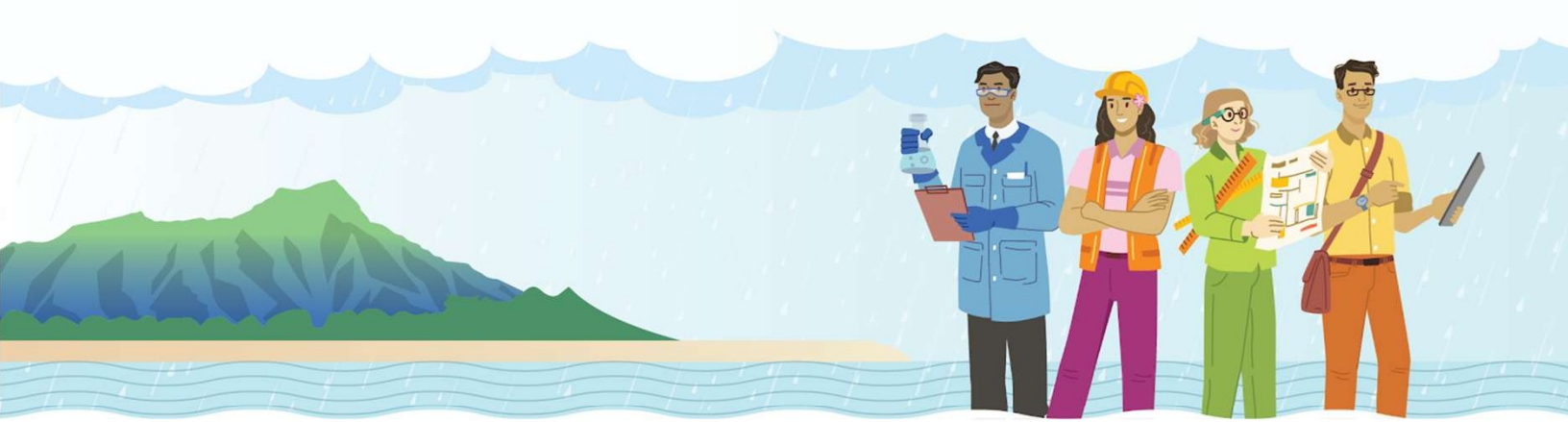




Resources & Risks

Storm Water Career: All

All Careers Full- Course Lesson Plan #:
13 of 15

Next Lesson Plan Title (Full-Course):
Wrap it Up & Celebrate!

Select Career Short-Course Lesson Plan #:
N/A

Next Lesson Plan Title (Short-Course):
N/A

SUMMARY

In this lesson, students develop their critical thinking and collaboration skills, emphasizing the importance of tool selection, resource allocation, risk assessment, and community engagement.

FOCUS & GOALS

In learning about project management tools, students will:

- Describe key project management terms and their related phases
- Develop skills in project definition, task breakdown, progress monitoring, effective communication, and adaptation to change

MATERIALS NEEDED

- Storm Patrol Project Workbook (optional, best used as a computer document)
- Post-it notes
- Large format paper such as a flip chart or white board

LEARNING OBJECTIVES

- Identify key stakeholders and their needs with project management scenarios
- Demonstrate effective resource allocation and task development
- Evaluate and mitigate risk associated with project implementation

VOCABULARY

Resources - Various assets, materials, tools, and personnel required to effectively plan, execute, monitor, and control a project.

Resource Allocation - Process of assigning and distributing resources to various tasks and activities within a project.

Risk Analysis - Identifying and evaluating potential risks to determine their impact and likelihood.

Risk Management - Process of identifying, analyzing and responding to any risk that arises over the life cycle of a project.

Background

In recent lessons, students delved into the foundational phases of project management, focusing on developing a project scope and plan. As these projects transition from theory to implementation, project managers can harness a variety of tools tailored to specific phases of the project lifecycle. It is essential to note that not every tool is universally applicable; the effectiveness of these tools is contingent upon the unique characteristics of each project. Through hands-on experience, project managers cultivate the ability to select the most suitable tools for a given scenario, thus enhancing their management skills and project outcomes.

The contemporary landscape underscores the importance of effective resource management, particularly in response to pressing issues such as waste management and environmental protection. This lesson emphasizes a practical approach, wherein students engage in scenarios that require critical thinking, collaboration, and innovative solutions—all while navigating various constraints. Project managers often confront limitations that compel them to prioritize effectively, optimize their planning, and incorporate community feedback to enhance the overall efficacy of their initiatives.

A pivotal element within project management is the risk assessment phase. Here, project managers face unique challenges that necessitate identifying potential risks, such as cultural misunderstandings, regulatory constraints, and budget limitations. By categorizing these risks within a matrix that weighs impact and probability, managers can devise actionable strategies to address high-impact, high-likelihood scenarios. This emphasis on proactive risk management highlights the importance of teamwork, effective communication, and adaptability—skills crucial for success in any professional setting.

Ultimately, this lesson serves as a microcosm of real-world applications, where resource allocation, strategic planning, and risk assessment converge. It provides students with a platform to creatively tackle environmental management challenges, promoting collaborative problem-solving and critical thinking throughout the process. Through reflecting on their experiences and insights gained, students are encouraged to consider how these lessons can be directly applied to their future endeavors, particularly in fields that prioritize sustainability and community engagement. As they navigate these challenges, they will be better equipped to contribute meaningfully to the pressing issues facing our environment today.

I. Resource Allocation Activity

1. Divide students into 2-3 teams.
2. Share with students that they will act as an outreach committee tasked with developing a storm water management strategy aimed at reducing litter on campus. Campus storm drains are experiencing significant trash issues, leading to flooding and water quality degradation. Teams must address these challenges within a limited budget and resource constraints.
3. Provide students with the challenge parameters listed in Box 1 (to the right).
4. Give student teams about 15 minutes to discuss and research various outreach techniques that could be applicable to their scenario. They should brainstorm innovative solutions that meet the challenge requirements. Then, they will draft a plan detailing their chosen techniques, associated costs, expected outcomes, and community benefits.
5. Each team presents their outreach plan to the group, outlining their approach and how it addresses the key challenges.
6. Evaluate each plan based on effectiveness, creativity, cost-efficiency, and community integration. Provide feedback and highlight innovative ideas or strategies.
7. Reflect on how teams addressed the challenge and the trade-offs they had to consider (e.g., cost vs. effectiveness, community needs vs. environmental impact). Explore real-world applications of the concepts learned through the challenge and the student's projects.

BOX 1

1. Budget: Each team has a fictional budget of \$100 for implementing their outreach plan.
2. Area and Demographics:
 - The campus consists of 2000 students and faculty.
 - There are 40 trash receptacles on campus.
 - There is a mix of trash generating areas, including the cafeteria, the student center, and the athletic facilities.
3. Constraints:
 - The plan must comply with campus regulations (i.e. restrictions on posters, sharing information, etc.).
 - The design should consider community input, enhancing school values, and students' quality of life.
 - Teams may include up to three different types of outreach practices (e.g., posters, hand outs, digital content).
4. Expected Outcomes:
 - Increase better trash disposal amongst campus visitors by at least 25% compared to the current situation.

II. Risk Assessment Activity

1. Share with the student teams that they will now consider if they were tasked with launching their new outreach campaign aimed at raising awareness about trash reduction in an unfamiliar market. This market differs significantly in demographics, cultural preferences, and previous outreach experiences. Given the potential stakes involved, identifying and managing key risks is essential for a successful campaign.
2. Have student teams gather around a whiteboard or large poster paper.
3. Using post-it notes, each team will identify potential risks related to launching the outreach campaign. These can include: cultural misunderstandings, lack of market research, poor communication strategy, insufficient budget allocation, regulatory constraints, negative reception from the target audience, inadequate channels for outreach, limited local partnerships or networks, and misalignment between the campaign message and audience values.
4. Each team should aim to generate at least 10-15 risks and place them on post-it notes.
5. Once risks are identified, teams will create an Impact/Likelihood matrix on a poster or digital platform.
6. The matrix consists of nine scenarios, based on the likelihood of occurrence (low, medium, high) and impact on the outreach campaign (low, medium, high).
7. Teams will categorize each identified risk into one of the nine scenarios based on their assessment.
8. Teams will focus on the risks placed in the "High Impact / High Likelihood" scenario.
9. For each of these risks, teams will collaboratively brainstorm and document mitigation strategies to avoid, reduce, or transfer the risk. Examples of mitigation might include: conducting thorough market research prior to launch, engaging with local influencers or community leaders for insight, developing culturally sensitive marketing material, setting aside a contingency fund for unexpected expenses, establishing feedback mechanisms to gauge audience reception, and identifying legal advisors familiar with local regulations.
10. After addressing high-impact, high-likelihood risks, teams will review the remaining risks scattered across the other sections.
11. They will develop a broader strategy for continuously monitoring and managing these risks throughout the campaign. Strategies may include: regularly scheduled check-ins to evaluate ongoing risks, establishing protocols for responding quickly to unforeseen issues, creating a risk register to track all identified risks and their statuses, and developing communication channels to keep all stakeholders informed.
12. Each team will briefly present their most significant risks, mitigation strategies, and risk management plans.
13. As a facilitator, guide a discussion around key insights from the exercise, such as:
 - Which strategies they found most effective and why?
 - How did they approach handling unforeseen risks?
 - The significance of risk assessment in project management.
 - Lessons learned about teamwork and communication during the risk assessment process.

Encourage participants to reflect on how these insights can be applied to real-world scenarios in their own projects.

Example Risk Assessment Impact/Likelihood Matrix (*theoretical placement of identified risks in italics*)

	Low Impact	Moderate Impact	High Impact
Unlikely	<i>Misalignment between the campaign</i>	<i>Regulatory constraints</i>	<i>Inadequate channels for outreach</i>
Likely	<i>Negative reception from the target audience</i>	<i>Cultural misunderstandings</i>	<i>Lack of market research</i>
Highly Likely	<i>Limited local partnerships or networks</i>	<i>Poor communication strategy</i>	<i>Insufficient budget allocation</i>

Adaptations and Resources

Storm Patrol Project Based Learning Track:

- Have students work as a team to complete the Resources and notes section of their Storm Patrol Project Plan.

Activity-Centric Learning Track:

Conduct Activities I and II.

Tips to Truncate Lesson:

- Cut any of the activities and just share the concepts of resource allocation and risk assessment.

Tips to Extend Lesson:

- Assign optional readings or resources for further exploration of project management concepts.

Resources:

- Sash & Company, *15 Outreach Strategies Examples for Effective Community Engagement*, <https://sashandcompany.com/outreach/outreach-strategies-examples/>
- SMTP Ghost Blog, *How Much Does Outreach Cost?*, <https://smtpghost.com/blog/how-much-does-outreach-cost/>

