**Time:** 45 minutes

**Objective:**

Today students will use Problem Wheels to find the causes and effects of a problem in order to generate possible questions. They help teams identify the causes of a problem to develop strategies to fix the problem.

**Overview:**

Students will be able to frame a user-centered design statement or question to find the root cause.

**Materials & Setup:**

[Problem Wheels per team](https://blossoms.mit.edu/sites/default/files/project/page_files/Day-8-Problem-Wheels.pdf)

[Problem Framing Examples per team](https://blossoms.mit.edu/sites/default/files/project/page_files/Day-8-Problem-Framing-Examples.pdf)

[Frame the Problem Guide per team](https://blossoms.mit.edu/sites/default/files/project/page_files/Day-8-Frame-the-Problem-Guide.pdf)

**Activity:**

**“If I had asked people what they wanted, they would have said, ‘Faster horses.’” - Henry Ford**

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| **Overview** | **Details** |
| **Using Problem Wheels**Question: Did you focus on a problem or opportunity?**Causes Wheel**Question: What causes a problem?**Effects Wheel**Question: How do you discover effects of the problem?**Opportunity Teams****Frame the Question**Question: What are some underlying questions?**Stuck?****Closure: Vote the framing questions** | * Hand out the [Problem Wheels](https://blossoms.mit.edu/sites/default/files/project/page_files/Day-8-Problem-Wheels.pdf) document for each team.
* The first top focuses on problems. The bottom half focuses on opportunities. Use either the top or bottom depending on your focus.
* Students place a different cause in each sector of the circle. Think of all causes including money, government, society or culture.
* Next teams place different effects in each sector of the other circle. Write the layers of people or things affected by the problem and their perspectives.
* If students focus on opportunity, they follow the same steps, focusing on both short-term and long-term benefits as well as logistical, physical, and environmental challenges.
* Have students discuss each cause and effect to develop several framing questions based on it. Remind them: Select a challenge that is: important to the user, practical to solve with the time and resources you have.
* If teams are stuck, use Frame the Problem Guide & Problem Framing Examples.
* Students as a group, choose their top 6 to 10 framings through a multi-stage voting process.
* Students review the Problem Wheels and list of problem framings with the team.
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