**Solving World Issues One Smartphone at a Time**

# **Overview**

The purpose of this activity is to familiarize students with the potential of online tools for problem-solving.

Students will be divided into teams of 3 to 5 people. As an in-class activity that can be completed for homework, each team will be assigned the same problem to solve using online tools on their smartphones. It can be a complex math problem that introduces new formulas they haven't been taught yet or an important social problem like hunger, poverty or the lack of privacy in the 21st century. Students will be encouraged to think outside the box and consult online resources (journal articles, videos, newspapers, etc.). Students will be given online tools such as the Google Suite, the Microsoft Suite or Span Nureva to assist them in putting all their ideas together as a team. Halfway through the activity, the class will briefly come together in order to share each team's findings.

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**Instructional Objectives**

* To realize the potential of creativity and open innovation for problem-solving
* To learn to evaluate the ideas of their peers and give constructive feedback
* To become aware of new pedagogical ways to use smartphones

# **Benefits**

* The students practice their skills in teamwork and become acquainted with different apps and technology
* They become more familiar with current world issues and/or complex problems of interest to them (how to reduce traffic jams in Montreal, how to stop the destruction of the Amazon Forest, how to find an eco-friendly alternative to plastic, etc.)

# **Challenges**

* If using Google Suite, those students with iPhones will need to download the google-relevant app and be logged on to their gmail to access all the features (1)
* When sending a link for a Google Suite document via MIO, students with iPhones will have a harder time accessing the document (2)

# **Tip**

* For challenge (2) once the student has installed the goolge-relevant app, the student must click on the option ‘open with Safari’ so as to be able to use all the features like sharing hacks and editing

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To prepare the activity, which should take about 3 hours, the teacher chooses an innovative theme and lets their students know what theme they chose before class. This theme should reflect a complex problem and require students to work together to find creative ways to solve it. The teacher should choose a theme that can be broken down into sub-problems. Before class, each group of students is assigned a different sub-problem, in order to jump-start the problem solving process in class. Students should do their own research on the open innovative theme and select three sources to bring to class. This should take the students about 1 hour to complete. To introduce the activity in class, which should take 30 minutes, the teacher presents the open innovation activity and the platform students will use for the activity. The teacher then asks the students to work in groups. Once in groups, the students spend about one hour discussing solutions to the problem. To begin this process, the theme is discussed within the group and students present their preliminary research (the three sources they found before coming to class) to their group. Then the groups come up with creative solutions to the problem and share their information on the teacher’s platform of choice, for other groups to see. The groups then have an opportunity to prepare and finalize their presentations on the platform and decide how they want to present their solutions to the class. For the next 30 minutes each group present their solutions, after which there is a 15-minute discussion period, where the entire class talks about the different solutions presented by the groups. At the end of the activity, the teacher can evaluate the students' research and presentation skills, along with their creativity. 
