



NAME OF THE ACTIVITY: **PROBLEM-SOLVING EXPLORATION**

Activity nr: 4 / Flipped Classroom

| Content | Skills | Competencies |
|--------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <i>Flipped Classroom</i> | <i>Active recall, question formulation, memory, public speaking</i> | <i>team working, cooperative learning, creativity, analysing, critical thinking</i> |

Activity Overview

| PROBLEM-SOLVING EXPLORATION | |
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| <i>General Description</i> | <p><i>Present students with a set of complex problems that require multiple steps to solve.</i></p> <p><i>Pair up students and ask one student to be the problem solver, who explains their thought process in developing a solution based on what was learned out of class.</i></p> <p><i>The partner listens to this process and offers suggestions if there are difficulties, or expresses confusion should there be parts that are difficult to understand.</i></p> <p><i>After the first problem has been solved, ask the students to switch roles and begin again.</i></p> |
| <i>Materials</i> | <p>Individual pieces for documentation (sheets of paper; virtual desktop)</p> <p>Individual tools for documentation/writing/drawing (physical or virtual pens, markers, brushes)</p> |
| <i>Duration</i> | <i>Example: 30-60 minutes</i> |
| <i>Feasibility</i> | <i>The activity is feasible for group and/or individual implementation. Students can both individually and collaboratively write down, classify and map the ideas related to their learning objectives.</i> |



Activity

1. **Pre-Class:** Individually, students study the provided material (can apply for all information mediums: written, video, audio, practical)
2. **Pre-Class:** Individually, a student is presented with a set of problems that require multiple steps to resolve. The student can decide which problem to solve and then actually solve it. After that, the student should articulate their problem-solving process (approach, thoughts, actions)
3. **In-Class:** Collaboratively (groups of 2 to 5) present the problem they've solved and their problem-solving process.
4. **In-Class:** After the member presents their work, other parties from the group can ask questions, give suggestions, express and discuss possible confusion about things they may have not understood.
5. **In-Class:** Once the cycle described in steps 3 & 4 is complete another member of the group is to present their work; the process continues until every member of the group has presented their process and solutions.