# Student booklet

*We have designed a template for you to fill in and then print so your students will know how to work. You can add a first page with a picture and the PBL title. Remember to erase these darker sections before printing it!*

**Context**

*To be completed by the teacher: Below you write a creative or authentic problem.*

**Organisation of this sequence**

*To be completed by the teacher: How long will the first phase last? How much time is needed for the second phase? How much time for the final phase? You can make a table to illustrate the organisation clearly. It's a good idea to specify the modalities (in class or at home or online, in groups, or individually…)*

**Phases and steps**

|  |  |  |  |
| --- | --- | --- | --- |
| Phase | Duration | Steps | Explanations |
| First phase  In group  In class? | *To complete* | **Organise the group** | Together, define the role of each group member |
| *To complete* | **Discover and rephrase the problem** | After reading the context alone, define the keywords and questions that may arise regarding these keywords in a group. What exactly is the problem you have to solve? What are you being asked to do? |
| *To complete* | **Design a pathway** | Define which elements and concepts need to be explained, propose a list of relevant questions, identify a pathway to reach the solution, and define a list of expected deliverables. |
| *To complete* | **Define the knowledge needed** | Clearly define what is known and what is unknown. What data is missing to solve the problem? What are the intended learning outcomes? What deliverables do you need to produce in this case? |
| *To complete* | **Define a working plan** | Which steps do each of you need to follow in order to collect the information needed (research, experiments, interviews…)? |

|  |  |  |  |
| --- | --- | --- | --- |
| Phase | Duration | Steps | Explanations |
| 2nd Phase  Individually  At home? | *To complete* | **Implement the action plan** | Each student in the group has to work on every step that has been defined in the action plan.  You must collect and analyse information to explain and solve the problem. |

|  |  |  |  |
| --- | --- | --- | --- |
| Phase | Duration | Steps | Explanations |
| Final Phase  In group  In class? | *To complete* | **Determine the role of each partner** | If necessary, you can change some roles |
| *To complete* | **Share everyone’s production** | Each group member shares what they have found, which resources were used, and which conclusions help to solve the problem. Everyone can check and propose improvements to the outcomes. The group then builds a common response, with an explanatory solution to the problem. |
| *To complete* | **Prepare the deliverables** | If necessary |
| *To complete* | **Assess** | You assess the group work alone. Compare your answers together. Then assess your learning outcomes and your work individually. |

**What is your role in the group?**

|  |  |
| --- | --- |
| *Taxi* | The driver guides the progress of the group work. They ensure that each step is completed.  They put out an alert if a task is forgotten, and need to find collective solutions when required. |
| *Montre* | The timekeeper is responsible for keeping to the collective work schedule. They ensure optimal use of the time available. |
| *Presse-papiersCrayon* | The scribe writes down all the points that have been discussed, whatever they are, and all the positions expressed during the meeting(s). They write them on a blackboard, paperboard, or any other surface that can be viewed by all the group members. |
| *Visage au large sourire avec remplissage solide* | The facilitator’s role is key to ensuring that everyone can express their opinion freely and to meet the goal of the meeting. They can help to develop a common understanding and to create a pleasant work atmosphere. |
| *Document* | The secretary is responsible for summarising the main ideas, hypotheses, decisions taken, and working outcomes of the group.  They are in charge of communicating these data to all the group members. |
| *Bulle de conversation* | The speaker reports the process, work status, and the group's results to the teacher, the tutor, the whole class, or to any external person necessary. |
| *Liste de vérification* | The reviewer is in charge of the progress points. They report what has been done and what remains to be done. |
| *Yeux* | The observer looks at how the group functions. They report their observations to improve the way the group operates. |

**Resources**

*You can add the resources here or indicate the types of document they will receive from the tutor at the end of the first phase.*

***Example of group assessment***

The group completes this assessment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Assessment | Totally no | no | yes | Totally yes |
| About the group’s output | | | | |
| Did the group follow each step of the PBL sequence? |  |  |  |  |
| Did the group achieve the intended learning outcomes? |  |  |  |  |
| Did the group produce what was asked? |  |  |  |  |
| About the group’s organisation | | | | |
| Did the group atmosphere and interactions facilitate efficiency? |  |  |  |  |
| Was everyone able to express themselves? |  |  |  |  |
| Could the group’s work be improved? |  |  |  |  |
| Did everyone stick to their role during the different phases? |  |  |  |  |
| About the complex problem | | | | |
| Was the topic interesting? |  |  |  |  |
| Do you think that knowing how to solve this kind of problem will help you at work later on? |  |  |  |  |
| About the relationship with the tutor | | | | |
| Did the tutor guide the group effectively by asking the right questions to refocus when needed? |  |  |  |  |

***Example of self-assessment***

Complete this assessment individually

1. Explain in a nutshell the problem as you understood it.
2. What questions or sub-problem(s) emerged from it?
3. What existing knowledge did you use to solve it?
4. What new knowledge did you acquire?
5. How did you acquire this knowledge? Please identify and assess your sources’ reliability.
6. What aspects do you still need to explore further?
7. What shortcoming(s) did you identify during this exercise? How could you improve the process?

***Example of peer (and self) assessment***

Complete this assessment individually

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Assessment | Totally no | no | yes | Totally yes |
| Qualitative interactions with the group | | | | |
| Myself |  |  |  |  |
| ………… |  |  |  |  |
| ………… |  |  |  |  |
| ………… |  |  |  |  |
| ………… |  |  |  |  |
| ………… |  |  |  |  |
| ………… |  |  |  |  |
| Qualitative interactions with the group | | | | |
| X |  |  |  |  |
| ………… |  |  |  |  |
| ………… |  |  |  |  |
| ………… |  |  |  |  |
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