Name: _____ Group: _____

PROCEDURE

SSC1 – SCIENCE

Creating the context

I ask myself questions

- Research the scientific (and technological) concepts related to the problem to be solved.
- Define the key words.

I must

- Reformulate the goal of the problem-solving situation.
- Identify the independent and dependent variables, if applicable.
- Formulate the observation criteria for the problem-solving situation, if applicable.

I think

- Formulate a hypothesis or a provisional explanation and justify it (I think that . . . because . . .).

Reflection

	Yes	No
Do I fully understand the scientific (and technological) concepts covered in this situation?	☐	☐

Planning the problem solving

I plan

Materials

- Draw up a list of materials for the experiment.

Protocol

- Write out the protocol for the experiment, keeping in mind the following instructions:
  - Write clear, simple sentences.
  - Use an action verb (e.g. *measure, weigh, pour, record, draw*) at the beginning of each sentence.
  - Place the steps in chronological order.
  - Follow safety rules.
- Plan one or more control tests to compare results, if applicable.
- Draw a diagram of your experimental setup, if applicable.

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Planning the problem solving (*continued*)

Table of results

- Prepare one or more tables for recording the results (data, observations) of the experiment.
- Give each table a title.

Reflection

	Yes	No
Have I considered other approaches?	☐	☐

Initiating the problem solving

I experiment

- Conduct the experiment, following the protocol.
- Adjust the plan of action (materials, protocol) as needed. Record and justify each change.
- Follow safety rules at all times.
- Record the results.
- Perform any necessary calculations and draw one or more diagrams (if applicable), based on the results.

Reflection

	Yes	No
Did I record and justify each of the changes I made to my plan of action?	☐	☐

Analyzing results and drawing conclusions

I analyze my results

- Make connections between the experimental results and the goal of the problem-solving situation (using diagrams, calculations, etc.).
- Assess the relevance of the results or of the experiment in general.
- Identify the advantages and disadvantages of the experiment, if applicable.
- Identify any errors that might have occurred during the experiment (and their causes) and suggest improvements to the protocol.

I draw my conclusions

- Review the hypothesis, if applicable.
- Draw a conclusion related to the goal defined under the heading “I must” in the “Creating the context” section.