

# SCIENTIFIC INVESTIGATIVE PROCESS IN SECONDARY SCHOOL

## Ask yourself a question



- Situational-problem
- Discovery question

## Suggest an explanation



- Initial ideas
  - I explain in my own words what I know about the problem or what I think about it.
- Hypothesis
  - I think that / I imagine that / I suppose that...
  - I think it because / since / due to...
  - I identify the main factors (data / variables) to be considered

INITIAL IDEAS, TENTATIVE EXPLANATION AND HYPOTHESIS

## Planning and implementing the process

### Materials

- I familiarise myself with the available materials.

### Development

- I choose what will prove useful to me (to my hypothesis) in order to answer the situational problem.
- What are the steps?
- What precautions do I need to take?
- What should I note and when?

### Action

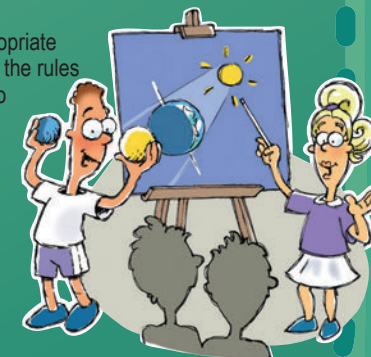
- I carry out the process according to the order established at the start.
- I adjust the process as needed and note the adjustments.
- I note the data I collect.
- I organise the data respecting the rules and conventions.



PLANNING AND CARRYING OUT

## Working out explanations and concluding

- Does my process confirm my hypothesis or initial explanation?
- Are the other teams' results similar? Could they be useful to me for answering my initial questions?
- I suggest an explanation for the initial questions, based on the data collected, my results and on my knowledge.
- What should I communicate about my accomplishments and how do I communicate them effectively?
- Did I use the appropriate terms and respect the rules and conventions to express my ideas and to treat my data?
- What do I take away from this process?



OUTCOME

SIGNIFICANT CONTEXT