

SCIENTIFIC ANALYSIS PROCESS IN HIGH SCHOOL

What is this phenomenon?
What is my opinion
on this subject?



- Question pertaining to a scientific phenomenon
- Question pertaining to the scientific principle(s) at issue in the problem
- Questions pertaining to the impact of a phenomenon or a problem on man, the environment and on ethics



Suggest an explanation

- Initial ideas
 - I explain in my own words what I know about the phenomenon/problem or what I think the principles at issue are.
- Tentative solution
 - I identify the main aspects to be considered in the analysis.
 - I think that/I imagine that/I suppose that...
 - I think it because/since/due to...

INITIAL IDEAS, TENTATIVE EXPLANATION AND HYPOTHESIS

Planning and carrying out the process

Materials

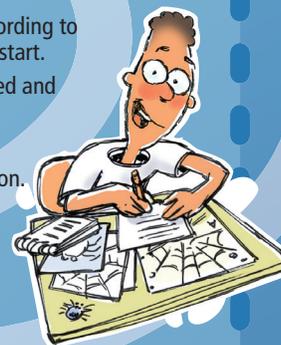
- I observe, manipulate and model the phenomenon or the problem.

Development

- I choose a scenario that will be useful to answer the questions.
- What are the steps?
- What precautions should I take?
- What are the concepts, laws, models and theories at issue in this phenomenon/problem?
- What should I note and when?

Action

- I implement the process according to the order established at the start.
- I adjust the process as needed and note the adjustments.
- I note my observations.
- I collect the useful information.



PLANNING AND CARRYING OUT

Working out explanations and concluding



- Do my observations and my knowledge confirm my initial explanation?
- I suggest an explanation for the initial questions, based on the data collected 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 illustrate the phenomenon/the problem?
- What do I take away from this process?

OUTCOME

SIGNIFICANT CONTEXT