

It wouldn't do any harm to drive 60 km/h in a city instead of 50 km/h would it?

Developers: Jan Alexis Nielsen & Claus Michelsen

Institute: University of Southern Denmark

Country: Denmark

Assessment criteria

This student assessment tool is only a suggestion. If the teacher finds it appropriate, some criteria can be excluded and even others may be included. We suggest that the assessment of the individual student as he/she is working in the group is derived from the assessment of the student working in the following dimensions

1. **Knowledge dimension** (refining his/her usage of the relevant concepts, refining his/her understanding of relations between mathematics, technology, science and society)
2. **Reasoning dimension** (gathering information, identifying patterns, critical reasoning skills, drawing valid conclusions, using mathematics in argumentation)
3. **Communicational dimension** (presentation and discussion, listening to others).

		Group:	Student name				
Criteria for assessment							
Usage of the relevant concepts	Uses all relevant concepts incorrectly						
	Uses many relevant concepts incorrectly						
	Uses some relevant concepts correctly						
	Uses many/all relevant concepts correctly						
Understanding of relations between mathematics, technology, science and society	Does not understand the complex net of relations between mathematics, technology, science and society						
	Understands that mathematics influences society, but does not understand that aspects of society influences the way we do mathematics.						
	Understands some of the interactions between mathematics and society.						
	Understands the complex net of relations between mathematics, technology, science and society						
Gathering information	Unable to find relevant information in the task description as well as handling information from own experiences in an appropriate (reflective) manner.						
	Finds relevant information in the task description, but does not draw on own experience.						
	Finds relevant information both in task						

	description and from own experience, only reflects on own experiences to a minimal extent.					
	Finds relevant information in the task description and handles information from own experiences in an appropriate (reflective manner)					
Identifying patterns	Does not analyze information so as to identify a pattern.					
	Analyzes information by means of typical modeling tools, but does not identify a pattern.					
	Analyzes information by means of typical modeling tools, and identifies a pattern					
Critical reasoning skills	Does not take a critical attitude towards conclusions.					
	Attempts to takes a critical attitude towards conclusions but does not manage to fully reflect on the conclusions					
	Takes a critical attitude towards conclusions and manages, to some extent, to reflect on the conclusions					
	Takes a critical attitude towards conclusions and manages in an elaborate way to reflect on the conclusions					
Argumentative skills	Does not present his/her thoughts in an argumentative fashion.					
	Attempts to present his/her thoughts in an argumentative fashion, but conducts many argumentative errors.					
	Present his/her thoughts in a clear and argumentative fashion, but conducts some argumentative errors.					
	Present his/her thoughts in a clear and argumentative fashion.					
Using mathematics in argumentation	Does not attempt to mobilize mathematical aspects of discussion into elements of an argument.					
	Attempts to mobilize mathematical aspects of discussion into elements of an argument, but does not argue persuasively.					
	Attempts to mobilize mathematical aspects of discussion into elements of an argument, and manages to some extent to argue persuasively.					
	Mobilizes mathematical aspects of discussion into elements of a clearly presented sound argument.					
Presentation and discussion	Participates in neither group discussion, presentation, nor final discussion					
	Participates only in group discussion.					
	Participates both in group discussion and presentation.					
	Participates in all three aspects.					
Listening to others	Does not listen to others.					
	Listens to others, but does not attempt to react to or operationalize received ideas or thoughts.					
	Listens to others and reacts to received ideas or thoughts, but does not attempt to operationalize these ideas and thoughts.					
	Listens to, reacts to and attempts to operationalize the ideas and thoughts of others.					