

Summative 3: Impacts of Systems

Overall Expectation(s): 1. Assess the personal, social, and/or environmental impacts of a system, and evaluate improvements to a system and/or alternative ways of meeting the same needs; (8s18).

A large component of most non-mechanical systems is humans. To increase the productivity of a system, automated components are often used in place of the human components. Automated components can perform repetitive tasks for much longer periods of time than a human can.

Using automated components in a system affects society, the environment, and the economy. When humans are replaced by automated components, many of them lose their jobs and become unemployed. The economy usually becomes more efficient, although high unemployment can seriously affect the stability of the economy. Environmental impacts include an increase in energy consumed and sometimes in waste produced by automated systems. When deciding whether or not to use an automated component in a system, we must assess the overall impacts.

Review pages 165-168 (up to Assessing a System) - reasons why automated systems were developed and that each new automated system has both benefits and drawbacks.

Choose an automated system in the community you live in. Consider the possible impacts for each point of view for the automated system. Think about positive and negative impacts as well as possible improvements to the system and/or alternative ways of meeting the same needs. For example, consider an automated car wash in Richmond Hill.

Individuals (child, elderly person, parent, families)

- How would an Individual be impacted by an automated car wash?

Society (members of a community who live together for their mutual benefit)

- How would a member of society be impacted by an automated car wash?

Environment (environmentalist, ecologist, green people)

- How would an environmentalist/ the environment be impacted by an automated car wash?



Assessment Criteria - Summative Evaluation

	Level 4	Level 3	Level 2	Level 1
Assess the personal, social, and/or environmental impacts of a system, and evaluate improvements to a system and/or alternative ways of meeting the same needs (8s18)	Student demonstrates a high degree of understanding when assessing the personal, social, and/or environmental impacts of a system, and evaluating improvements to a system and/or alternative ways of meeting the same needs	Student demonstrates considerable understanding when assessing the personal, social, and/or environmental impacts of a system, and evaluating improvements to a system and/or alternative ways of meeting the same needs	Student demonstrates some understanding when assessing the personal, social, and/or environmental impacts of a system, and evaluating improvements to a system and/or alternative ways of meeting the same needs	Student demonstrates limited understanding when assessing the personal, social, and/or environmental impacts of a system, and evaluating improvements to a system and/or alternative ways of meeting the same needs

FULL Name: _____

DUE Date: _____

Type of Automated System: _____

Type of Impact	Positive Impacts	Negative Impacts	Solutions for Negative Impacts
<p data-bbox="216 399 396 448">Individuals (People & Families)</p> 			
<p data-bbox="79 756 539 833">Society (Members of a community who live together for their mutual benefit)</p> 			
<p data-bbox="205 1136 405 1185">Environment Natural surroundings</p> 