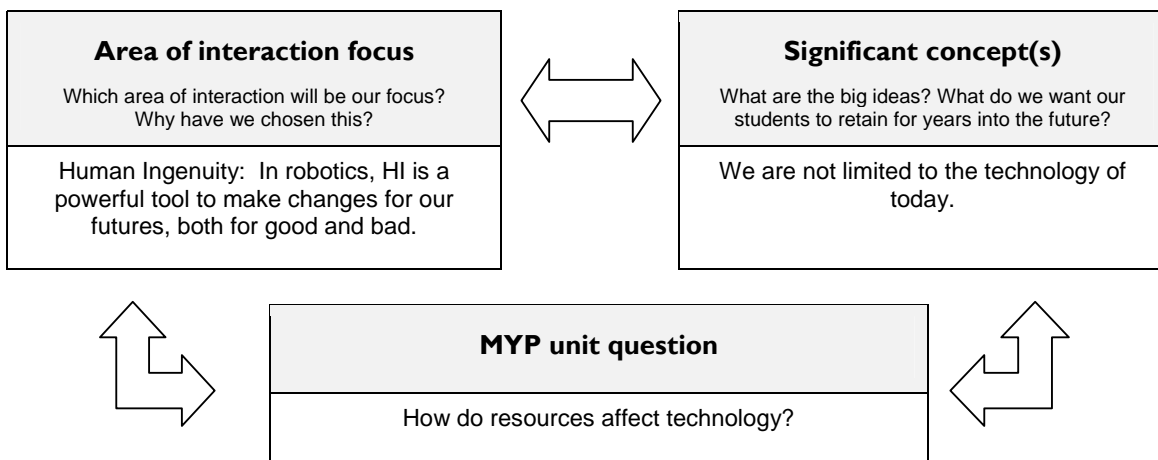


# MYP unit planner

<b>Unit title</b>	<b>History of Robotics</b>
Teacher(s)	Stancil
Subject and grade level	Technology/ Level 1
Time frame and duration	150 min. over a period of 10 days

## Stage I: Integrate significant concept, area of interaction and unit question



<p><b>Assessment</b></p> <p>What task(s) will allow students the opportunity to respond to the unit question?</p> <p>What will constitute acceptable evidence of understanding? How will students show what they have understood?</p>
<p>Create a PowerPoint Presentation on the history of robotics.</p>
<p>Which specific MYP objectives will be addressed during this unit?</p>
<p>Investigate – Students should develop the design brief. At the end of the course, they should be able to: collect, analyse, select, organize and evaluate information.</p> <p style="padding-left: 40px;">Students should formulate the design specification. At the end of the course, they should be able to list specific requirements that must be met by the product.</p> <p>Plan – Students plan the product/solution. At the end of the course, they should be able to construct a plan to create the product/solution that has a series of logical steps.</p> <p>Create – Students create the product/solution. At the end of the course, they should be able to create a product of appropriate quality.</p> <p>Evaluate – Students evaluate the product. At the end of the course, they should be able to evaluate the impact of the product on individuals and on society.</p> <p>Attitude – Students should provide evidence of personal engagement with the subject (motivation, independence, general positive attitude) when working in technology.</p>

Which MYP assessment criteria will be used?
Investigate – 6 Plan – 6 Design – 6 Create – 6 Evaluate – 6 Attitude - 6

## Stage 2: Backward planning: from the assessment to the learning activities through inquiry

<p><b>Content</b></p> <p>What knowledge and/or skills (from the course overview) are going to be used to enable the student to respond to the unit question?</p> <p>What (if any) state, provincial, district, or local standards/skills are to be addressed? How can they be unpacked to develop the significant concept(s) for stage 1?</p>
<p><b>Technology Skills:</b></p> <p><b>Research skills – the application of the investigation strategy; evaluate their product. Students will research the history of robotics to include Archytas of Tarentum who built a mechanical bird, Vaucanson who built automata, Capek who introduced the term “Robot” in his play, use of robots today, and projected use for the future.</b></p> <p><b>State Standards</b></p> <ul style="list-style-type: none"> <li>• <b>Scientific Knowledge is open to change due to creativity and discovery.</b></li> <li>• <b>Students comprehend a wide array of informational text on the history of robotics.</b></li> <li>• <b>Students use a systematic process for the collection, processing and presentation of information in a PowerPoint on the history of robotics.</b></li> </ul>
<p><b>Approaches to learning</b></p> <p>How will this unit contribute to the overall development of subject-specific and general approaches to learning skills?</p>
<p>General approach to learning skills</p> <ul style="list-style-type: none"> <li>• Research – identifying what knowledge is needed and obtaining it</li> <li>• Information Literacy – applying knowledge to a practical use</li> <li>• Communication – to clearly communicate information learned</li> </ul>

<p><b>Learning experiences</b></p> <p>How will students know what is expected of them? Will they see examples, rubrics, templates?</p> <p>How will students acquire the knowledge and practise the skills required? How will they practise applying these?</p> <p>Do the students have enough prior knowledge? How will we know?</p>	<p><b>Teaching strategies</b></p> <p>How will we use formative assessment to give students feedback during the unit?</p> <p>What different teaching methodologies will we employ?</p> <p>How are we differentiating teaching and learning for all? How have we made provision for those learning in a language other than their mother tongue? How have we considered those with special educational needs?</p>
<p>Through:</p> <ul style="list-style-type: none"> <li>•Modified assessment criteria rubrics</li> <li>•Planning templates/guidelines</li> </ul>	<p>Incorporating:</p> <ul style="list-style-type: none"> <li>•Formative modified assessment rubrics</li> <li>•Verbal and written feedback</li> </ul>
<p><b>Resources</b></p> <p>What resources are available to us?</p> <p>How will our classroom environment, local environment and/or the community be used to facilitate students' experiences during the unit?</p>	
<p>Internet access</p> <p>Trade books</p> <p>Text books</p> <p>Class notes</p>	

## Ongoing reflections and evaluation

<p><b>In keeping an ongoing record, consider the following questions. There are further stimulus questions at the end of the “Planning for teaching and learning” section of <i>MYP: From principles into practice</i>.</b></p> <p><b>Students and teachers</b></p> <p>What did we find compelling? Were our disciplinary knowledge/skills challenged in any way?</p> <p>What inquiries arose during the learning? What, if any, extension activities arose?</p> <p>How did we reflect—both on the unit and on our own learning?</p> <p>Which attributes of the learner profile were encouraged through this unit? What opportunities were there for student-initiated action?</p> <p><b>Possible connections</b></p> <p>How successful was the collaboration with other teachers within my subject group and from other subject groups?</p> <p>What interdisciplinary understandings were or could be forged through collaboration with other subjects?</p> <p><b>Assessment</b></p> <p>Were students able to demonstrate their learning?</p> <p>How did the assessment tasks allow students to demonstrate the learning objectives identified for this unit? How did I make sure students were invited to achieve at all levels of the criteria descriptors?</p> <p>Are we prepared for the next stage?</p> <p><b>Data collection</b></p> <p>How did we decide on the data to collect? Was it useful?</p>
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**Figure 12**  
*MYP unit planner*

### History of Robotics

You are to complete a PowerPoint presentation on the history of robotics. The following sections are mandatory. After you have completed these sections, you may continue your research on your own. There are several excellent sources for your use: websites, library books, magazines, to name a few.

Read the following articles about Jacques de Vaucanson and his accomplishments. Then begin a presentation on the History of Robotics. Include a brief section on his life, and his creations.

<http://www.swarthmore.edu/Humanities/pschmid1/essays/pynchon/vaucanson.html>

[http://en.wikipedia.org/wiki/Jacques\\_de\\_Vaucanson](http://en.wikipedia.org/wiki/Jacques_de_Vaucanson)

[http://en.wikipedia.org/wiki/Digesting\\_Duck](http://en.wikipedia.org/wiki/Digesting_Duck)

<http://music.calarts.edu/~sroberts/articles/DeVaucanson.duck.html>

Read the following articles about Archytas of Tarentum (known as the father of mechanics) and his accomplishments. Then add him to the presentation on the History of Robotics.

<http://www-groups.dcs.st-and.ac.uk/~history/Biographies/Archytas.html>

<http://en.wikipedia.org/wiki/Archytas>

<http://plato.stanford.edu/entries/archytas/>

Read the following article about Capek. Then add him to the History of Robotics presentation.

<http://capek.misto.cz/english/robot.html>

### History of Robotics Rubric

	0	1 - 2	3 - 4	5 - 6
Investigate	Does not investigate history of robotics or did investigate and then copied and pasted information into the presentation.	Does research at least 3 historic inventors/creators including Archytas of Tarentum, Vaucanson, and Capek; 1 current use of robotics; and 1 use for the future.	Does research at least 4 historic inventors/creators including Archytas of Tarentum, Vaucanson, and Capek; 2 current uses of robotics; and 1 use for the future.	Does research at least 6 historic inventors/creators including Archytas of Tarentum, Vaucanson, and Capek; 3 current uses of robotics including factory, surgical; and 3 uses for the future including nanobots.
Design	No design	Does not have a cohesive design for the presentation. Slides appear disjointed.	Does design a presentation that is attractive but does not complement the topic. Student cannot justify the design.	Does design a presentation that is attractive and complements the topic. Student justifies the design and evaluates it against the design specifications.
Plan	No plan	Some information listed with no sketches or sketches with no information.	Includes sketches and information – not detailed.	Includes detailed sketches with detailed information.
Create	Does not create a presentation	Creates part of a presentation.	Uses resources well, follows the plan, has good quality presentation.	Uses resources well, modifies the presentation to make an outstanding presentation.
Evaluate	No effort to evaluate the plan, presentation, or design cycle use	Some effort made to evaluate the presentation.	Evaluates the presentation and suggests ways to improve it.	Successfully evaluates the presentation, Successfully evaluates how presentation could be improved.
Attitude	Unsatisfactory, unmotivated, did not work	Occasionally demonstrates motivation.	Frequently displays satisfactory motivation.	Consistently displays high motivation.

