

**Subject:** AI

**Lesson Title:** Introduction to AI for Students

**Year:** Year 9 / 10

**Duration:** 1hr 20 Minutes

**Digital Literacy Learning Outcomes:**

- (1.1) Students can identify and articulate their information needs.
- (1.2) They can find, select, use, and combine information from various sources.
- (4.1) Students review, revise, and evaluate information presented in various digital media.
- (4.2) They understand how and why messages in digital media are constructed.
- (5.1) Students use various tools to manage their own learning.

**Subject Learning Outcomes:**

- Students will gain foundational knowledge about AI, including its definition, use cases, and subsets such as Machine Learning.
- Students will also explore different types of Machine Learning: Supervised, Unsupervised, and Reinforcement Learning.

<p><b>Materials and Resources:</b></p>	<ul style="list-style-type: none"> <li>• Interactive Flat Panel (IFP).</li> <li>• Internet connection.</li> <li>• Student devices such as laptops or desktop computers.</li> <li>• PowerPoint presentation.</li> <li>• Quizziz Quiz for the Introduction (<a href="#">Link</a>).</li> <li>• Quick Draw Self Reflection Form (<a href="#">Template Link</a>).</li> </ul>
<p><b>Introduction What is AI?</b></p> <p><b>(10 minutes)</b></p>	<ul style="list-style-type: none"> <li>• What is AI? - Provide an introduction about Artificial Intelligence and some use cases.</li> <li>• Activity: Students can answer questions through the Quizziz Quiz as part of the introduction. The teacher can fill in the details and provide the explanation between questions.</li> </ul>
<p><b>Machine Learning</b></p> <p><b>(20 minutes)</b></p>	<ul style="list-style-type: none"> <li>• Introduce Machine Learning as a subset of Artificial Intelligence. Mention the concept of data sets and provide examples of different data sets.</li> <li>• Provide a brief demo of Quick Draw: <a href="http://quickdraw.withgoogle.com">quickdraw.withgoogle.com</a></li> <li>• Activity: Students use Quick Draw to draw the doodles and reflect on the results. Students may write their reflections using the Microsoft Forms Self Reflection Form.</li> </ul>

<p><b>Types of Machine Learning</b></p> <p><b>(30 minutes)</b></p>	<ul style="list-style-type: none"> <li>• Mention different types of Machine Learning mainly:             <ul style="list-style-type: none"> <li>○ Supervised Learning</li> <li>○ Unsupervised Learning</li> <li>○ Reinforcement Learning</li> </ul> </li> <li>• Demonstrate the concept of Machine Learning through Teachable Machine - <a href="https://teachablemachine.withgoogle.com/">https://teachablemachine.withgoogle.com/</a> You can provide teachable machine with a data set of images of Cats and Dogs and test it by providing different images of cats and dogs.</li> <li>• Activity: Students use <a href="https://teachablemachine.withgoogle.com/">teachablemachine.withgoogle.com</a> to create an AI system that can recognise the symbols of the rock, paper, scissors game.</li> </ul>
<p><b>Text to Image Generation</b></p> <p><b>(15 minutes)</b></p>	<ul style="list-style-type: none"> <li>• Describe what is Text to Image Generation and how it works. Mention how prompts need to be as precise and descriptive as possible to achieve the desired image. Attention should be given to keywords</li> <li>• Activity: Students visit <a href="https://bit.ly/say-what-you-see">https://bit.ly/say-what-you-see</a> and practice their text-to-image prompts on Level 1.</li> <li>• Activity: Present the students with a number of keywords that need to be combined to generate one image using Adobe Firefly - <a href="https://firefly.adobe.com">https://firefly.adobe.com</a></li> </ul>
<p><b>Conclusion</b></p> <p><b>(5 minutes)</b></p>	<p>With the understanding that students have gained about AI, have students identify an everyday problem that could be solved with AI.</p>

*Lesson Plan by Mr. André Bugeja (Digital Literacy Support Teacher)*