**Lesson Plan Template**

**Teachers:** Name: Michael Moore

**Course:** Exploring Technologies TIJ10

**Lesson Title:** What is an Autonomous Taxi?

**Unit Title:** Technological Design Unit

**Lesson Number:** 1

**Specific Expectations:**

A1.4 incorporate appropriate technological concepts (e.g., aesthetics, control, environmental sustainability/stewardship, ergonomics, fabrication/building/ creation, function, innovation, material, mechanism, power and energy, safety, structure, systems) in the design, fabrication or delivery, and evaluation of a product or service (see pp. 5–6);

A2.1 use a variety of appropriate methods to communicate information or ideas and concepts during the planning and production stages of a project (e.g., production plans, scripts, flow charts, storyboards, sketches, technical drawings, recipes, client consultation reports, design briefs);

A3.2 suggest improvements to a product or service on the basis of a set of criteria relevant to that product or service (e.g., durability, reliability, ease of use, eco-friendliness, appearance, safety, customer satisfaction)

**Prior Learning:** None

**Key Learning Goals**

Students will understand the design considerations and features of an autonomous taxi.

Students will describe the features incorporated in a self driving vehicle.

Students will identify challenges when creating an autonomous vehicle.

**Key Learning Question** (List any key questions you will ask during the lesson which may seek student prior learning or knowledge)

Who is the target audience for autonomous vehicles?

What are the key features needed to make self driving possible?

What are some advantages of autonomous vehicles?

Will people lose their jobs with autonomous taxi’s?

Why is it taking so long to come out?

**Materials List** (List the materials which may be needed to deliver the lesson whether it is a Socratic or Demonstration lesson format)

For students, hand out of the article or a computer to read the article.

For the teacher, board or projector to display discussion questions.

**Teaching Aids** (List any teaching aids needed for the lesson; Handouts, Power Points, etc. and include them with this plan)

Discussion Questions

<https://docs.google.com/document/d/1XjPgDMTdUpctUjIhsVYjspOFytD6IjbknaD6fe6DJJo/edit?usp=sharing>

Article

<https://www.forbes.com/sites/enriquedans/2021/06/11/the-future-of-autonomous-vehicles-product-orservice/?sh=7ee2c4fc5892>

**Teaching Strategies** (Give step by step instruction on how to deliver the lesson, this should be clear and precise and there should be enough information given so that another teacher would be able to deliver the lesson)

-Start the lesson with a conversion about the electric vehicles and how we are using them today, what current taxi’s look like and how we currently use taxi’s.

-Have a class discussion on the following discussion questions.

 -What is an autonomous vehicle?

 -What would an autonomous taxi look like?

 -How does an autonomous taxi’s work?

-Take up and review answers with students

-Open [Forbes article](https://www.forbes.com/sites/enriquedans/2021/06/11/the-future-of-autonomous-vehicles-product-orservice/?sh=7ee2c4fc5892) and project on board for visual effect.

-Handout or give a link to the following article to read:

-Hand out or place on the board the following Questions:

-*What are some of the challenges that must be addressed before autonomous vehicles can achieve widespread adoption, as stated in the article?*

*-As per the article, what is the current state of autonomous vehicle technology, and what advancements can be expected soon?*

*-In terms of convenience and safety, what are some potential benefits of autonomous vehicles, as mentioned in the article?*

*-How could the introduction of autonomous vehicles potentially impact the design of cities and people's lifestyles and work patterns, according to the article?*

*-What ethical and legal considerations should be considered during the development and implementation of autonomous vehicles, as discussed in the article?*

-Have students record their answers

-Finish the lesson by discussing the answers with students, review terminology by quizzing students verbally, and show examples to aid visuals.

**Modifications and Accommodations** (List any possible modifications or accommodations to the lesson needed to help students achieve the key learning goals of the lesson)

Review the needs for the classroom. Make notes or highlight points in the article for students that may require accommodations. Have a scribe ready if a student requires one based on their IEP.

**Terminology List** (List all new terminology that may be learned during the lesson)

-Algorithm

-lidar

-Radar

-GPS

-autonomous

Self-driving

**Literacy and Numeracy** (List any literacy strategies and numeracy strategies which may be addressed or delivered during the lesson)

Literacy will be reviewed with the answers to the article to determine an understanding of the content. Students will understand key terminology.

**Closing Questions** (List any closing questions which may be used to reflect student participation during the lesson)

How will this new information help you design your own autonomous taxi?

What has influenced you the most?

Are you comfortable with the technology being used in autonomous vehicles, is safe?

**Lesson Reflections** (What when wrong/What went right, What can be changed)

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