



Demonstration Teaching in EDUC 213 Technology for Teaching and Learning 1

A Detailed Lesson Plan

Subject : TLE/ AUTOMOTIVE TECHNOLOGY

Grade & Section : 2-B3

Date : November 16, 2023

Time: 1:00- 3:00 Pm

I. OBJECTIVES:

A. Content Standard

1. The learner understands the parts and function of a manual transmission that will vary depending on the specific education or training program you are referencing; However, some common content standards of the parts and the function of a manual transmission may include:

B. Performance Standard

1. The learner should be able to identify, name and function of the parts of a manual transmission

C. Learning Competency

1. Present the function and parts of a manual transmission in accordance with task requirements.

Objectives:

At the end of the lesson students should be able to:

- Identify the different parts and function of a manual transmission of an automobile
- Value the importance of manual transmission of an automobile
- Name the parts and function of each components of a transmission by a role play presentation

II. Subject Matter



A. Topic

- MANUAL TRANSMISSION

B. Reference

- https://www.google.com/search?q=automotive+basic+hnd+tools+and+electric+tools&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIJCAEQIRgKGKABMgkIAhAhGAoYoAEyCQgDECEYChigATIMCAQQIRgKGBYYHRge0gEJMTEyNzFqMGoxqAIA&client=ms-android-vivo-rvo2&sourceid=chrome-mobile&ie=UTF-8

C. Materials

➤ Visual Aids ➤ Laptop ➤ Tv

D. Subject Integration

➤ English

E. Values Integration

➤ Cooperation

➤ Appreciation

➤ Self- efficacy

F. Learning Strategies

➤ Student- centered learning

➤ Demonstration method learning

III. Procedure



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1. Procedure	STUDENT'S ACTIVITY
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A. DAILY ROUTINE

Prayer

Before we begin our lesson for this afternoon, may I call on Ms. _____ to lead the opening prayer for this afternoon.

Let us pray. Let's bow our head and feel the presence of our LORD. In Jesus Name we pray, AMEN.

Greetings

Good afternoon class!

Good afternoon, Sir!

Classroom Management

Before you take your seat, kindly pick up all the pieces of paper under your chair and arrange your desk properly.

If it is done, you now take your seat.

Thank you, Sir.



Checking of Attendance

Class secretary, is there any absent today?

Very good! Perfect Attendance.

None Sir. Everybody was present.

Review/ Recall

What was the last topic they discussed last meeting? Any ideas?

Very good! So the last topic that they discuss is all about the 5S.

Sir the last topic that they discuss last meeting is all about the 5S

It seems that you really understood the last topic, lets move on to the motivational activity.

B. LESSON PROPER

1. Motivation

Memory card game!

Let us known the mechanics.

Mechanics :

Matching concept, getting the first pair, then make more pairs with a matching idea, from a mixed of cards. it is a individual game, the person who turn over the two pair cards will get the price, if the picked cards don't match, you need to turn them back over, the game is over when all the cards have been matched. do you understand the mechanics? okay lets start....

yes sir!



start of the activity.....



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<p>That's it, for our activity. Did you enjoy the activity class?</p> <p>Ok, What have you observed in the activity that you all performed?</p> <p>Very good! The activity you all performed was related to our topic for today.</p>	<p>the students participate actively in the activity</p> <p>Yes Sir! We enjoyed it</p> <p>Sir, I observed that the activity we performed is related to our topic for today.</p>
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2. Presentation of the Topic

Now that you have some thoughts about what we will discuss for today's discussion, based on the picture in our motivation. Our topic for today is all about Manual Transmission.

3.Presentation of the Objectives

But before we proceed to our topic, let us know first the objectives of our lessons.

At the end of the lesson students should be able to:

Everybody kindly read.

So, those are the objectives that we need to obtain, please be focused, cooperate, because later on after our discussion we will have a short quiz.

- Identify the different parts and function of a manual transmission of an automobile

- Value the importance of manual transmission of an automobile

- Name the parts and function of each components of a transmission by a role play presentation.



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4. Discussion

What comes into your mind when we say transmission?

Anyone please!

Okay from automotive.
Anyone?

Okay Mr. _____ .

Very good! Mr. _____ .

The transmission - a gear box is a device that increases the engine speed by the gear and converts it to appropriate torque in order to transmit to the driver wheels.

Okay!

Purpose of transmission .

Provide the torque needed to move the vehicle under a variety of road and load conditions. It does this by changing the gear ratio between the engine crankshaft and vehicle drive wheels. Be shifted into reverse so the vehicle can move backward. Be shifted into neutral for starting the engine and running it without turning the drive wheels.

There are two basic types of transmission the manual transmission and the automatic transmission.

Sir, transmission is the responsible of transmitting the torque from the engine to the differentials in order the vehicle to run.

Manual transmission- shifted manually or by hands.



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Ok class please read.



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<p>Thank you class!</p> <p>Manual transmission- shifted manually or by hands.</p> <p>Automatic transmission - it shifts automatically without the helps of the driver.</p> <p>Various types of gear boxes.</p> <p>Okay class please read!</p> <p>Thank you class!</p> <p>Manual transmission, manual transaxles, and transfer cases are all various types of gearboxes. A gearbox has:</p> <ol style="list-style-type: none">1.Gear that transmit power .2.Splined shafts that rotate while other parts slide on them.3.Bearing that support the shafts and transfer the load to the case or housing. <p>Do you understand class? Any clarification?</p> <p>Verygood !</p> <p>Okay, lets continue.</p> <p>Here the different kinds of gears in a gear box.</p> <p>Okay can you please read the slide</p> <p>Mr._____</p>	<p>Automatic transmission - it shifts automatically without the helps of the driver.</p> <p>Manual transmission, manual transaxles, and transfer cases are all various types of gearboxes. A gearbox has: 1. Gear that transmit power</p> <ol style="list-style-type: none">1.Splined shafts that rotate while other parts slide on them.2.Bearing that support the shafts and transfer the load to the case or housing.3.Box wrench- a wrench having a close, ring like end designed to fit over a nut or bolt.
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None sir.

Types of gears

Spur gear

Helical gear

Double helical gear

Spiral bevel gear

Miter gear

Straight bevel gear



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<p>Thank you so much Mr._____</p> <p>Those are the different kinds of gears in a transmission.</p> <p>Okay next are the major component of manual transmission .</p> <p>Everyone please read!</p> <p>Thank you class!</p> <p>So the input shaft are the one who carries the drive from the clutch disc into the transmission.</p> <p>Do you get it class?</p> <p>Verygood!</p> <p>Lets continue,kindly read the slide class.!</p> <p>Thank you!</p> <p>Output shaft who delivers torque from the transmission to the drive shaft.</p> <p>okay let's proceed. kindly read ms._____</p> <p>thank you ms._____</p> <p>So the shift rails are the one who push or pull the shift pork to select the desire gear.</p> <p>Can you please read Mr._____</p>	<p>Internal gear Worm gear Rack and pinion gear</p> <p>Major component of manual transmission</p> <p>Input shaft - also called the clutch shaft extends from the front of the transmission and carries drive from the clutch disc into the transmission.</p> <p>Yes sir.</p> <p>Output shaft - the main shaft of the transmission: the shaft that delivers torque from the transmission to drive shaft. shift rails - connects to the transmission and operates the gear selector.</p>
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Thank you! Ms. _____
shift fork are responsible for moving the
synchronizer when changing gears. everyone
, please read!

Thank you everyone!

Synchronizer is responsible to lock on its
desired speed gears .
synchronizer- the one who lock the desired
speed gear of a driver

anyone who wants to read?
Okay Ms. _____

Thank you Ms. _____
Counter gear is the one who connects the
speed of the engine through input shaft to
each of desired acceleration gear

Can you follow class?

Very good class!
Okay, let's proceed

shift fork - move the synchronizers
responsible for changing gears in a manual
transmission into mesh with the desired
gear.

SYNCHRONIZER- is a ring device that is placed
between the driving gears and the
synchronizer hub and acts through friction to



equalized speeds of the main shaft and the desire drive gear

Counter Gear - and the shaft is a connecting gear that will connect the engine speed from the input shaft to each of the acceleration gears. The function of the counter gear is to move the rotational power from the input shaft to the acceleration gears according to the gear selected by the driver.

Yes sir!



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<p>Everyone please read!</p> <p>Thank you class.</p> <p>The reverse idle gear is the one to change the direction of the rotation of the output shaft to produce a reverse run of the drive shaft. kindly read Mr.____</p> <p>Thank you ! Mr.____</p> <p>the gear shift lever is the one that manipulates by the driver by hands and mostly has a diagram showing the gears with in the transmission.</p> <p>Next is reverse light switch, everyone please read,</p> <p>Okay thank you,</p> <p>this switch indicates that if it is active the gear position of the transmission is at reverse.</p> <p>do you follow class?</p> <p>Okay lets proceed.</p> <p>transmission case Mr.____ please read.!</p>	<p>Reverse Idler Gear - An idler gear is a gear wheel that is inserted between two or more other gear wheels. The purpose of an idler gear can be two-fold. Firstly, the idler gear will change the direction of rotation of the output shaft.</p> <p>Gear Shift Lever - This transmission/gear shift lever is a lever located in the car cabin that functions as a tool for the driver when shifting the transmission based on driving conditions. Usually, there is a gearshift diagram on the transmission lever to make it easier for the driver to know the position of the gear used.</p> <p>Reverse Switch - The reverse light switch is an electronic switch on a car that activates the car's reverse lights when it is turned on. When the transmission is put into reverse gear, the switches activate the lights.</p> <p>Sir yes sir.</p>
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Transmission Case - is used as a protection for the transmission components and functions as a holder for the transmission bearing along with its input and output shafts. Also, this transmission



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Thank you Mr._____

Transmission case is where the gears located and the lubrication occurs.

Next is extension housing Ms._____ please read.

Thank you! Ms._____

Extension housing is where the output shaft is located it is the end of the transmission.

The next is the speedometer gear everyone kindly read

Thank You!. speedometer gear measures the vehicles speed it is connected to the speedometer which tell us what is the vehicle speed.

The manual operation of the Transmission

- Neutral
- first gear
- second gear
- third gear
- fourth gear
- fifth gear
- reverse gear

Any questions, clarifications regarding the topic?

body is used as a place to accommodate transmission oil.

Extension Housing - is a connection from the transmission body with a conical shape at the end. There is an oil seal that prevents transmission oil leakage. This Extension Housing functions to protect the output shaft components that come out of the transmission body and as a place to mount the speedometer gear

Speedometer Gear - is connected to the vehicle speed measuring device on the dashboard panel, which measures the vehicle's speed while driving. This speedometer gear is generally installed right on the output shaft. This gear will be connected to the speedometer cable.



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Alright thankyou, I hope that you have gained a lot of knowledge from the lesson.

5.Generalization

Okay class, I know that you already have the knowledge from our previous topic. What is the importance of having a transmission in a vehicle in our everyday life? Explain briefly your answer.

Yes Mr./Ms._____

Precisely! Mr./Ms._____.

In addition class, it doesn't matter what kind of transmission you have you need to know the importance and the value of transmission in our everyday life.

Do you have any clarification or questions class, regarding to our topic?

6. Application

Lets test if you really understand the lesson.I will group you into 5 that will be by row , so row 1 you will be the group 1, row 2 you will be the group 2,row 3 you will be the group 3, row 4 you will be the group 4, and row 5 you will be the group 5.

Is that clear class?

This assessment is called "Act Me ".

Instruction:

I have here a box and you need to pick one. And you will demonstrate the function of what you have pick. And the audience will going to guess what is being act..

None Sir!



Sir!(student answers the question with confident.)

Yes Sir!



None Sir!

Yes Sir!



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<p>For 2 minutes of preparation , you need to present it here in front ready or not ready.</p> <p>You will be graded based on the following criteria :</p> <p>Content- 40%</p> <p>Teamwork-20%</p> <p>Presentation-40% Total of 100%</p> <p>Is that clear class?</p> <p>Ok proceed to your assigned group.</p> <p>(AFTER 2 MINUTES OF PREPARATION)</p> <p>Ok class times up, kindly present your activity.</p> <p>(AFTER 5 MINUTES OF PRESENTATION OF ALL GROUPS)</p> <p>Thank you class for you cooperation</p> <p>Do you have any question or clarification about the topic?</p> <p>Ok class go back to your seats and kindly arrange your desk and seat properly.</p> <p>7.Evaluation</p> <p>I said earlier that we will having a quiz. I prepared questionnaires. Kindly get one and pass</p> <p>Instruction;</p> <p>Write your name, section and kindly read the direction. I will be giving you 5 minutes to answer the questions ,Is that clear class?</p> <p>Okay you may start answering</p>	<p>Yes Sir!</p> <p>(THE STUDENT STARTS PRESENTING THEIR ACTIVITY.)</p> <p>None Sir!</p> <p>Ok Sir!</p>
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Yes Sir!



- 1.it is the speed gear who have the highest torque but low in speed.
- 2.It is a lever that the driver used in shifting gear.
- 3.A type of transmission that didn't need the help of the driver when shifting gear?
- 4.Use to lock the desire speed gear in a transmission?
- 5.It is where the oil in the transmission locate.
- 6.It is responsible in countering the rotation from the input shaft before it go to the output shaft.
- 7.It performs the fastest speed but has the lowest torque.
- 8.If you are driving a heavy and loaded truck in a up hill with a not good condition of the road what speed gear is the best?
- 9.Where can you locate the back light switch?
- 10.The 4th gear is connected at?

(AFTER 5 MINUTES)

Are you done class?

Time is up please pass your paper forward.

(ANSWER KEY)

1. 1st gear
- 2.shift lever
- 3.automatic transmission
- 4.synchronizer
- 5.transmission case
- 6.counter gear
- 7.5th gear
8. 1st gear
- 9.extension housing
- 10.input shaft

Yes sir!



8. Assignment

For your assignment class, create a reflection about the topic that we discuss for today. composed an at least 5 sentences. Is that clear class?

Do you have questions, regarding to your assignment?

Before we end, Can you please stand up everyone.

Since everyone have participate , we will celebrate. We will going to dance.It is called the ram sam sam dance.

Are you ready class?

(AFTER THEY PUNISHED)

Since we all settled Everybody, stand up!

Praise be Jesus Christ.

That's all for today class.

Goodbye class.

None Sir!

Yes Sir!

Now and forever, AMEN.

Goodbye, Sir.



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