Subject: Economics

Class: SS1

Week: 3

Topic: Tools of Economic Analysis I

Subtopics:

- Tables
- Charts
- Graphs
- Types of graphs: pie chart, bar chart, pictogram, histogram

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Lesson Objectives

By the end of the lesson, students should be able to:

1. Define and explain tools of economic analysis.
2. Identify and differentiate between various data presentation tools.
3. Explain the different types of charts and graphs.
4. Interpret simple economic data using these tools.

Lesson Content

1. Introduction to Tools of Economic Analysis

In Economics, data plays a vital role in understanding economic activities and trends. To make data meaningful, clear, and useful for decision-making, economists use specific tools called **tools of economic analysis**.

These tools help to:

- Present data in an organized way.
- Summarize complex economic information.
- Reveal patterns and relationships clearly.

The primary tools include:

- **Tables**
- **Charts**
- **Graphs**

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2. Tables

A **table** is a systematic way of presenting data using rows and columns.

Features of a Table:

- Columns for variables (e.g. years, prices, quantities).
- Rows for entries or observations.
- A title or heading.

Example:

Year	Price of Petrol (₦)
2020	145
2021	162
2022	185

Uses of Tables:

- Present large volumes of data.
- Help in easy comparison and reference.
- Accurate and clear documentation.

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3. Charts and Graphs

Charts and graphs visually represent data for quick understanding and interpretation. Each type serves a specific purpose depending on the nature of the data.

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4. Types of Charts and Graphs

i. Pie Chart

- A **pie chart** is a circular diagram divided into sectors.
- Each sector represents a proportion (percentage) of the whole.

Example:
If a student's monthly spending is:

- Feeding: 40%
- Transportation: 20%
- Data: 10%
- Savings: 30%

A pie chart would represent these as segments of a circle.

Advantages:

- Very easy to interpret.
- Visually attractive.
- Useful for showing parts of a whole.

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ii. Bar Chart

- A **bar chart** consists of rectangular bars.
- Each bar's length represents the size of the item.
- Can be **vertical** or **horizontal**.

Example:

Item	**Quantity**
Exercise books	20
Pens	10
Pencils	5

Bar chart will have bars of different lengths showing these quantities.

Advantages:

- Easy to construct and interpret.

- Useful for comparison of items.
- Good for discrete data.

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iii. Pictogram (Pictograph)

- A **pictogram** uses symbols or pictures to represent data.
- Each picture represents a set number of items.

Example:
If 👜 = 10 bags, then:
👜👜👜 = 30 bags

Advantages:

- Easily understandable, especially for beginners.
- Makes data presentation interesting.

Limitation:

- Not suitable for large or very detailed data.

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iv. Histogram

- A **histogram** looks like a bar chart but the bars are joined together.
- It is used for **continuous** data and shows **frequency distribution**.

Example:

Age Range	No. of Students
10–12	5
13–15	9
16–18	6

In a histogram, these would be plotted with touching bars to reflect the continuity of the age ranges.

Difference from Bar Chart:

- Histograms are for continuous data (bars touch).
- Bar charts are for discrete data (bars don’t touch).