Topic 2: Opportunity Cost and Production Possibility Curve

Lesson Objectives:

- define opportunity cost
- distinguish between free goods and economic goods
- distinguish between capital and consumer goods
- explain the influence of opportunity cost on the decision making of consumers, workers, producers and governments
- introduce and interpret the **Production Possibility Curve (PPC)**

Define Opportunity Cost

As wants are unlimited, and resources are finite, we have to make choices. When you choose one thing, you give up something else. Opportunity cost is what you give up when you choose one option instead of another. It's always the **next best alternative** you didn't choose.

For example, imagine it's a sunny Saturday afternoon and you have just one hour to spend between **3 PM and 4 PM**. You've narrowed your choices to two things: **go for a bike ride** around your neighborhood or practice the piano. If you decide to ride your bike, you'll enjoy fresh air and exercise — but you'll miss the chance to enhance your piano skills. That lost opportunity to enhance your piano skills is your **opportunity cost**.

Free Goods and Economics Goods

Free goods are goods that do not require any resources to produce and so they do not involve an opportunity cost. These are things we can get easily, and they do not cost us anything. For example, the air we breathe, or sunlight is a free good. It's everywhere around us and we do not have to pay for it. Free goods are always available, and we can use them as much as we want without paying.

Economic goods are goods that require resources to produce and hence the production involves an opportunity cost. These are goods that cost money and are not always easy to get. For instance, a video game or a new pair of shoes are economic goods because you have to buy them, and they are limited. If everyone wanted the same video game, there might not be enough for everyone, so people would have to pay for it.

Notebook Activity 1:

List 5 free goods and 5 economic goods you use in your daily life.

Capital goods and Consumer goods

Capital goods are human-made goods used in production. These are tools, machines, buildings, or equipment that businesses use to produce other goods or services.

Consumer goods are goods and services purchased by consumers for their own satisfaction. Consumers buy these goods for their personal use.

Imagine a bakery: the big oven used to bake cakes and the mixer machines are **capital goods**—they help the bakery produce baked goods. When you buy a slice of cake at that bakery, what you purchase is a **consumer good**—ready for your enjoyment. One is used for production by a business, and the other is consumed by you.

Notebook Activity 2

Maya runs a small cake shop in her neighborhood. Every morning, she uses her **electric oven**, **mixing machine**, and **baking trays** to prepare cakes and cupcakes. She buys **flour**, **sugar**, and **chocolate** from the market and turns them into delicious treats. Customers come to her shop to buy **cakes**, **cookies**, and **muffins** to enjoy at home.

Maya also uses a **refrigerator** to keep her ingredients fresh and a **delivery bike** to send cakes to nearby houses.

Read the case study and sort the items below into **Capital Goods** and **Consumer Goods**. Give reasons for your answer.

Influence of Opportunity Cost on decision making

Opportunity cost and consumers

We're all consumers—we buy and use goods and services every day. Because we don't have enough money to get everything we want, we often need to make decisions. For instance, imagine you're saving money and choosing between two new laptops. You research a few options but narrow it down to two options that are about the same price and quality. Whichever you choose, you give up the benefits of the other option—the next-best alternative becomes your **opportunity cost**.

Opportunity cost and workers

When someone decides which job to take, like between becoming a teacher or joining the civil service, they're really choosing one path while giving up another—this is the **opportunity cost**. To make the best decision, they think about things like how much each job pays (wage), whether they can earn promotions over time, and how much they'll enjoy the work (job satisfaction).

Opportunity cost and producers

Producers also have to make choices when deciding what to produce. If a farmer chooses to use his land to grow potatoes, he cannot use the same land to keep cattle. When businesses or farmers decide what to produce, they usually aim for the option that earns the most profit.

Opportunity cost and the government

The government collects money from people through taxes and has to choose how to spend it. If it spends more money on schools and education, it might have less money left for hospitals and healthcare. This is called **opportunity cost**—it means giving up one thing to get something else. This occurs because a government has limited resources, but several different issues to address.

Production Possibility Curve (PPC)

The **Production Possibility Curve (PPC)** is a simple graph that shows the **different choices** a country (or company) can make when it uses its **limited resources** to produce **two goods**.

Because resources like land, money, machines, and workers are limited, you can't produce everything at once. If you make more of one thing, you often have to make less of something else.

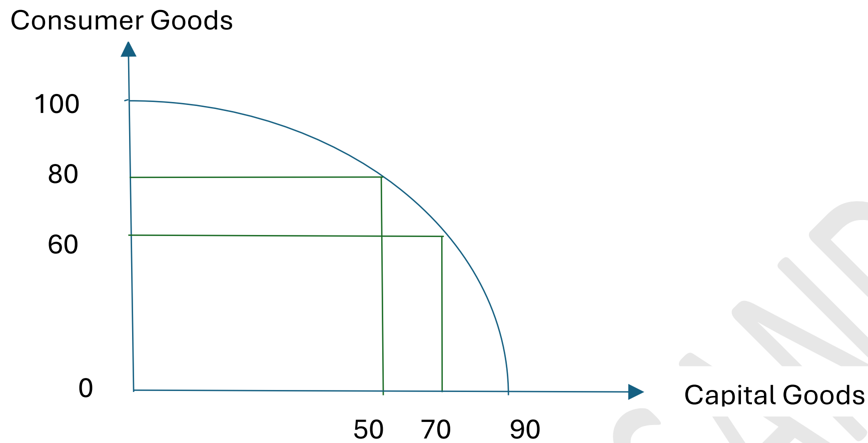

Figure A: A Production Possibility Curve (PPC), showing the combinations of capital and consumer goods that can be produced with limited resources.

In Figure A we can see that with the given resources, a country can either produce 0 consumer goods and 90 capital goods, or 60 consumer goods and 70 capital goods.
On the other hand, if 100 consumer goods are produced, only 0 capital goods can be produced.

Notebook Activity 3:

a. A small factory can produce the following combinations of pencils and books with its resources. Draw a PPC to illustrate the different combinations of books and pencils that can be produced.

Books	Pencil
0	200
50	100
100	0

b. A farmer can use his land to raise cows for **milk** or chickens for **eggs**, but not both fully. The following combinations of milk and eggs can be produced with the existing factors of production. Illustrate this in a PPC diagram.

Milk in Litres	Eggs
0	60
20	40
40	20

Key Terms:

- **Opportunity Cost**: the next best alternative to be forgone.
- **Free Goods:** a product which does not require any resources to make it and so does not have an opportunity cost.
- **Economic good**: a product which requires resources to produce it and therefore has an opportunity cost
- **Capital goods**: human-made goods used in production.
- **Consumer goods**: goods and services purchased by households for their own satisfaction.
- **Production possibility curve**: a curve that shows the maximum output of two types of products and the combination of those products that can be produced with existing resources and technology.

Notebook Activity 4:

Kenya's Tough Choice

Kenya is a developing country where many children do not have access to quality education, especially in rural areas. At the same time, the country also struggles with frequent droughts, which cause water shortages and crop failure for many farming families.

The government only has enough resources to address any one issue. Within 100-120 words discuss which issue the government should address, why it is important for the country, and explain why the government needs to choose, instead of solving both problems.