# INNOVATION PLACE MAT



1 Identify and define the 4 factors of production

2 By researching the below Innovators, find out each one's key innovations

3 Using the 'Circular Flow of Income' explain why households offer enterprise to firms

4 Explain what is meant by 'factor immobility'

unemployment

14 Explain with examples the meaning of 'creative destruction'

13 Explain what is meant by 'Wealth Disparity'

12 Explain what is meant by 'Structural Change' in an economy and explain how innovation may lead to structural unemployment

### **CASE STUDY**



• Thanks to the efficiency of the internet and automated systems, productivity and GDP have grown during the last few decades, but the middle class and jobs are disappearing.

In fact, we have reached a tipping point where technology is now destroying more jobs than it creates. And if the trend continues we could face a serious crisis in the US and abroad, said Wendell Wallach, a consultant, ethicist, and scholar at the Yale University Interdisciplinary Center for Bioethics.

Robots, 3D printing, and other emerging technologies are all fueling technological unemployment and global wealth disparity.

### **CASE STUDY**



Innovation is the process of creating something new that makes life better. Innovation is impossible without passion. Innovators see the world differently.

Innovators end up becoming obsessed with taking the world from as it is to as it should be. They become obsessed with making the world better. Many innovators in the for-profit sector focus incessantly on bringing value to market. Others focus incessantly on the core research needed to push the human race forward. Regardless of the sectors we play in, we are all relentlessly focused on solving problems and creating a better world than the one that exists today.

Rvan Allis

www.startupguide.com/world/greatest-innovators

Rank	Innovator	Famous for
1	Thomas Edison	American Inventor, created the first Lightbulbs and cameras
2	Steve Jobs	
3	Nikola Tesla	
4	Bill Gates	
5	Benjamin Franklin	
6	Leonardo Da Vinci	
7	Alexander Graham Bell	
8	Sandford Fleming	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
9	Marie Curie	0
10	The Wright Brothers	0 0 0

'underproduction' of goods in free markets

6 Explain why the existence of 'non-excludability' can lead to

**Explain how innovations in transport** 

can lead to lower frictional and regional

7 Explain how patents incentivise innovation

11 Outline the advantages and disadvantages of giving tax cuts to innovators/ entrepreneurs 10 Define 'Dynamic Efficiency'

**9** Using a relevant diagram, explain how a monopoly firm can result in an 'inefficient use of resources'

8 Explain why increased innovation can lead to an increase in aggregate supply

## INNOVATION PLACE MAT SUGGESTED ANSWERS

#### 1 Identify and define the 4 factors of production

Enterprise: The process by which new businesses are formed in order to offer products and services in a market. Labour: The mental and physical work of people. Land: All natural resources. Capital: Man-made inputs to the production process

### 2 By researching the below Innovators, find out each one's key innovations

Thomas Edison - American Inventor, created the first Lightbulbs and cameras

Steve Jobs - Founder of Apple

Nikola Tesla – Power Engineer

Bill Gates - Founder of Microsoft

Benjamin Franklin - Politician and Inventor

Leonardo Da Vinci - Artist and Inventor

Alexander Graham Bell - Invented the Telephone

Sandford Fleming – Inventor of time zones and building

transcontinental railways

Marie Curie - Nobel Prize winning chemist

The Wright Brothers – Invented and flew the first aeroplane

### 3 Using the 'Circular Flow of Income' explain why households offer enterprise to firms

Households are motivated by profit to provide enterprise to businesses i.e. they provide factor inputs in return for factor payments (rent for land, interest for capital, wages for labour and profits for enterprise)

#### 4 Explain what is meant by 'factor immobility'

The inability of factors of production to freely move to where they are demanded for either geographical reasons e.g. family ties, unequal house prices or lack of appropriate skills

### 5 Explain how innovations in transport can lead to lower frictional and regional unemployment

Some frictional and geographical unemployment is caused by an inability to move around to take work, improved transport increase the distance that workers can commute from, meaning workers can more easily find appropriate work

### 6 Explain why the existence of 'non-excludability' can lead to 'underproduction' of goods in free markets

If firms cannot exclude consumers from using their goods, then they will be unable to charge for them, as consumers will decline to purchase because they know they can 'free-ride' - with little profit incentive firms are less likely to provide such goods

#### 7 Explain how patents incentivise innovation

Patents grant an artificial monopoly and mean that rival firms cannot copy your design or idea for a certain period of time

### 8 Explain why increased innovation can lead to an increase in aggregate supply

More efficient factors of production / production techniques as a result of innovation increases the productive potential of the economy and shifts LRAS outwards. Lower production costs may shift SRAS outwards as well

### 9 Using a relevant diagram, explain how a monopoly firm can result in an 'inefficient use of resources'

When a monopoly firm maximises profit at MC = MR, then Price>Marginal Cost therefore Allocatively Inefficient and not operating where AC is lowest, therefore not productively efficient—the diagram should indicate the monopoly profit-maximising level of output and price, the allocatively efficient output/price, and the productively efficient output and price

#### 10 Define 'Dynamic Efficiency'

Dynamic efficiency refers to the ability for a firm to improve its goods/services/production processes over time, leading to a downwards shift in AC and/or increase in AR. This could be through a reduction in average costs or the development of new products which can be to the consumers advantage

#### 11 Outline the advantages and disadvantages of giving tax cuts to innovators/entrepreneurs

#### Advantages

Incentivise innovation—leads to improvement

More employment
Increased consumption in the future—more tax revenue
long run. Potential

#### Disadvantages

Loss of tax revenue Inequality could worsen Creates monopolies and/or monopsony power

## 12 Explain what is meant by 'Structural Change' in an economy and explain how innovation may lead to structural unemployment

Innovation can trigger growth, however can make various industries redundant. Improvements in technology can move firms away from using labour and to capital, which can create structural unemployment

#### 13 Explain what is meant by 'Wealth Disparity'

Wealth disparity is another way of saying wealth inequality; wealth refers to the stock of assets (unlike income, which is a flow, as a result of providing factors of production)

#### 14 Explain with examples the meaning of 'creative destruction'

Classic examples of creative destruction include: Netflix (removing rental video/DVD stores from the market), digital cameras removing Kodak (monopoly on film/film processing) from the market, Google Maps (removing the need for paper maps or city to Z map books) etc