

# Economic Geography

## Unit 5 - Secondary and Tertiary Activities

Unit 5 gives the student insight into selected secondary activities in which humans engage as they transform raw materials, provided by primary activities, to more finished forms. Manufacturing utilizes capital and labour inputs to move materials through a series of processes until a higher-value added product is obtained. Services involve the “manufacturing” of intangible goods or services for human use. Students are encouraged to examine the importance of the secondary and tertiary sectors and factors that help to account for their location.

## Unit 5: Secondary and Tertiary Activities

### Outcomes

***SCO 5.1: The student will be expected to demonstrate an understanding of what manufacturing entails, including the following delineations:***

- 5.1.1 Identify natural and human inputs in a manufacturing operation. (k)
- 5.1.2 Analyze the processes in a manufacturing operation. (a)
- 5.1.3 Describe the three processes that may be used to change a raw material into a useable form. (k)

### Sample Learning/Teaching Strategies

*Teachers can have students*

- examine a case study of a factory to describe the components of a manufacturing operation.

Inputs		Manufacturing Processes	Outputs
Physical	Human		

- using data provided in the case study above, compare the value of outputs to the value of inputs. Explain why this comparison is an important one for the manufacturer.
- identify components in the systems model, based on the case study, which are difficult for the manufacturer to control.

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### Sample Assessment Strategies

*Students could, for example:*

- research a local factory or one featured in a magazine or newspaper. They should construct a flow chart to show the relationship among the inputs, manufacturing processes, and outputs (see teacher note 1).
- develop a poster display to describe a local factory and illustrate the operation with photos.

### Teacher Notes

- Students may be assigned the task of flowcharting the information in ST, Figure 13.4, page 221. (1)

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### Outcomes

***SCO 5.2: The student will be expected to differentiate among types of manufacturing activity, including the following delineations:***

- 5.2.1 Define the terms labour-intensive and capital-intensive. (k)
- 5.2.2 **Analyze a manufacturing operation to determine if it is labour-intensive or capital-intensive. (a)**
- 5.2.3 Define the terms light industry and heavy industry. (k)
- 5.2.4 **Analyze a manufacturing operation to determine if it is an example of light-industry or heavy-industry. (a)**

### Sample Learning/Teaching Strategies

*Teachers can have students*

- examine a case study of a manufacturing operation. They should describe characteristics that help to classify it as either light industry or heavy industry (see teacher note 1).
- classify the manufacturing operation profiled above as either labour-intensive or capital-intensive. They should defend the choice.

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### Sample Assessment Strategies

*Students can, for example:*

- given short descriptions of a series of manufacturing operations, and classify each as either labour-intensive or capital intensive (see teacher note 1).
- examine a series of photos of manufacturing operations, and classify each as either light industry or heavy industry.

### Teacher Notes

- Refer students to ST, “Case Study: Manufacturing Wrigley’s Gum,” page 219; and “Case Study: Making Steel World Wide,” pages 221-223. (1)

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### Outcomes

***SCO 5.3: The student will be expected to determine the factors that influence the location of an industry, including the following delineations:***

- 5.3.1 Examine the influence that site conditions and situation may have on the location of an industry. (a)
- 5.3.2 Compare the terms resource-oriented industry and market-oriented industry. (k)
- 5.3.3 **Analyze the influence of weight-gain and weight-loss production on the location of an industry. (a)**
- 5.3.4 Describe the advantages of the agglomerating tendency. (k)
- 5.3.5 Identify the characteristics of a labour force that make it attractive to industry. (k)
- 5.3.6 **Explain how government subsidies on transportation influence the location of a given industry. (k)**
- 5.3.7 Draw conclusions about patterns in the distribution of highly industrialized areas on the earth's surface. (a)

### Sample Learning/Teaching Strategies

*Teachers can have students*

- given (1) a map showing the location of a resource (e.g., wood) and the market for a product (e.g., paper) manufactured from this resource, and (2) transportation costs, determine whether the factory should be located near the resource or near the market.
- given (1) a map showing the location of a resource (e.g., drink concentrate) and the market for a product (e.g., soft drinks) manufactured from this resource, and (2) transportation costs, determine whether the factory should be located near the resource or near the market.
- given the findings in the above two scenarios, write a statement to describe where to locate (1) an industry that produces weight-loss products, and (2) one that produces weight-gain products.
- develop a brief article for a manufacturers' magazine outlining the advantages of the local community for a given industry.
- given a map showing the most industrialized areas of the world, briefly describe the pattern shown.

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### Sample Assessment Strategies

*Students could, for example:*

- given a brief description of manufacturing operations and their locations, match each description with a location diagram (see teacher note 1).
- given a case study of an industrial activity, extrapolate factors that account for its location.

### Teacher Notes

- To introduce the concept of agglomeration (for delineation 5.3.5 and 5.3.6), refer to examples in the local area. If no references to industry can be made, refer to the service industry; for example, ask students to think about why it is advantageous for a fast-food restaurant to be located in or near a pedestrian mall.
- Refer to ST, Exercise 16, page 227. (1)

## Unit 5: Secondary and Tertiary Activities

### Outcomes

***SCO 5.4: The student will be expected to examine environmental issues related to industrial activity, including the following delineations:***

- 5.4.1 Analyze the roles of stakeholders in the face of an environmental threat. (a)
- 5.4.2 Relate the location of areas at risk to the location of major industrialized areas. (a)
- 5.4.3 Anticipate the kinds of actions that should be taken to avert an environmental threat posed by an industry. (i)
- 5.4.4 **Defend selected social/moral issues associated with manufacturing operations. (i)**

### Sample Learning/Teaching Strategies

*Teachers can have students*

- analyze a case study for an industrial operation that has a poor environmental record:
  - identify the kind of environmental threat it poses
  - determine the underlying causes of this threat
  - describe the responses of interest groups to the hazard
  - describe the reaction of industry and government to interest groups
- suggest alternative actions that may be taken to reduce or eliminate the environmental threat described in the case study above.
- analyze a case study of a closure of a factory:
  - factors underlying the closure
  - the human impact of the closure
- given a map showing the effect of a doubling of carbon dioxide in the atmosphere, describe the likely effect on
  - the production of wheat
  - the distribution of equatorial rainforests
  - the distribution of desert areas
- given a map showing the chlorofluorocarbon (CFC) emissions per person per year, evaluate the validity of the following statement:
- “Industrialized countries are the main culprits in the depletion of the ozone layer.”

## Unit 5: Secondary and Tertiary Activities

### Sample Assessment Strategies

*Students could, for example.*

- analyze a world map showing areas with high acid rain levels and a map identifying industrialized areas. They should describe the relationship between acid rain levels and the degree of industrialization.
- evaluate the validity of the following statement:  
*“An industry should be shut down if it poses any degree of risk to the environment.”*
- examine a case study about an operation that employs child labour. They should develop a stand either for or against the practice. Student should show their arguments in a letter to the editor of the local newspaper (see teacher note 1).

### Teacher Notes

- Refer to the World Bank website (<http://www.worldbank.org/data>) and then click on “Data by Topic” and then scroll to “Environment.”
- Refer to the Free the Children website (<http://www.freethechildren.org>)  
The stories of real child labourers are featured. (1)
- Refer to ST, “Case Study: When Children Do Not Play,” pages 235-236. (1)

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## Unit 5: Secondary and Tertiary Activities

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### Outcomes

***SCO 5.5: The student will be expected to describe types of tertiary activities, including the following delineations:***

- 5.5.1 Define the term tertiary activity. (k)
- 5.5.2 Identify the four categories of service activities. (k)
- 5.5.3 **Contrast private tertiary activity and public tertiary activity. (k)**
- 5.5.4 Define the term quaternary activity. (k)

### Sample Learning/Teaching Strategies

*Teachers can have students*

- examine a case study of a tertiary activity (e.g., tourism) to determine:
  - the factors that account for the location of the activity
  - the importance of the activity to the local economy
  - examples of the agglomerating tendency
  - other world sites with which it has to compete
  - factors which threaten the viability of this activity
- examine a graph to explain how distance affects demand for a service (see teacher note x).

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### Sample Assessment Strategies

*Students could, for example.*

- examine a telephone directory and cite examples of tertiary activity according to the categories in item 5.5.2.
- conduct research to identify a place that is strongly associated with a certain tertiary activity (e.g., Rome as a religious site). They should write a report to account for its location and economic importance.

### Teacher Notes

- To begin this SCO, you may wish to have students to talk about the location of tertiary activities (e.g., a coffee shop, a law office) in the local community and find evidence for the agglomerating tendency.

## Unit 5: Secondary and Tertiary Activities

### Outcomes

***SCO 5.6: The student will be expected to analyze patterns in the location of selected tertiary and quaternary activities, including the following delineations:***

- 5.6.1 Examine factors that affect the location of a tertiary activity. (a)**
- 5.6.2 Examine factors that affect the location of a quaternary activity. (a)**
- 5.6.3 Analyze factors that account for patterns in world trade for a selected commodity. (a)**
- 5.6.4 Analyze factors that account for patterns in mass communications. (a)**
- 5.6.5 Examine how mass communications can affect the location of a workplace. (a)**

### Sample Learning/Teaching Strategies

*Teachers can have students*

- examine a case study of a quaternary activity (e.g., a call centre) to determine
  - the factors that account for the location of the activity
  - the importance of the activity to the local economy
  - other world sites with which it has to compete
  - factors which threaten the viability of this activity (see teacher note 1)
- analyze a case study to examine the economic importance of information-based technology.
- conduct a survey in the local community to gain an indication of the percentage of people employed in primary, secondary tertiary, and quaternary sectors. They should briefly describe the pattern shown by the research.
- examine a graph to explain how distance affects demand for a service (see teacher note 2).

## Unit 5: Secondary and Tertiary Activities

### Sample Assessment Strategies

*Students could, for example.*

- Examine a telephone directory and cite examples of tertiary activity according to the categories in item 5.5.2.
- Select an occupation in the quaternary sector that they may wish to consider as a career choice. They should describe aspects of the job that appeal to you.

### Teacher Notes

- Explain to students that service industries make up the tertiary sector as described in the ST, pages 240-241. Since the high-technology and information-based industries have gained such economic importance, some economists and geographers use the term “quaternary” as a sub-category of the tertiary sector. For SCOs 5.6 and 5.7, refer to ST, 249-251 and 293-296.
- Refer to ST, Exercises 15, 16 and 17, page 248. (1)
- Refer to ST, Figure 14.5, page 244, and TR Worksheet 14.1 (Location of Tertiary Activities). (2)

## Unit 5: Secondary and Tertiary Activities

### Outcomes

***SCO 5.7: The student will be expected to analyze trends and issues in the tertiary and quaternary sectors, including the following delineations:***

- 5.7.1 Describe the economic importance of the tertiary sector. (k)
- 5.7.2 Analyze issues that affect the viability of a tertiary activity. (a)
- 5.7.3 Describe the economic importance of the quaternary sector. (k)
- 5.7.4 Examine factors that affect the growth of the quaternary sector. (a)
- 5.7.5 Evaluate the social and economic impact of developments in the quaternary sector. (i)

### Sample Learning/Teaching Strategies

*Teachers can have students*

- ask students to conduct a survey of the occupations of parents/care givers of other students in the school. Determine the percentage share of jobs related to the tertiary and quaternary sector.
- conduct research to examine factors that give rise to “telecommuting”. Write a report to describe this trend (see teacher note 1).

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### Sample Assessment Strategies

*Students could, for example.*

- given a scenario describing a communications need, sketch an information journey chain and describe the impact of an email connection (see teacher note 1).
- compare a map showing the location of industrial regions with a map showing international communications traffic. Describe the similarities in the two patterns (see teacher note 2).
- assess the validity of the following statement:

*“The world is becoming a smaller place.”*

### Teacher Notes

- Refer to Exercise 16, page 294. (1)
- Refer to Figures 13.6 and 17.11. Figure 13.12 may also be used in this activity. (2)

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### Outcomes

***SCO 5.8: The student will be expected to use a specific indicator to measure standard of living including the following delineations:***

- 5.8.1 Define the term gross national product (GNP). (k)
- 5.8.2 Define the term per capita GNP. (k)
- 5.8.3 Relate per capita GNP to level of economic development. (a)
- 5.8.4 Relate employment structures to levels of economic development. (a)
- 5.8.5 Explain why it is beneficial to use more than one indicator when describing the standard of living of a country. (k)
- 5.8.6 Relate selected social and economic indicators to level of economic development. (a)
- 5.8.7 **Analyze patterns in the distribution of selected socio-economic indicators with the patterns in the distribution of developed or developing countries. (a)**

### Sample Learning/Teaching Strategies

*Teachers can have students*

- test the following hypothesis:  
As a nation becomes wealthier, the percentage employed in agriculture decreases. The following steps may be used:
  - examine a table indicating, for selected countries, the per capita GNP and the percentage employed in the primary sector
  - plot the values on a graph and describe the extent to which the hypothesis is supported (see teacher note 1)
- examine a table showing, the employment structure for selected countries at different levels of development. They should briefly describe the relationship between:
  - the level of development and the percentage employed in the secondary sector
  - the level of development and the percentage employed in the tertiary sector (see teacher note 2)
- support their agreement or disagreement with the following statement:  
*“A high per capita GNP figure indicates that all of the people in that country enjoy a high standard of living.”*
- examine a world map showing the average number of calories available as a percentage of the calories needed. Identify:
  - two continents where there is an adequate supply of calories
  - the continent experiencing the most severe calorie shortfall (see teacher note 4)

## Unit 5: Secondary and Tertiary Activities

### Sample Assessment Strategies

*Students could, for example:*

- given a world map indicating the per capita GNP for each country, determine the per capita GNP for each country in the chart below.

Country	Per Capita GNP
<b>Developed:</b>	
Canada	
Sweden	
United States	
<b>Developing:</b>	
Argentina	
Mexico	
Spain	
<b>Least developed:</b>	
Bangladesh	
India	
Kenya	

Briefly describe the relationship between per capita GNP and level of economic development (see teacher note 3).

- analyze a world map showing the per capita GNP for each country and evaluate the validity of each of the following statements:
  - *“The continent of Africa has the greatest concentration of countries with a low standard of living.”*
  - *“The most highly developed countries in the world are concentrated in Europe and North America.”*
  - *“The least developed countries are mostly found in regions with hot climates”* (see teacher note 3).
- given a table indicating, for six countries, the number of newspapers per 10 000 people and the number of televisions per 10 000 people, determine the two countries that are likely to be developed, and the two which are likely to be least developed.

### Teacher Notes

- Refer to Figure 13.11, page 231. (1)
- Refer to Figures 13.11 and 13.12, page 231. (2)
- Refer to Figure 13.12, page 231. (3)
- For a map on caloric intake, refer to [http://www.fc.bus.emory.edu/~john\\_uda/agriculture/](http://www.fc.bus.emory.edu/~john_uda/agriculture/) and follow the link to GDP-Caloric Intake Correlation, then to Exhibit 2. (4)

