

AP HUMAN GEOGRAPHY

UNIT 5

**Agriculture
and Rural
Land-Use
Patterns and
Processes**



12–17%
AP EXAM WEIGHTING



~19–20
CLASS PERIODS

The icon consists of a white circle containing a blue square with the letters 'AP' in white. Below the square is a blue horizontal line with two short vertical bars extending downwards from its center, resembling a computer monitor or a stylized 'I'.

Remember to go to [AP Classroom](#) to assign students the online **Personal Progress Check** for this unit.

Whether assigned as homework or completed in class, the **Personal Progress Check** provides each student with immediate feedback related to this unit's topics and skills.

Personal Progress Check 5

Multiple-choice: ~35 questions

Free-response: 1 question

- 2 stimuli

Agriculture and Rural Land-Use Patterns and Processes



Developing Understanding

BIG IDEA 1

Patterns and Spatial Organization **PSO**

- How do a people's culture and the resources available to them influence how they grow food?

BIG IDEA 2

Impacts and Interactions **IMP**

- How does what people produce and consume vary in different locations?

BIG IDEA 3

Spatial Patterns and Societal Change **SPS**

- What kind of cultural changes and technological advances have impacted the way people grow and consume food?

This unit examines the origins of agriculture and its subsequent diffusion. Students learn about the ways agricultural practices have changed over time as a result of technological innovations, such as equipment mechanization and improvements in transportation that create global markets. In addition, they examine the consequences of agricultural practices such as the use of high-yield seeds and chemicals, revisiting the human–environmental relationships studied in Unit 1.

Course emphasis on spatial patterns is evident in this unit as students consider the differences in what foods or resources are produced and where they are produced. These agricultural production regions are impacted by economic and technological forces that increase the size of agricultural operations and the carrying capacity of the land. This has in turn created a global system of agriculture and the interdependence of regions of agricultural consumption and production.

Student understanding of this global system of agriculture based on government cooperation lays the foundation for a deeper understanding of economic development in the final unit of the course.

UNIT AT A GLANCE

Enduring Understanding	Topic	Suggested Skill	Class Periods
			~19–20 CLASS PERIODS
PSO-5	5.1 Introduction to Agriculture	2.D Explain the significance of geographic similarities and differences among different locations and/or at different times.	
	5.2 Settlement Patterns and Survey Methods	4.D Compare patterns and trends in visual sources to draw conclusions.	
SPS-5	5.3 Agricultural Origins and Diffusions	2.B Explain spatial relationships in a specified context or region of the world, using geographic concepts, processes, models, or theories.	
	5.4 The Second Agricultural Revolution	4.D Compare patterns and trends in visual sources to draw conclusions.	
	5.5 The Green Revolution	2.D Explain the significance of geographic similarities and differences among different locations and/or at different times.	
PSO-5	5.6 Agricultural Production Regions	2.E Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects in different contexts and regions of the world.	
	5.7 Spatial Organization of Agriculture	2.D Explain the significance of geographic similarities and differences among different locations and/or at different times.	
	5.8 Von Thünen Model	5.B Explain spatial relationships across various geographic scales using geographic concepts, processes, models, or theories.	
	5.9 The Global System of Agriculture	5.D Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects and across various geographic scales.	
IMP-5	5.10 Consequences of Agricultural Practices	2.E Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects in different contexts and regions of the world.	
	5.11 Challenges of Contemporary Agriculture	4.D Compare patterns and trends in visual sources to draw conclusions.	
	5.12 Women in Agriculture	3.D Compare patterns and trends in maps and in quantitative and geospatial data to draw conclusions.	
 Go to AP Classroom to assign the Personal Progress Check for Unit 5. Review the results in class to identify and address any student misunderstandings.			

SAMPLE INSTRUCTIONAL ACTIVITIES

The sample activities on this page provide ways to integrate the teaching of skills and content from the unit into your classroom instruction. They are completely optional and may be altered to suit the needs of your class. Please refer to the Instructional Approaches section beginning on page 133 for more examples of activities and strategies.

Activity	Topic	Sample Activity
1	5.3	<p>Close Reading</p> <p>Have students read materials regarding the Columbian Exchange and the subsequent diffusion of plants and animals across the world. In their reading, students can highlight claims of changes to agriculture as a result of the Columbian Exchange. Next, have students hypothesize how their diets would be different than they are today had the Columbian Exchange not occurred.</p>
2	5.8	<p>Shared Inquiry</p> <p>Have students read “Understanding Land Use Patterns” by Robert Bednarz, available under Classroom Resources on the AP Central site. Have students discuss the factors of land-use patterns identified by Bednarz in his article and how and why they have changed from Von Thünen’s time.</p>
3	5.10	<p>Socratic Seminar</p> <p>By holding a focused discussion around the essential question, <i>How does society change as agricultural practices change?</i> you can provide students with an opportunity to illustrate their understanding in depth. Students can be encouraged to address environmental, social, economic, and cultural opportunities and challenges for both commercial and subsistence agriculture.</p>



Unit Planning Notes

Use the space below to plan your approach to the unit. Consider how you want to pace your course and your methods of instruction and assessment.

.....

.....

.....

SUGGESTED SKILL

 *Spatial Relationships*

2.D

Explain the significance of geographic similarities and differences among different locations and/or at different times.



AVAILABLE RESOURCES

- Classroom Resources > [Understanding Land Use Patterns](#)

TOPIC 5.1

Introduction to Agriculture

Required Course Content

ENDURING UNDERSTANDING

PSO-5

Availability of resources and cultural practices influence agricultural practices and land-use patterns.

LEARNING OBJECTIVE

PSO-5.A

Explain the connection between physical geography and agricultural practices.

ESSENTIAL KNOWLEDGE

PSO-5.A.1

Agricultural practices are influenced by the physical environment and climatic conditions, such as the Mediterranean climate and tropical climates.

PSO-5.A.2

Intensive farming practices include market gardening, plantation agriculture, and mixed crop/livestock systems.

PSO-5.A.3

Extensive farming practices include shifting cultivation, nomadic herding, and ranching.

TOPIC 5.2

Settlement Patterns and Survey Methods

SUGGESTED SKILL

 *Source Analysis*

4.D

Compare patterns and trends in visual sources to draw conclusions.

Required Course Content

ENDURING UNDERSTANDING

PSO-5

Availability of resources and cultural practices influence agricultural practices and land-use patterns.

LEARNING OBJECTIVE

PSO-5.B

Identify different rural settlement patterns and methods of surveying rural settlements.

ESSENTIAL KNOWLEDGE

PSO-5.B.1

Specific agricultural practices shape different rural land-use patterns.

PSO-5.B.2

Rural settlement patterns are classified as clustered, dispersed, or linear.

PSO-5.B.3

Rural survey methods include metes and bounds, township and range, and long lot.

SUGGESTED SKILL

 *Spatial Relationships*

2.B

Explain spatial relationships in a specified context or region of the world, using geographic concepts, processes, models, or theories.



AVAILABLE RESOURCES

- Classroom Resources > [Scale](#)

TOPIC 5.3

Agricultural Origins and Diffusions

Required Course Content

ENDURING UNDERSTANDING

SPS-5

Agriculture has changed over time because of cultural diffusion and advances in technology.

LEARNING OBJECTIVE

SPS-5.A

Identify major centers of domestication of plants and animals.

SPS-5.B

Explain how plants and animals diffused globally.

ESSENTIAL KNOWLEDGE

SPS-5.A.1

Early hearths of domestication of plants and animals arose in the Fertile Crescent and several other regions of the world, including the Indus River Valley, Southeast Asia, and Central America.

SPS-5.B.1

Patterns of diffusion, such as the Columbian Exchange and the agricultural revolutions, resulted in the global spread of various plants and animals.

TOPIC 5.4

The Second Agricultural Revolution

SUGGESTED SKILL

 *Source Analysis*

4.D

Compare patterns and trends in visual sources to draw conclusions.

Required Course Content

ENDURING UNDERSTANDING

SPS-5

Agriculture has changed over time because of cultural diffusion and advances in technology.

LEARNING OBJECTIVE

SPS-5.C

Explain the advances and impacts of the second agricultural revolution.

ESSENTIAL KNOWLEDGE

SPS-5.C.1

New technology and increased food production in the second agricultural revolution led to better diets, longer life expectancies, and more people available for work in factories.

SUGGESTED SKILL

 *Spatial Relationships*

2.D

Explain the significance of geographic similarities and differences among different locations and/or at different times.

TOPIC 5.5

The Green Revolution

Required Course Content

ENDURING UNDERSTANDING

SPS-5

Agriculture has changed over time because of cultural diffusion and advances in technology.

LEARNING OBJECTIVE

SPS-5.D

Explain the consequences of the Green Revolution on food supply and the environment in the developing world.

ESSENTIAL KNOWLEDGE

SPS-5.D.1

The Green Revolution was characterized in agriculture by the use of high-yield seeds, increased use of chemicals, and mechanized farming.

SPS-5.D.2

The Green Revolution had positive and negative consequences for both human populations and the environment.

TOPIC 5.6

Agricultural Production Regions

SUGGESTED SKILL

 *Spatial Relationships*

2.E

Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects in different contexts and regions of the world.



AVAILABLE RESOURCES

- Classroom Resources > [Understanding Land Use Patterns](#)

Required Course Content

ENDURING UNDERSTANDING

PSO-5

Availability of resources and cultural practices influence agricultural practices and land-use patterns.

LEARNING OBJECTIVE

PSO-5.C

Explain how economic forces influence agricultural practices.

ESSENTIAL KNOWLEDGE

PSO-5.C.1

Agricultural production regions are defined by the extent to which they reflect subsistence or commercial practices (monocropping or monoculture).

PSO-5.C.2

Intensive and extensive farming practices are determined in part by land costs (bid-rent theory).

SUGGESTED SKILL

 *Spatial Relationships*

2.D

Explain the significance of geographic similarities and differences among different locations and/or at different times.

TOPIC 5.7

Spatial Organization of Agriculture

Required Course Content

ENDURING UNDERSTANDING

PSO-5

Availability of resources and cultural practices influence agricultural practices and land-use patterns.

LEARNING OBJECTIVE

PSO-5.C

Explain how economic forces influence agricultural practices.

ESSENTIAL KNOWLEDGE

PSO-5.C.3

Large-scale commercial agricultural operations are replacing small family farms.

PSO-5.C.4

Complex commodity chains link production and consumption of agricultural products.

PSO-5.C.5

Technology has increased economies of scale in the agricultural sector and the carrying capacity of the land.

TOPIC 5.8

Von Thünen Model

Required Course Content

ENDURING UNDERSTANDING

PSO-5

Availability of resources and cultural practices influence agricultural practices and land-use patterns.

LEARNING OBJECTIVE

PSO-5.D

Describe how the von Thünen model is used to explain patterns of agricultural production at various scales.

ESSENTIAL KNOWLEDGE

PSO-5.D.1

Von Thünen’s model helps to explain rural land use by emphasizing the importance of transportation costs associated with distance from the market; however, regions of specialty farming do not always conform to von Thünen’s concentric rings.

SUGGESTED SKILL

 *Scale Analysis*

5.B

Explain spatial relationships across various geographic scales using geographic concepts, processes, models, or theories.



AVAILABLE RESOURCES

- Classroom Resources > [Understanding Land Use Patterns](#)
- Classroom Resources > [Scale](#)

SUGGESTED SKILL Scale Analysis**5.D**

Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects across various geographic scales.

**AVAILABLE RESOURCES**

- Classroom Resources > [Scale](#)

TOPIC 5.9

The Global System of Agriculture

Required Course Content

ENDURING UNDERSTANDING**POS-5**

Availability of resources and cultural practices influence agricultural practices and land use patterns.

LEARNING OBJECTIVE**PSO-5.E**

Explain the interdependence among regions of agricultural production and consumption.

ESSENTIAL KNOWLEDGE**PSO-5.E.1**

Food and other agricultural products are part of a global supply chain.

PSO-5.E.2

Some countries have become highly dependent on one or more export commodities.

PSO-5.E.3

The main elements of global food distribution networks are affected by political relationships, infrastructure, and patterns of world trade.

TOPIC 5.10
**Consequences of
Agricultural
Practices**

Required Course Content

ENDURING UNDERSTANDING

IMP-5

Agricultural production and consumption patterns vary in different locations, presenting different environmental, social, economic, and cultural opportunities and challenges.

LEARNING OBJECTIVE

IMP-5.A

Explain how agricultural practices have environmental and societal consequences.

ESSENTIAL KNOWLEDGE

IMP-5.A.1

Environmental effects of agricultural land use include pollution, land cover change, desertification, soil salinization, and conservation efforts.

IMP-5.A.2

Agricultural practices—including slash and burn, terraces, irrigation, deforestation, draining wetlands, shifting cultivation, and pastoral nomadism—alter the landscape.

IMP-5.A.3

Societal effects of agricultural practices include changing diets, role of women in agricultural production, and economic purpose.

SUGGESTED SKILL

 *Spatial Relationships*

2.E

Explain the degree to which a geographic concept, process, model, or theory effectively explains geographic effects in different contexts and regions of the world.



AVAILABLE RESOURCES

- Classroom Resources > [Understanding Land Use Patterns](#)

SUGGESTED SKILL

 Source Analysis

4.D

Compare patterns and trends in visual sources to draw conclusions.



AVAILABLE RESOURCES

- Classroom Resources > [Understanding Land Use Patterns](#)

TOPIC 5.11

Challenges of Contemporary Agriculture

Required Course Content

ENDURING UNDERSTANDING

IMP-5

Agricultural production and consumption patterns vary in different locations, presenting different environmental, social, economic, and cultural opportunities and challenges.

LEARNING OBJECTIVE

IMP-5.B

Explain challenges and debates related to the changing nature of contemporary agriculture and food-production practices.

ESSENTIAL KNOWLEDGE

IMP-5.B.1

Agricultural innovations such as biotechnology, genetically modified organisms, and aquaculture have been accompanied by debates over sustainability, soil and water usage, reductions in biodiversity, and extensive fertilizer and pesticide use.

IMP-5.B.2

Patterns of food production and consumption are influenced by movements relating to individual food choice, such as urban farming, community-supported agriculture (CSA), organic farming, value-added specialty crops, fair trade, local-food movements, and dietary shifts.

IMP-5.B.3

Challenges of feeding a global population include lack of food access, as in cases of food insecurity and food deserts; problems with distribution systems; adverse weather; and land use lost to suburbanization.

IMP-5.B.4

The location of food-processing facilities and markets, economies of scale, distribution systems, and government policies all have economic effects on food-production practices.

TOPIC 5.12

Women in Agriculture

SUGGESTED SKILL

 *Data Analysis***3.D**

Compare patterns and trends in maps and in quantitative and geospatial data to draw conclusions.

Required Course Content

ENDURING UNDERSTANDING

IMP-5

Agricultural production and consumption patterns vary in different locations, presenting different environmental, social, economic, and cultural opportunities and challenges.

LEARNING OBJECTIVE

IMP-5.C

Explain geographic variations in female roles in food production and consumption.

ESSENTIAL KNOWLEDGE

IMP-5.C.1

The role of females in food production, distribution, and consumption varies in many places depending on the type of production involved.

