

# FRANKLIN-SIMPSON HIGH SCHOOL

**Course Name:** APES      **Unit Name:** Land and Water Use

## **Objectives:**

### **Land and Water Use (10–15%)**

#### A. Agriculture

##### 1. Feeding a growing population

(Human nutritional requirements; types of agriculture; Green Revolution; genetic engineering and crop production; deforestation; irrigation; sustainable agriculture)

##### 2. Controlling pests

(Types of pesticides; costs and benefits of pesticide use; integrated pest management; relevant laws)

#### A. Forestry

(Tree plantations; old growth forests; forest fires; forest management; national forests)

#### B. Rangelands

(Overgrazing; deforestation; desertification; rangeland management; federal rangelands)

#### D. Other Land Use

##### 1. Urban land development

(Planned development; suburban sprawl; urbanization)

##### 2. Transportation infrastructure

(Federal highway system; canals and channels; roadless areas; ecosystem impacts)

##### 3. Public and federal lands

(Management; wilderness areas; national parks; wildlife refuges; forests; wetlands)

##### 4. Land conservation options

(Preservation; remediation; mitigation; restoration)

##### 5. Sustainable land-use strategies

#### E. Mining

(Mineral formation; extraction; global reserves; relevant laws and treaties)

#### A. Fishing

(Fishing techniques; overfishing; aquaculture; relevant laws and treaties)

#### B. Global Economics

(Globalization; World Bank; Tragedy of the Commons; relevant laws and treaties)

**Purpose of the Unit:**

Identify and describe water resources, and understand how humans are managing and using this valuable resource. Understand the tragedy of the commons, public land management, and urban development, as well as mining techniques and issues. Understand hunger and malnutrition, agriculture, and the environmental impacts of different farming techniques.

**Prerequisites:**

All prior units in this class

**Daily Lesson Guide**

<b>Day</b>	<b>Lesson Content and Objectives</b>	<b>Focus Questions</b>	<b>Critical Thinking (High Yield / Literacy /LTF/etc.)</b>	<b>Engagement</b>	<b>Assessment and/or Accommodations</b>
<b>1</b> R 1/3	Flow	Discuss the ways in which humans manage water distribution, and identify Earth's natural sources of water.	Constructing an argument	Summarizing and note taking, constructing an argument	Bell Ringer, students will be completing a graphic organizer that will be used to construct an argument
<b>2</b> F 1/4	Flow	Describe the major human uses of water, and identify the factors that will affect the future availability of water.	Constructing an argument	Summarizing and note taking, constructing an argument	Bell Ringer, students will be completing a graphic organizer that will be used to construct an argument
<b>3</b> M	Water Issues and legislation	Discuss the ways in which humans	Guided Notes, similarities and	Guided notes, and discussion	Bell Ringer, discuss organizer from last week

1/7		manage water distribution, and identify Earth's natural sources of water.	differences		
4 T 1/8	Distribution and use of water	Describe the major human uses of water, and identify the factors that will affect the future availability of water.	Graphic Organizer, Discussion	Guided notes, and formative quiz	Bell Ringer, clicker quiz over Chapter 9
5 W 1/9	Intro to land use, Tragedy of the Commons lab	Describe the concepts of the tragedy of the commons and maximum sustainable yield, and explain how they pertain to land use.	Manipulatives	Hands on lab	Bell Ringer, turn in lab questions
6 R 1/10	Mining and laws	Explain how elements and minerals are extracted for human use.	Learning with others	Jig saw	Bell Ringer, class discussion
7 F 1/11	Mining lab	Explain how elements and minerals are extracted for	Manipulatives	Hands on lab	Bell Ringer, turn in lab

		human use.			
<b>8</b> M 1/14	Public land use, federal agencies, land management practices	Describe the function, operation, and efficacy of the four major public land management agencies in the United States.	Learning with others	Jig Saw	Bell Ringer, answers to discussion questions
<b>9</b> T 1/15	Residential land use	Understand and describe the causes and consequences of urban sprawl. Describe approaches and policies that promote sustainable land use.	Assessing learning	Case Study	Bell Ringer, answer discussion questions
<b>10</b> W 1/16	Agriculture intro Hunger Lab due Friday	Describe human nutritional needs and the challenges of overcoming hunger and malnutrition.	Learning with others	Case Study, demonstration	Bell Ringer, exit slip
<b>11</b> R 1/17	Research GM, Green Revolution,	Research and create a presentation	Preparing an informational presentation	Research and presentation development	Monitor student's work. Rubric

	Alternative farming and pest management, Agribusiness	about your topic related to agriculture.			
<b>12</b> F 1/18	Research	Research and create a presentation about your topic related to agriculture.	Preparing an informational presentation	Research and presentation development	Monitor student's work. Rubric
<b>13</b> W 1/23	Research	Research and create a presentation about your topic related to agriculture.	Preparing an informational presentation	Research and presentation development	Bell Ringer, Monitor student's work. Rubric
<b>14</b> R 1/24	Present	Present about your topic related to agriculture.	Informational presentation	Presentation, students fill out organizer as other groups present	Bell Ringer, rubric over presentation
<b>15</b> F 1/25	Present	Present about your topic related to agriculture.	Informational presentation	Presentation, students fill out organizer as other groups present	Bell Ringer, rubric over presentation
<b>16</b> M 1/28	Misc Agriculture topics, land conservation, DO	Explain what dissolved oxygen is, why it is important, and how to measure it.	Learning with others, manipulatives	Lab over DO, real world application	Bell Ringer, exit slip over DO
<b>17</b> T 1/29	Global Policies	Compare several global policies that surround	Learning with others	Jig Saw	Bell Ringer, use white boards to assess policies

		land and water use			
<b>18</b> W 1/30	Review	Summarize how humans impact land and water, and how they are used worldwide.	Closure	Review Game	Bell Ringer, assess students as they play review game
<b>19</b> R 1/31	MC Test	Summative end of Unit Test	Summative Assessment	Summative Assessment	Bell Ringer, summative assessment
<b>20</b> F 2/1	FRQ Test	Summative end of Unit Test	Summative Assessment	Summative Assessment	Bell Ringer, summative assessment