## GEOGRAPHICAL SKILLS (DAY 2):

**Human Geography Skills:**

1. B. Explain geographic concepts, processes, models, and theories.

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

## CONTENT (DAY 2):

This content is designed for any High School Social Studies Class. Day 1 is History-centered while Days 2 and 3 are Geography-centered.

AP Human Geography references:

- Topic 3.6 Contemporary Causes of Diffusion
- SPS-3.A.3 Cultural ideas and practices are socially constructed and change through both small-scale and large-scale processes such as urbanization and globalization. These processes come to bear on culture through media, technological change, politics, economics, and social relationships.
- Topic 2.3 Population Composition
- PSO-2.E.1 Patterns of age structure and sex ratio vary across different regions and may be mapped and analyzed at different scales.

### DAY 1

**TO WHAT EXTENT IS THE CORONAVIRUS SIMILAR TO THE SPANISH FLU?**

**CLASS ACTIVITY: Making a Claim supported by Evidence**

Students will investigate primary and secondary sources on the Coronavirus/COVID-19 pandemic of 2020 and the Spanish Influenza pandemic of 1918. Students will identify similarities and differences between government responses, Geographic diffusion, cultural impact, economic impact, public reaction, and the effects of the diseases themselves.

**CHECK FOR UNDERSTANDING: Thesis Statement**

Students will synthesize comparisons between the Coronavirus and Spanish Influenza pandemics into an argumentative claim backed by document evidence.

### DAY 2

**HOW DO WE SLOW DIFFUSION IN A GLOBALIZED WORLD?**

**CLASS ACTIVITY: Analyzing Quantitative Data**

Students will investigate sources on the diffusion of COVID-19. Students will analyze population pyramids for five countries impacted by COVID-19.

**CHECK FOR UNDERSTANDING: Making Predictions**

Students will predict how the diffusion of information regarding COVID 19 impacts the diffusion of the virus.

### DAY 3

**WHAT ARE THE ECONOMIC CONSEQUENCES OF A PANDEMIC?**

**CLASS ACTIVITY: Analyzing Quantitative Data**

Students will analyze global economic data showing the impact of the spread of COVID-19. Students will analyze the growth of COVID-19 cases in Italy, South Korea, and the United States to identify current trends and to predict future growth as well as comparing how each country has addressed the spread of COVID-19.

**CHECK FOR UNDERSTANDING: Global Impact of COVID-19**

Students will analyze changes in GDP forecasts for selected countries to demonstrate their understanding of the economic consequences of COVID-19, identify successful approaches to addressing the growth of COVID-19, and finally to discuss global consequences of pandemics.
## Module Sources

<table>
<thead>
<tr>
<th>Day</th>
<th>Author</th>
<th>Source</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>WHDE Authors</td>
<td>Why was the 1918 Flu so Deadly?</td>
<td>March 13, 2020</td>
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<td></td>
<td>WHDE Authors</td>
<td>The Science Behind the Flu</td>
<td>March 13, 2020</td>
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<td>WHDE Authors</td>
<td>Art and the Spanish Flu</td>
<td>March 13, 2020</td>
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<td>WHDE Authors</td>
<td>Government Measures to Fight the New Plague</td>
<td>March 13, 2020</td>
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<td></td>
<td>WHDE Authors</td>
<td>The Largest Flu Pandemic in History</td>
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<td>WHDE Authors</td>
<td>How the Flu Spread Across America</td>
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<td>WHDE Authors</td>
<td>Effects of the 1918 Influenza Pandemic</td>
<td>March 13, 2020</td>
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<td><strong>2</strong></td>
<td>CDC</td>
<td>Map of COVID 19 Cases</td>
<td>March 11, 2021</td>
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<tr>
<td></td>
<td>UCSUSA</td>
<td>Exponential vs Linear Growth Curves</td>
<td>April 9, 2018</td>
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<td></td>
<td>Worldometers</td>
<td>Graph of COVID-19 Cases- Europe vs United States</td>
<td>March 14, 2021</td>
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<td></td>
<td>Drew Harris</td>
<td>Flatten the Curve</td>
<td>2020</td>
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<td>Wikimedia Commons</td>
<td>Map of Airline Connections</td>
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<td>Social Distancing Tweet from CDC</td>
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<td>White House</td>
<td>White House Avoid Eating Out Tweet</td>
<td>March 16, 2020</td>
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<td></td>
<td>Wikimedia Commons</td>
<td>World Map of Urbanization Levels</td>
<td>2015</td>
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<td></td>
<td>CDC</td>
<td>Risk for COVID-19 Infection, Hospitalization, and Death by Age Group</td>
<td>February 18, 2021</td>
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<td><strong>3</strong></td>
<td>WHDE Authors</td>
<td>Top 5 Markets for Motor Vehicle Parts and Accessories produced in China (2018)</td>
<td>March 15, 2020</td>
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<tr>
<td></td>
<td>WHDE Authors</td>
<td>Estimated Impact of COVID-19 outbreak on global tech shipments in Q1 2020</td>
<td>March 15, 2020</td>
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<td>WHDE Authors</td>
<td>Quarterly Change in Global Smartphone Shipment 2020</td>
<td>March 27, 2021</td>
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<td></td>
<td>WHDE Authors</td>
<td>Dow Jones Industrial Average, EURO STOXX 50 Average, NIKKEI 225 Average, SSE Composite Index 2/18/20 -3/12/20</td>
<td>March 15, 2021</td>
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<td>Airline Revenue Losses 2020 By Region</td>
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<td></td>
<td>WHDE Authors</td>
<td>Impacts on Airline travel and revenue</td>
<td>March 15, 2021</td>
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<td></td>
<td>WHDE Authors</td>
<td>Impact on Royal Caribbean Cruises</td>
<td>March 15, 2021</td>
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<tr>
<td></td>
<td>WHDE Authors</td>
<td>Total Coronavirus Cases 2/15/20 -3/16/20</td>
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<td>New Coronavirus Cases in Italy, United States, and South Korea 2/15/20 - 3/16/20</td>
<td>March 16, 2020</td>
</tr>
<tr>
<td></td>
<td>WHDE Authors</td>
<td>South Korea, Italy, and United States Approaches to addressing the spread of Coronavirus</td>
<td>March 15, 2021</td>
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<tr>
<td></td>
<td>WHDE Authors</td>
<td>Organization for Economic Cooperation and Development (OECD) Changes in GDP Growth Forecast 2020</td>
<td>March 15, 2021</td>
</tr>
</tbody>
</table>
DAY 2

Based on a 60-minute class

Lesson Question: How does globalization help diffuse diseases such as COVID-19 across different populations?

Social Studies Skill: Spatial Relationships (Geography)

OVERVIEW

Students will examine the diffusion of COVID-19 and then examine the different population pyramids of five countries affected by COVID-19. The diffusion of COVID-19 is a significant global issue and also reveals one of the liabilities of increased globalization. The five focus countries were selected because they were the main countries receiving media attention for COVID-19 cases as of mid-March 2020. Furthermore, each of the focus countries represent different population structures, making the impact of the virus potentially different.

Materials needed:
In Person- Copies of the activity materials.
Online- Post the activity materials.
Create a copy of this Google Form to record student answers
(you can choose to use Google Forms to collect student responses, in person or virtually)

SEQUENCE OF INSTRUCTION

CLASS ACTIVITY: WARM-UP/INTRODUCTION

WARM-UP/INTRODUCTION (5 MINUTES):

ACTIVITY 1: COVID-19 K-W-L CHART

Have students fill out the first two columns of their KWL Chart. The K column is for what they know about COVID-19 and the W column is for what they want to know about COVID-19. At the conclusion of the lesson they will revisit the chart to fill out the L column with what they have learned. If your students completed Day 1, they should have more information to put in the K column than they will if you are using this day as a standalone.
Teacher Notes

Students likely have heard a lot of information about the COVID-19 virus. Some of the information students may “know” may be incorrect. As a result, you may want to add an additional step and have students then check their K column for accuracy. If you add this step, students will need access to the Internet and an understanding of how to filter sources for accuracy.

Teaching Tip

Consider creating a “shared” Google Doc so that all students can edit the KWL chart as a group. This allows them to add their own thinking in “real time” as part of the introduction or even as part of a homework assignment to set up the lesson.

ACTIVITY 1: What are the patterns of diffusion related to COVID-19?

CLASS ACTIVITY (20-25 MINUTES): Source Analysis

Google Form: To have students record answers using a Google Form, teachers can use this FORM. The link forces you to make a copy. Then you can share the “copied form” link with your students. Here is a screen shot of the Form to preview what students will see:

![Image of Google Form with COVID-19 map]

Students can record their answers in the Form and teachers can export their answers into a Google Sheet to review, grade, and/or provide feedback.

ACTIVITY 1:

Analyze 7 Sources -- Students will analyze the seven provided sources, answering the question(s) at the conclusion of each source. The recommendation is for students to analyze the sources individually, but pairs or small groups are an option as well.
**Synthesis Statement** -- After students have completed their analysis, they should answer the question, “Based upon the documents provided, plus any additional information you may already know, explain in your own words how COVID-19 diffused.” This should be a synthesis statement in which students demonstrate an understanding of the diffusion of the COVID-19 virus.

**KWL** -- Finally, students should return to add relevant information in the last column of their KWL chart.

**Teaching Tip**

If you are teaching this as part of the AP Human Geography course you may encourage students to consider another dimension to the diffusion of viruses such as COVID-19. Although they are diffused contagiously due to person to person contact, the diffusion of COVID-19 outside its hearth fits a hierarchical pattern due to transportation networks.

**ACTIVITY 2: What are the differences in the population structures of some of the countries impacted by COVID 19?**

**CLASS ACTIVITY (15-20 MINUTES): POPULATION PYRAMID ANALYSIS**

**ACTIVITY 2:**

**Task 1**: Students will analyze the five country population pyramids provided and answer a question that follows on the population structure of each society.

**Task 2**: After students have examined each pyramid individually, they should predict the order of the pyramids from youngest to oldest population structures.

(Answers: 1=Iran, 2=China, 3= United States, 4= South Korea, 5= Italy).

Students should check their answers by using a search engine such as Google to find the median age for each country (i.e. Iran “median age”).

**Task 3**: Students read the chart on COVID-19 deaths to understand the significance of population structure related to the spread of the virus. After students have analyzed the chart, they should answer the following question:

“Based upon this information and what you learned regarding the population structure of each of the five focus countries, which country should be most concerned about the spread of the virus and why?”

Once students have answered the question they should return to their K-W-L chart and add information learned from this activity to the last column.
Teaching Tip

If students have never seen a population pyramid previously then you may wish to show them this brief video - https://www.youtube.com/watch?v=RLmKfXwWQtE or assign them this article- https://populationeducation.org/what-population-pyramid/ so they have the background information necessary to effectively complete this activity.

An extension activity would be to have students research the mortality rates of the five focus countries to see if old age is the key factor or if instead there are also other factors.

CHECK FOR UNDERSTANDING (15 minutes)

How does the diffusion of information regarding COVID 19 impact diffusion of the virus?

The student will write a brief essay. Emphasize that there are competing viewpoints regarding the impact that the diffusion of information has had regarding the diffusion of the virus. What do students think will happen? Is the diffusion of information a positive? A negative? Why or why not? The key is that the student should take a position based on what they do know and support that position with evidence and reasoning.

Teaching Tip

If you are conducting this lesson using Online Management Solutions then this would be a good post to a discussion board where students not only share their own responses, but also engage with their classmates to support and/or challenge the statements of others. Regardless of whether students are online or in a face to face teaching environment, have students focus on explaining their rationale and supporting their responses.
<table>
<thead>
<tr>
<th>K</th>
<th>W</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you already know?</td>
<td>What do you want to know?</td>
<td>What have you learned?</td>
</tr>
</tbody>
</table>
DIRECTIONS: As you view each source be sure to answer the questions underneath each source completely. At the conclusion you will be asked to tie each of these sources together to answer the question- “How did COVID-19 diffuse?”

**Source 1 - Map of COVID-19 Cases**
World Health Organization Cumulative Data, CDC, March 11, 2021, 

What are the spatial patterns identifiable in the map above?

Why might there be large variations in the number of cases from March 2020 to March 2021?
Source 2 - Exponential vs Linear Growth Curves

- **Exponential Growth** - Growth that occurs with the doubling of a phenomena. Doubling time is the time it takes for a phenomena to double. In this case, doubling time refers to the amount of time for the number of cases to double.
- **Linear Growth** - Growth that occurs with the same increase for each unit of time.

What is the difference between the two growth curves depicted above?

Source 3 - Graph of COVID-19 Cases in Europe vs United States

The graph above presents the cumulative number of COVID-19 cases in Europe and the United States since their initial 10,000 reported cases. Do the curves display exponential or linear growth? Explain your answer.
Given the information about Italy, why would there be movements to “flatten the curve?”

How might the airline traffic displayed above promote the diffusion of COVID-19?
Source 6- Tweets from the Centers for Disease Control (CDC) on “Social Distancing” and from the White House on Slowing the Spread, 3/16/20.

How do the above tweets attempted to impact the diffusion of COVID-19?
How might high levels of urbanization promote the diffusion of COVID-19?

Notice that China has overall a low level of urbanization despite being considered the hearth* of COVID-19. How might scale be useful in explaining this trend?

*hearth = where a phenomenon begins

**ACTIVITY 1 -- SYNTHESIS STATEMENT**

Based on the documents provided, and any additional information, explain in your own words how COVID-19 diffused.

*Write your answer here*

-When completed, please return to the KWL chart and add a bullet point or two to the L column of your chart
DIRECTIONS: As you analyze each pyramid, be sure to answer the question about the age composition of each pyramid and support your answer with evidence. After analyzing all population pyramids, answer this question:

“How does the population structure differ for five different countries (China, Iran, Italy, South Korea, and the United States) impacted by COVID-19 and why does it matter?”

Hint: When analyzing each pyramid note if it is more top heavy (which would indicate an aging population), bottom heavy (which would indicate a younger population), or evenly dispersed (which would indicate more middle aged).

Is this a young/middle-aged/aging population?

Explain.
Is this a young/middle-aged/aging population?

Explain.

Is this a young/middle-aged/aging population?

Explain.

Is this a young/middle-aged/aging population?

Explain.
**TASK 2 -- Predicting and Identifying Population Structures**

In the chart below, PREDICT the order of the pyramids using 1-5 in the second column.

(1 = the youngest population structure; 5 = oldest population structure)

After you have predicted, check your work! Using your favorite search engine, find the median age for each country (i.e. search for Iran “median age”). Enter the values found in the third column.

<table>
<thead>
<tr>
<th>Country</th>
<th>PREDICTION (1 = young 5 = oldest)</th>
<th>Median Age (search internet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iran</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
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<tr>
<td>South Korea</td>
<td></td>
<td></td>
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<tr>
<td>United States</td>
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</tbody>
</table>
### TASK 3 -- Interpreting Death Rate Data

**Risk for COVID-19 Infection, Hospitalization, and Death by Age Group as of February 18, 2021**

<table>
<thead>
<tr>
<th>Rate compared to 5-17-years¹</th>
<th>0-4 years</th>
<th>5-17 years</th>
<th>18-29 years</th>
<th>30-39 years</th>
<th>40-49 years</th>
<th>50-64 years</th>
<th>65-74 years</th>
<th>75-84 years</th>
<th>85+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases²</td>
<td>&lt;1x</td>
<td>Reference group</td>
<td>3x</td>
<td>2x</td>
<td>2x</td>
<td>2x</td>
<td>2x</td>
<td>2x</td>
<td>2x</td>
</tr>
<tr>
<td>Hospitalization³</td>
<td>2x</td>
<td>Reference group</td>
<td>7x</td>
<td>10x</td>
<td>15x</td>
<td>25x</td>
<td>35x</td>
<td>55x</td>
<td>80x</td>
</tr>
<tr>
<td>Death⁴</td>
<td>2x</td>
<td>Reference group</td>
<td>15x</td>
<td>45x</td>
<td>130x</td>
<td>400x</td>
<td>1100x</td>
<td>2800x</td>
<td>7900x</td>
</tr>
</tbody>
</table>

All rates are relative to the 5-17-year age category. Sample interpretation: Compared with 5-17-year-olds, the rate of death is 45 times higher in 30-39-year-olds and 7,000 times higher in 85+ year-olds. Compared with 18-29-year-olds, the rate of hospitalization is 8 times higher in 75-84-year-olds (55 divided by 7 equals 7.9).

**How to Slow the Spread of COVID-19**
- Wear a mask
- Stay 6 feet apart
- Avoid crowds and poorly ventilated spaces
- Wash your hands

-When completed, please return to the KWL chart and add a bullet point or two to the L column.
**CHECK FOR UNDERSTANDING**

**TAKE A POSITION!**

**How does the diffusion of information regarding COVID-19 impact diffusion of the virus?**

Answer the question above, being sure to use evidence and clear reasoning to support your answer.

There is not a single correct answer.

You should use information from this lesson as part of your answer.

Hint: A first step might be to consider how information diffuses. In what ways does information diffuse quickly or is hindered or is restricted in today’s world.

<table>
<thead>
<tr>
<th>How does the diffusion of information regarding COVID-19 impact diffusion of the virus?</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

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