

Theme

B

Agriculture in East Asia

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PURPOSE

To research, map, and graph the different aspects of agriculture in East Asian countries. Through this exercise, the student will gain knowledge of the different crops of the region, who grows these crops, and the reasons why specific crops are grown in certain areas.

THEME STATEMENT

Technology, Production, Distribution & Consumption (TPDC): Decisions revolving around exchange and economic policies, production, distribution, consumption, and technology (along with well-being) are global in scope.

SUGGESTED TIME

One class period of 90 minutes, or the equivalent in shorter periods.

KEY VOCABULARY & CONCEPTS

Regional bias; exports; imports; agricultural production; consumption.

MATERIALS NEEDED

- atlases
- encyclopedias
- world almanacs
- regional cookbooks of East Asian cuisines
- outline map of East Asia
- graph paper
- rulers

INITIATION (Inquiry, Preview, Involvement)

1. Have students write down on a scrap piece of paper some of the crops that they think are grown in the East Asian region. To assist students in thinking of some crops, students might want to look at some regional cookbooks. (NOTE: It is important to remind students that the foods eaten by East Asian people are not necessarily cultivated in East Asia, and *vice versa*; students could be introduced to import and export concepts here.)

SUMMARY

Adaptable Levels
Grades 7-12

Related Themes
PPE, CCC

Values
Understanding

Skills
Mapping, graphing, analyzing,
researching, recognition,
constructing graph scale,
interpreting

Integration
Language, social studies,
science, math

2. After students have had a few minutes to write down their ideas, have them read their ideas to the class, recording all responses on the board. Explain to students that they will be learning more about East Asian crops, and at the end, they will have the opportunity to review this list for accuracy.
3. Have students locate the different crops that are grown in the general East Asian region. Generally, this can be done with an up-to-date atlas. Have students label these crops colorfully on their outline maps of East Asia.

DEVELOPMENT (Instruction, Data Collection, Organization)

1. Have each student look through an almanac and list the primary crops from each country: China, Japan, North Korea and South Korea (see sample data on *Teacher Background #1*). Students should label these on their maps in some fashion.
2. Using a world almanac and an atlas, each student will construct a bar or circle graph that clearly demonstrates how the countries compare with each other with regard to the following crops: corn, wheat, rice, fish (add other crops as needed/desired). There are a number of different ways to make this comparison between countries—the easiest being a simple comparison between the number of tons of the crop produced by each country. For more advanced students or to encourage more research, production comparisons can be made by dividing the total crop production by the country's total arable land (e.g., pounds per square mile) or by the country's total population (e.g., pounds per capita) [for the latter, see sample graphs on *Teacher Background #1*].
3. As a class, distinguish between cold weather and warm weather crops. Also, discuss how this list of crops grown in East Asian countries compares to their original list of ideas on the board (see “Assessment of Achievement”).

EXTENSION/ENRICHMENT (Idea Articulation, Ownership, Experimentation)

- Have students construct a circle or bar graph that clearly demonstrates the difference between Japan and China with regards to the percent of population employed in the agricultural sector. Additional research may need to be done.
- Have students get into small groups. Assign each group a country to research and analyze why specific crops are grown in certain regions. Necessary research will include determining what elements affect the growth of certain crops (e.g., precipitation, altitude, temperature, soil composition).
- Have students do some comparative research on crops which are *cultivated* in a particular East Asian country as compared to crops which are *consumed* in that same country. This can be followed up with a discussion on imports and exports of that particular country, tracing on their maps the points of origination for imports and the destinations for exports.
- If time permits or if students need to work on map skills, they can make their own maps (see lesson “World at Your Fingertips: Cartographic Skills” by Patrick Rea and other related lessons in this book).

ASSESSMENT OF ACHIEVEMENT

Have students reflect back to the answers on the board and then as a group discuss any differences that they discovered. Alternately, arrange students into small groups and have each group discuss the differences amongst themselves, reporting back to the class with their conclusions. As the groups discuss their findings, the rest of the class may use a simple checklist to assess themselves.

KEY QUESTIONS

- Why are some of the first responses (about crops grown in East Asia) different from the answers that you discovered during your research?
- What information did you find the most interesting?
- What affects the growth of crops in China? Japan? Korea?
- What is the main problem of growing crops in China? Japan? Korea?
- How have the countries of East Asia improved their crop production?

ALTERNATIVES

- If necessary, students can work in small groups and rank or list the information instead of constructing graphs.
- Focus the discussion from a slightly different angle on how countries of East Asia have improved their crop production.

REFERENCES & RECOMMENDED RESOURCES

- *Hammond Comparative World Atlas*. Maplewood: Hammond, Inc., 1997.
- *The World Almanac and Book of Facts, 1997*. Mahwah: Kill Communications, 1997.

TEACHER BACKGROUND #1:

Leading Agricultural Crops and Production Comparisons

PRIMARY AGRICULTURAL CROPS GROWN (current as of 1997):

CHINA: wheat, rice, cotton, potatoes, tea

JAPAN: rice, sugar, beets, vegetables, fruits

NORTH KOREA: corn, potatoes, soybeans, rice

SOUTH KOREA: rice, barley, vegetables

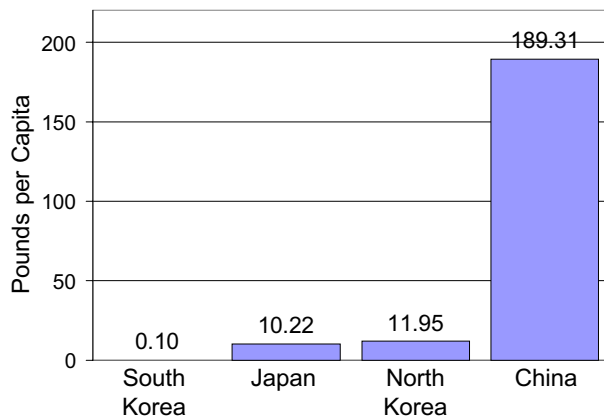
PRODUCTION COMPARISONS OF SELECTED CROPS:

[Data from: (1) *The World Almanac and Book of Facts, 1997*. Mahwah: Kill Communications, 1997; (2) CIA World Factbook, <http://hoshi.cic.sfu.ca/cgi-bin/cia.pl>]

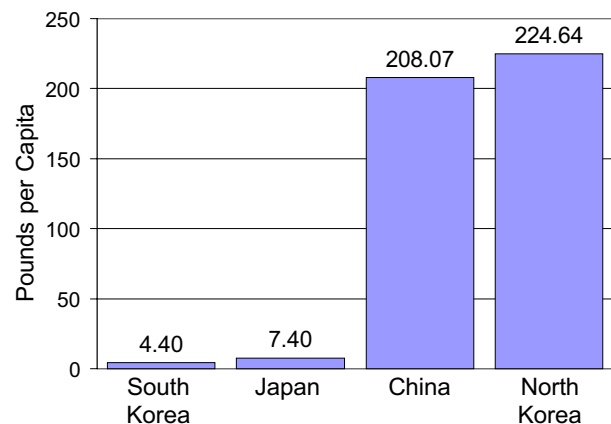
NOTE ON CONVERSION: All data was converted from “metric tons” to “pounds/capita” as follows: 1 metric ton=1000 kg and 2.205kg=1 lb. Total pounds were then divided by the country’s population to derive the *number of pounds per capita*.

NOTE ON DATA INTERPRETATION: The data below represents *production* and should not be confused with *consumption* by the population. It is important to remember that “pounds per capita” assumes that: (1) all members of the population would be allocated *equal portions* of the crop, and (2) all crop production is available on the domestic market (i.e., none of the crop production is exported or stored for future use). The “per capita” calculations are useful insofar as it standardizes the base of comparison between countries. This would be an excellent opportunity to discuss exporting and importing with your students.

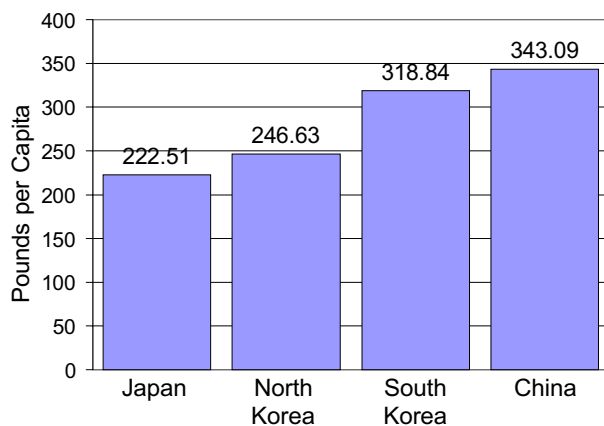
AGRICULTURAL PRODUCTION: WHEAT



AGRICULTURAL PRODUCTION: CORN



AGRICULTURAL PRODUCTION: RICE



AGRICULTURAL PRODUCTION: FISHING

