Latitude and Longitude Bingo
Using the cities of the United States, bingo will help reinforce the concepts of latitude and longitude.

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Grade Level: 4-5
Duration: 1 class period

Overview
Latitude and longitude provide a method of locating with precision a given location on a map. Knowledge of how to read longitude and latitude is important map reading skill.

Purpose
The students will use latitude and longitude lines on a map of the United States to locate cities.

Materials
- The United States Bingo map
- Blank Bingo Boards, one per student
- Counters such as beans, chips, etc. for Bingo markers
- Latitude and Longitude Reference sheet for teacher (2 copies—1 for reference, 1 to cut up)

Objectives
The student will be able to:

1. Distinguish between lines of latitude and longitude on a map.
2. Identify cities given their latitude and longitude using estimation to the nearest 5° reading.
3. Understand the relationship between latitude and longitude regarding parallelism and perpendicularity.

Arizona Geography Strand 4
CONCEPT 1 World in Spatial Terms
GRADE 4
PO 2 Interpret political and physical maps using grid g. latitude and longitude
GRADE 5
PO 2 Locate features in the world on a map using latitude and longitude

Arizona Math Standard
STRAND 1 Number Sense and Operations
CONCEPT 3: Estimation
GRADE 4
PO1. Solve grade level appropriate problems using estimation. With particular emphasis on latitude/longitude readings.
GRADE 5
PO1. Solve grade level appropriate problems using estimation. With particular emphasis on latitude/longitude readings.

- Latitude and Longitude Quiz for assessment with answer key
**Latitude and Longitude Bingo**

**Procedures**

*Prerequisite geography skill: Distinguish between latitude and longitude lines on a map.*

*Prerequisite math skill: Identify parallel and perpendicular lines.*

1. Have students identify several cities in the United States.
2. Review latitude and longitude in reference to parallel and perpendicular, as well as estimating degrees between each latitude and longitude line on a map.
3. Review the rules for Bingo. Once a student has 5 spaces in a row (horizontally, vertically, or diagonally) covered, BINGO may be called. To win, a student must call the city name and give the approximate latitude and longitude while looking at the U.S. map. Be sure to remind students that latitude is read first.
4. Distribute map and empty Bingo Board (one per student).
5. Students fill in Bingo Board with their choice of names of cities on the United States map. Students should not write the latitude and longitude in the spaces. (Note: all of the cities will not fit on the Bingo Board so students may choose any 25 of the cities listed on the map.)
6. Model the game by stating the latitude and longitude for any city on the map and check for understanding.
7. Call out the latitude and longitude of cities on cards one at a time, giving adequate time to locate the city on the map. Students cover the city if they have it on their Bingo board.

8. To win, a student must call BINGO and then state the 5 city names covered and give the approximate latitude and longitude for the 5 cities. Students will use the U.S. map to determine the latitude and longitude.

9. For closure, review how to determine latitude and longitude.

10. Students will complete the assessment worksheet to test conceptual knowledge of latitude, longitude, parallelism, perpendicularity, and estimation as well as practice math skills measured by Stanford Achievement Tests.

**Assessment**

Students will complete the assessment worksheet to test conceptual knowledge of latitude, longitude, parallel, perpendicular and estimation as well as practice math skills. Mastery is considered 80% or higher.

**Extensions**

Have the students continue to use latitude and longitude to find other locations in the world. Using newspaper stories can be great for current event discussions as well as providing topics for plotting with latitude and longitude.

**Sources**

www.bcca.org/misc/qiblih/latlong_us.html

www.getty.edu/research/tools/vocabulary/tgn/