Social Science: Geography

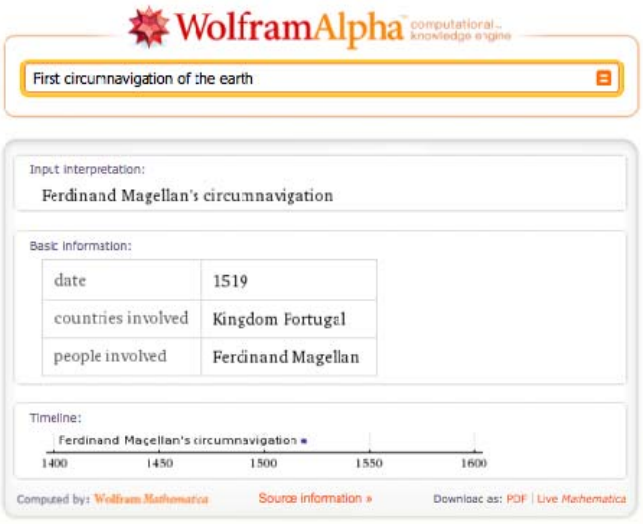
Around the World in Forty Hours

Objectives

Students will be able to:
- Compare distances and travel times between different locations on Earth.
- Research cultural and demographic information about foreign countries.
- Create a travel narrative conveying new knowledge to others.

Warm-Up

Ask students if they can name people who have traveled around the world, and how they have done so—ship, airplane, balloon, or other means? W|A can help students identify the first person to travel around the globe, who traveled by ship.

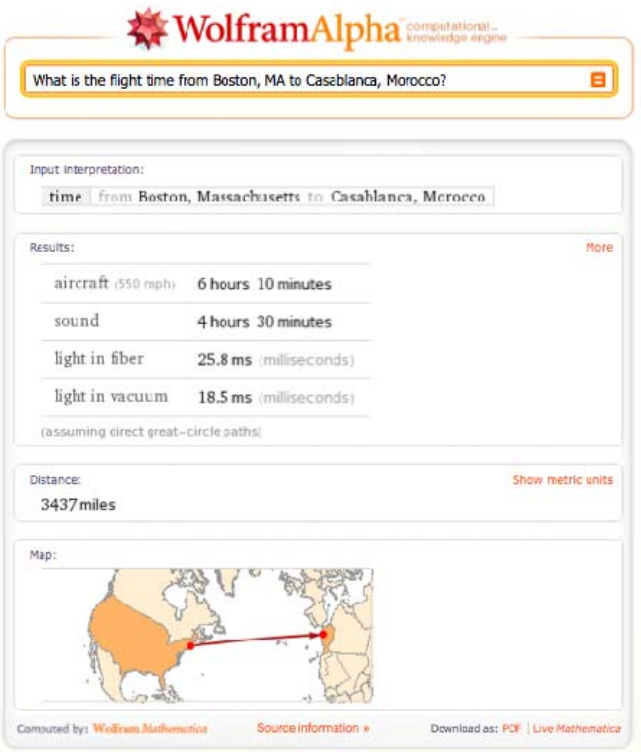


Ask students how they would travel if they wished to circle the globe today. What form or forms of transportation would they use? Where might they stop along the way?

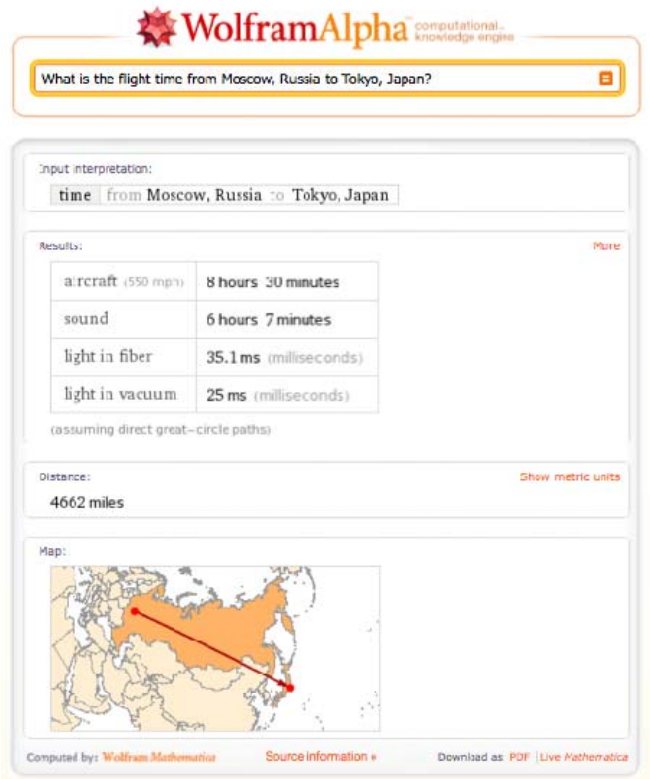
Lesson

• *Around the World in Eighty Days*: Ask students to read the third chapter of the Jules Verne novel, either from a school library or from an online text (the work is in the public domain). Discuss "the bet" aloud as a class. Does rounding the world in eighty days by steamship and railroad seem plausible? Point out that the story describes travel times, but says nothing about travel *schedules*; is it reasonable to assume that all ships and trains will be leaving as soon as possible after the traveler arrives?

• Try a similar estimation using W|A. Have students pick a collection of five cities forming a rough circle around the world, then compute travel times between them.




WolframAlpha computational knowledge engine
What is the flight time from Casablanca, Morocco to Moscow, Russia?
Input interpretation:
time from Casablanca, Morocco to Moscow, Russia
Results:
More
aircraft (550 mph) 4 hours 50 minutes
sound 3 hours 30 minutes
light in fiber 19.8 ms (milliseconds)
light in vacuum 14.1 ms (milliseconds)
(assuming direct great-circle paths)
Distance:
Show metric units
2633 miles
Map:
Computed by: Wolfram Mathematica
Source information »
Download as: PDF | Live Mathematica


WolframAlpha computational knowledge engine
What is the flight time from Moscow, Russia to Tokyo, Japan?
Input interpretation:
time from Moscow, Russia to Tokyo, Japan
Results:
More
aircraft (550 mph) 8 hours 30 minutes
sound 6 hours 7 minutes
light in fiber 35.1 ms (milliseconds)
light in vacuum 25 ms (milliseconds)
(assuming direct great-circle paths)
Distance:
Show metric units
4662 miles
Map:
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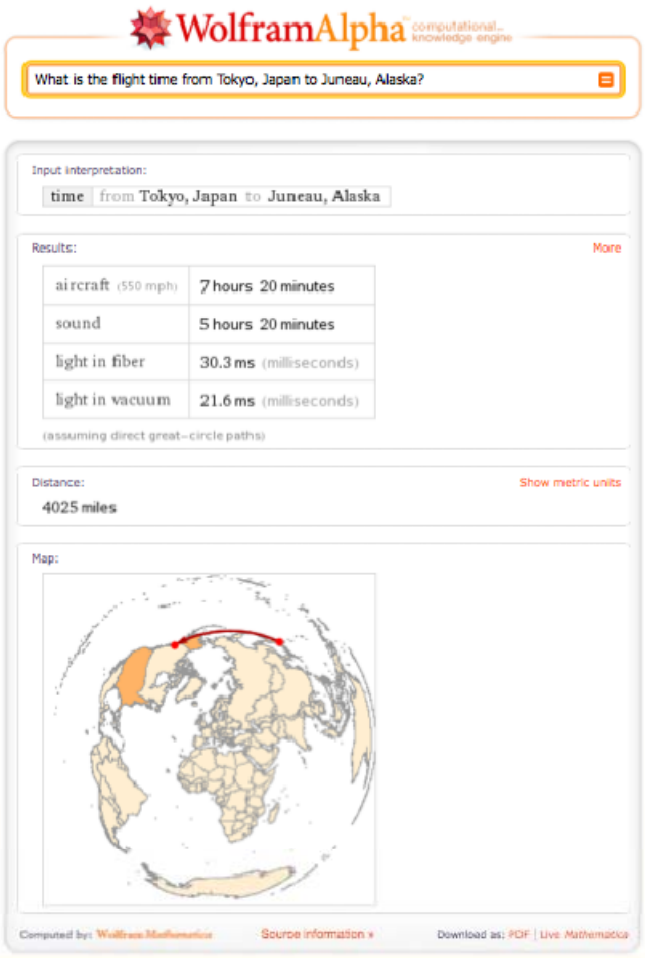
WolframAlpha
computational knowledge engine
What is the flight time from Tokyo, Japan to Juneau, Alaska?
Input interpretation:
time from Tokyo, Japan to Juneau, Alaska
Results:
More
aircraft (550 mph) 7 hours 20 minutes
sound 5 hours 20 minutes
light in fiber 30.3 ms (milliseconds)
light in vacuum 21.6 ms (milliseconds)
(assuming direct great-circle paths)
Distance:
Show metric units
4025 miles
Map:
Computed by: Wolfram Mathematica
Source information »
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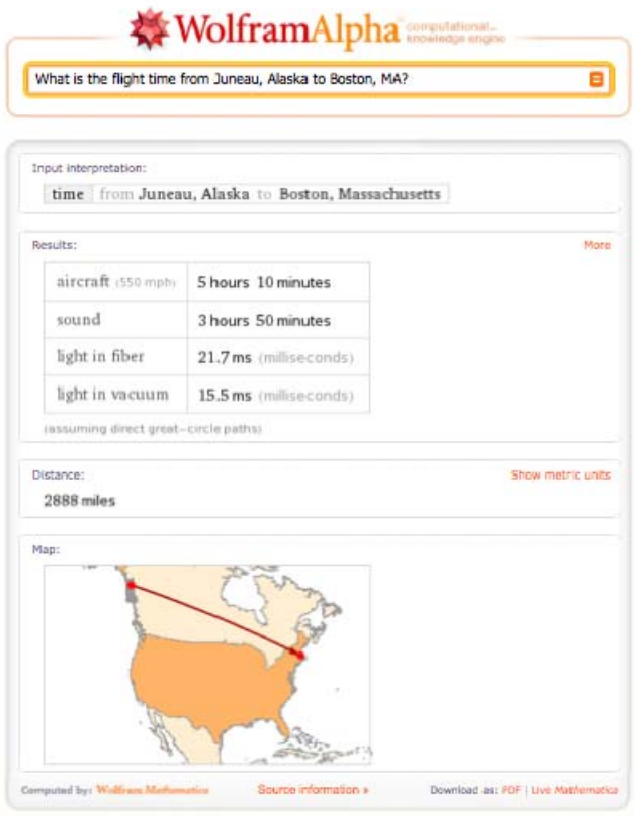
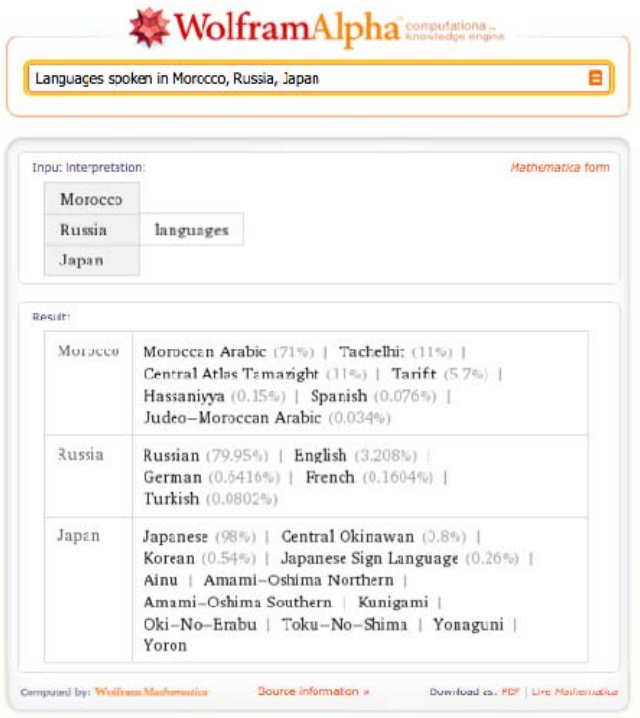
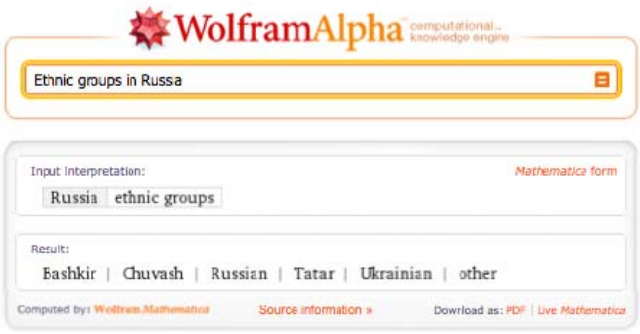
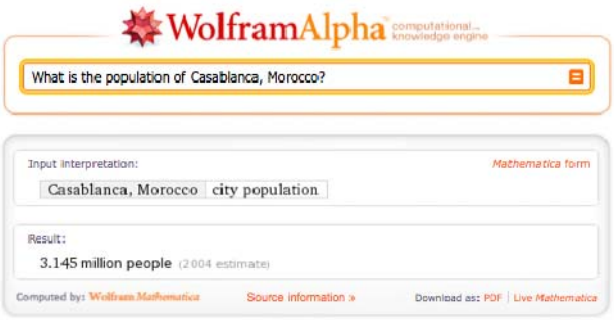


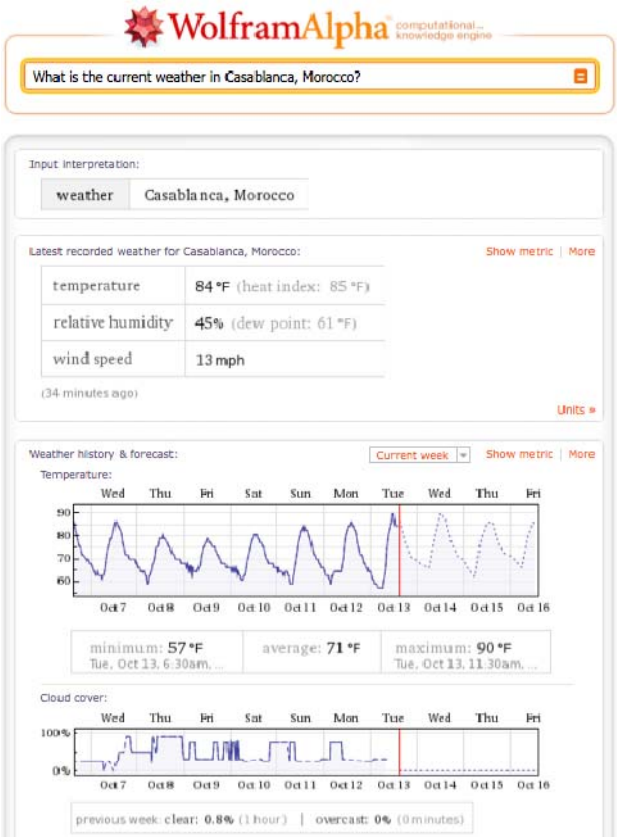
• Now ask students to research the different cities and countries that appeared on their flight plans. Ask W|A about languages, religions, ethnic groups, or other information.





• Ask each student to pick one location and conduct further research with W|A and library sources. How large is the city through which the student plans to travel? What is the weather like?





• Ask each student to construct a short narrative describing a modern-day journey around the world, writing one or two paragraphs describing their passage through a particular city. Have students include the types of languages they might hear, weather conditions they might experience, different religions or ethnicities they might encounter, etc.

Closing

• Ask students to compare flight plans and see whose hypothetical trip took the least time. Then divide the class into five groups and assign each group to research one of the cities on the shortest flight plan in greater detail. Ask each group of students to prepare a written report on their assigned city and to create a short skit acting out what a hypothetical world traveler might encounter there.

Demonstrations

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Comparing Data on Countries

Captain Cook's Voyages

Colorcoded Country Comparison
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