Length of Lesson:	
3 days – 9 hours total	
Content Area: Math, Social Studies	
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Learning Objective/Essential Understanding: Day 1: 3 hours

SWBAT

- 1. Describe what caused Christopher Columbus to want to petition many rulers to find a trade route to the East Indies, citing evidence to support these causes.
- 2. List the effects Christopher Columbus's voyage had on culture in the Western Hemisphere, using evidence from the text to support your claims.

Day 2: 3 hours

SWBAT

- 3. Describe, draw, and identify points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines in two-dimensional figures (maps) with 80% accuracy.
- 4. Describe the route of Christopher Columbus's voyage using math vocabulary, citing textual evidence, with 100% accuracy.

Day 3: 3 hours

SWBAT

- 5. Use technology to create a precise map of the local area and identify local sites/landmarks with 80% accuracy.
- 6. Make observations about specific routes to local sites using the terms *line, line segment, ray, angle (right, acute, obtuse), perpendicular* and *parallel lines* with 100% accuracy.

Materials/Resources Including Technology:

SS passage: <u>The Explorers: Christopher Columbus</u>, Newsela.org Google Maps computer protractor

Lesson Plan

CCR Standards and Foundational Skills		
CCRS Addressed:	R.1. C/D (cite evidence/make inferences)	
Anchor and Level	R.3. C/D (cause/effect)	
	4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	
Math Practices Addressed:	MP.6 - Precision	
Foundational	Uses Technology	
Skills Addressed:	Solves Problems	
	Applies Mathematical Operations, Concepts, and Reasoning	

Vocabulary:

Longitude, latitude, cardinal directions, voyage, point, line, line segment, ray, angle (right, acute, obtuse), perpendicular, parallel

Activities:

Day 1: 3 hours

- 1. Teacher asks the following questions:
 - a. What are some reasons you have traveled in the past?
 - b. Why would you travel somewhere new?
 - c. What tools would you choose to take with you on this trip?
- 2. Teacher reviews the day's objectives.
- 3. Teacher says, "Today we are going to read about Christopher Columbus and his voyage."
- 4. Teacher reviews vocabulary words by first asking students if they are familiar with each word. Then the teacher defines each word and uses each word in a sentence. The teacher points out that these words will be used in the passage they will read. Words: *longitude, latitude, cardinal directions, voyage*
- 5. Students read the passage, "The Explorers: Christopher Columbus" as a group. Students take turns reading aloud, one paragraph at a time.
- 6. During the reading, teacher will ask the students questions to ensure understanding (e.g., What do you think the queen's wishes were? Why do you think the natives hated Christopher Columbus?). The teacher will work with students to identify the evidence in a guided practice.
- 7. Independent Practice: Have the students answer the following questions and discuss evidence from the passage in pairs. Afterward, ask if there are any questions about the evidence. Also ask if students disagreed about the evidence.
 - a. Why was Christopher Columbus's request for funding rejected by several monarchs? Cite specific examples from the passage.
 - b. What does this mean? "The sailors noticed the natives wore small bits of gold."
 - c. What did Christopher Columbus exaggerate when he gave his report to the royal court?
 - d. What does the "Columbian Exchange" mean?
 - e. What was "exchanged" through the "Columbian Exchange" or through any movement of people from one place to another?
- 8. Ask students to think about a "voyage" they have taken and be ready to discuss it tomorrow in class (starting and ending location, what they brought with them, how they traveled, etc.).

9. Formative assessment/closure: Teacher says, "We will continue to use evidence to answer questions. Please respond to the following question in 2-3 paragraphs, citing at least 3 pieces of evidence from the text." (Teacher collects responses to assess for evidence.)

After reading the passage, why is opening up the Americas to European colonization credited to Christopher Columbus? Cite specific examples from the passage.

- 10. Review the objectives. Ask students if they achieved the objectives.
- 11. Next day preview: Teacher will indicate that they will use math terms to describe the voyage tomorrow.

Extension Activity/Additional Project:

http://www.pbs.org/independentlens/newamericans/newamericans.html

Create a "word wall" over a large wall map. Place words on the countries from which the words originate. Create a bar graph to represent this data: # words by country.

http://www.pbs.org/independentlens/newamericans/culturalriches/language_flash.html

"People have been migrating to new places for centuries, introducing words, phrases and concepts into the languages of the cultures they join—and helping these languages change and evolve." <u>https://www-tc.pbs.org/independentlens/newamericans/culturalriches/LM_PrintableList.pdf</u>

Day 2: 3 hours

- 1. Teacher says, "Yesterday we learned about Christopher Columbus's voyage." Teacher reviews the day's objectives and checks for understanding.
- 2. Teacher reviews today's vocabulary words by asking students if they are familiar with the words. The teacher defines the words and uses the words in sentences. Words: *point, line, line segment, ray, angle (right, acute, obtuse), perpendicular, parallel*
- 3. Teacher will demonstrate how to describe Christopher Columbus's voyage using vocabulary words. Teacher may provide sentence stems as guided practice, for example:
 - a. Christopher Columbus traveled _____, toward _____.
 - b. Columbus's ship made a _____ angle when passing _____.
 - c. Columbus could have traveled parallel to _____.
- 4. Ask students to verbally describe his voyage using cardinal directions/vocabulary words and relative location (e.g., what bodies of water he travels, what countries/continents he is near).
- 5. Teacher asks students to review the reading from the day before and to highlight important facts about the voyage. Teacher points out that highlighting evidence will help when answering questions.
- 6. Have the students discuss in groups the importance of the voyage and how it changed the Western Hemisphere. Teacher circulates room to listen for students citing evidence.
- 7. Teacher accesses prior knowledge. Ask students if they've taken a voyage (moved from one place to another).
- 8. In pairs, have students share about their voyage (2 minutes per student).
 - a. Starting location
 - b. Ending location
 - c. What they brought with them
 - d. How did they travel?
- 9. On the board, have students write the starting location and ending location of their voyage (organize into 2 columns).

- 10. Using laptops, or in a computer lab, have students access Google Maps. Ask the students to determine who had the longest voyage.
 - a. Go to https://www.google.com/maps/
 - b. Click on the blue arrow to "Get directions."
 - c. Enter starting location in the "Your location" box.
 - d. Enter ending location in the "Choose destination" box.
- 11. Teaches projects (on board) Christopher Columbus's voyage using the map from the reading passage from Day 1 as guided practice.
- 12. Have students independently locate the distance in miles on the Google map and compare the distance of their voyage to Christopher Columbus's voyage. Discuss distance, mode of transportation, etc.
- 13. Teacher will project a map of the local area (teacher may want to print copies of the map) for additional guided practice.
- 14. Ask students to locate places in the community (e.g., class, home, grocery store, local school).
- 15. Ask students to give step-by-step directions on how they get from home to:
 - a. class,
 - b. the doctor,
 - c. the grocery store.
- 16. Ask students what they notice about the structure of the roads and how are they arranged? (If your local area is a small rural area, show a map of the closest city to illustrate this.)
- 17. Students will notice that some roads are parallel, some are perpendicular, and some intersect. Introduce parallel, perpendicular, and intersecting lines. Parallel lines never intersect, perpendicular lines intersect to form a right angle, and intersecting lines cross. Teacher may use a visual model to demonstrate the types of lines and provide conceptual understanding.
- 18. Have students identify on the map roads that are parallel, perpendicular, and intersecting. Teacher circulates to see if students have demonstrated mastery of the concept of parallel, perpendicular, and intersecting. Teacher may have students draw parallel, perpendicular, and intersecting lines.
- 19. Introduce types of angles (obtuse, right, acute, straight). Say, "When lines intersect they form angles. There are 4 types of angles. Obtuse angles measure greater than 90 degrees, right angles equal 90 degrees, acute angles measure less than 90 degrees, and straight angles measure 180 degrees."
- 20. Provide each student with a protractor and <u>sample angles to measure</u>. Each student should practice finding, identifying, and measuring each type of angle. The teacher circulates to see if students have demonstrated mastery.
- 21. Formative assessment/closure: Have students identify the types of angles on the map by using the protractor to measure. On a printed map, have students trace and label the 4 types of angles and submit as a formative assessment.
- 22. Review the objectives and ask students if they have met each objective.
- 23. Next day preview: Tell students they will be drawing a map of the neighborhood during the next class.

Day 3: 3 hours

- 1. Today we're going to draw a map of the major places in town.
- 2. Teacher says, "Let's review the vocabulary from yesterday."
 - a. Lines (intersecting, parallel, perpendicular)
 - b. Angles (acute, obtuse, right, straight)
- 3. Have students come to the board to draw examples of the types of angles and lines to check for mastery.

- 4. Teacher projects a map on the board and does a guided practice using the create-a-map feature in Google maps.
- 5. Teacher provides the directions for creating a map:
 - a. Go to https://www.google.com/maps/d/u/0/
 - b. Click on "Create a new map."
 - c. Click the words "Untitled layer" and type "Home."
 - d. Type your address in the search bar, then click the magnifying glass. A green map marker will appear on the map at the address. A box will also appear with the address you entered. Click "+ add to map" which appears below the address.
 - e. Click on "Add layer."
 - f. Click the words "Untitled layer" and type "School."
 - g. Type the address of your literacy center in the search bar, then click the magnifying glass. A green map marker will appear on the map at the address. A box will also appear with the address you entered. Click "+ add to map" which appears below the address.
 - h. Under the search bar, click "Add directions."
 - i. Continue in this pattern: add layer, name the layer, find an address (to a local site in town), add to map, add directions.
 - j. Click "Preview" to view map.

**Alternate way to do the activity—draw map on graph or white paper.

- 6. Once the maps are completed, students will answer the following questions:
 - a. What's the distance from class to the locations below (using directions from Day 2, step 6):
 - 1. The doctor's office?
 - 2. The grocery store?
 - 3. Home?

**Teacher can choose other locations (landmarks, etc.).

- b. On your map/route, do you have any parallel, perpendicular, or intersecting lines? Identify.
- c. Does your map/route have any right angles? obtuse angles? acute angles? straight angles?
- 7. Collect maps as final assessment.
- 8. Teacher reviews the objectives and asks students if they have met the objectives. Alternately, students may complete an exit ticket identifying whether they have met the objectives.

The Explorers: Christopher Columbus

By Biography.com Editors and A+E Networks, adapted by Newsela staff on 06.28.16 Word Count **895** Level **960L**



An oil painting of Christopher Columbus in 1519. Wikimedia Commons

Synopsis: Explorer and navigator Christopher Columbus was born in 1451 in the Republic of Genoa, Italy. His first voyage into the Atlantic Ocean in 1476 nearly cost him his life. Columbus participated in several other expeditions to Africa. In 1492, Columbus left Spain in a ship called the Santa Maria with two other ships, the Niña and the Pinta. He has been credited with opening up the Americas to European colonization.

Early Voyages

Explorer and navigator Christopher Columbus was born to the son of a weaver in 1451 in the Republic of Genoa, Italy. He first went to sea as a teenager, when he participated in a few trading voyages in the Mediterranean and Aegean seas.

His first voyage into the Atlantic Ocean in 1476 nearly cost him his life. The ship he was sailing on was attacked by armed private French ships off the coast of Portugal. His ship was burned and Columbus swam to the Portuguese shore.

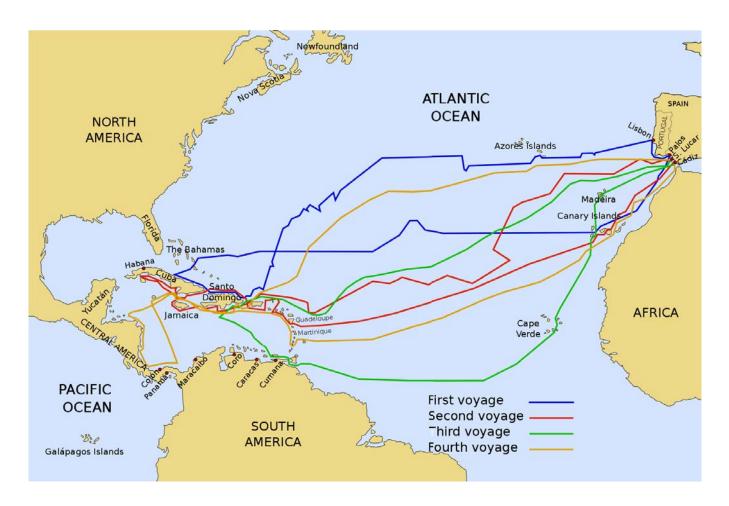
In later expeditions of Africa, Columbus learned about the Atlantic currents that flowed east and west from the Canary Islands. Muslims controlled the trade routes through the Middle East, which made travel to India and China difficult for Europeans. Columbus believed a route sailing west across the Atlantic would be quicker and safer. He hoped to sail west to reach the East. He mistakenly believed the distance sailing west toward Asia was shorter than it actually was. At the time, there was not as much known about just how large the Earth was. People in Europe did not realize that North and South America were between them and Asia. Still, many experts at the time did believe China was not as close as Columbus had estimated.

First Voyage To The New World

Columbus asked several kings to pay for a three-ship voyage of discovery. Spanish Monarchs Isabella of Castille and Ferdinand of Aragon, became interested in 1486. However, most of their money was spent on a war with the Muslims.

Soon after the Spanish army won the war in Granada in January of 1492, the monarchs agreed to pay for his expedition. In August of 1492, Columbus left Spain on a ship named the Santa Maria, alongside the Pinta and the Niña.

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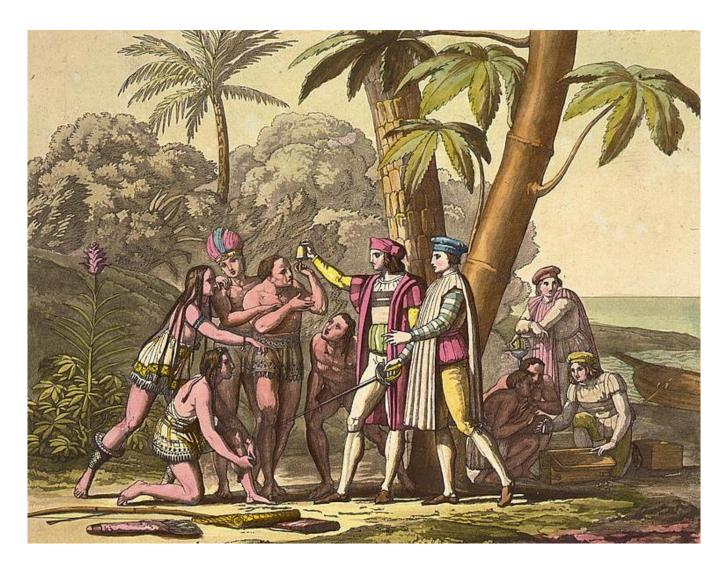


Columbus and his men sailed to Cuba and Hispaniola. Hispaniola is an island that today holds Haiti and the Dominican Republic. The Santa Maria was wrecked on a reef off the coast of Hispaniola. With the help of some islanders, Columbus' men built the settlement Villa de la Navidad. They used wood from the wreck. Convinced he had reached Asia, Columbus sailed home with the two remaining ships. Thirty-nine of Columbus' men stayed behind to run the settlement.

Later Voyages

Columbus returned to Spain in 1493. He gave the royal court a happy, but somewhat exaggerated report. When he went back to Hispaniola, he found that the Navidad settlement had been destroyed and all the sailors had been killed. Columbus forced the natives into slavery, making them rebuild the settlement and search for gold. This was against the wishes of the queen. Little gold was found and the natives hated him. Before returning to Spain, Columbus left his brothers, Bartholomew and Diego, in charge.

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On his third voyage, Columbus explored the Orinoco River in present-day Venezuela, in South America. When he returned to Hispaniola, the settlers were about to revolt. They had had not found much gold and they did not like Columbus' brothers. The Spanish Crown sent a royal official to arrest Columbus and he was taken back to Spain in chains.

Columbus convinced King Ferdinand to pay for one more voyage, in 1502. A storm wrecked one of his ships, stranding the captain and his sailors on the island of Cuba. The islanders refused to give them food. Columbus looked at an almanac. He saw that there would soon be a lunar eclipse. This happens when the sun's light is blocked by the Earth's shadow. He told the islanders that he could "take away the moon." When the eclipse happened, the natives were afraid and listened. Columbus and his went back to Spain in November of 1504.

Mixed Legacy

Columbus died on May 20, 1506, still believing he had discovered a shorter route to Asia.

Columbus gets credit for opening up the Americas to European colonization. He has also been blamed for destroying the native peoples of the islands he explored. He failed to find a new route to Asia, but his "Columbian Exchange" set in motion the transfer of people, plants, animals, and cultures that greatly affected nearly every society on the planet.

The Exchange brought important types of foods to both hemispheres, and introduced horses to the Americas. But the Exchange also brought new diseases to both hemispheres. Smallpox from the Old World killed millions of the Native Americans, and the once colorful and rich cultures of several Native American civilizations were lost.

Recent Discoveries

In May 2014, archaeologists said they may have found the Santa Maria off the north coast of Haiti. Barry Clifford, the leader of this expedition, told the Independent newspaper that all evidence "strongly suggests this wreck is Columbus' famous flagship the Santa Maria."