

Find that Journey

Name: _____

Lesson 11

Date: _____

Vocabulary

Latitude - an imaginary line that measures distance north or south of the equator

Longitude - an imaginary line that measures angular distance east or west of the prime meridian

Cardinal Directions - the four main compass directions: North, South, East, and West

Activity 1

Geography of Famous Trails

1

Using the Ari Compass application, you'll identify key geographic information about each of the four trails below to help you identify the famous trail. Place your Ari on the compass image after selecting the Compass application with the **On a Map** setting to orient it to your map. The Ari should be placed on either the **Start** or **End** locations based on the directions provided.

Provide the compass direction as to where each geographic feature is located relative to the location noted.

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Example



The example shows an aerial map on the left with a green arrow pointing from a blue dot (Start) to a red dot (Point A). On the right, a compass app shows a green arrow pointing towards the top-left, corresponding to the direction of the arrow on the map. The compass face has a blue needle and a red arrow, with a scale at the bottom showing 351° 33' 12".

Ari is placed on the Start location and a theoretical or physical line is drawn to the first point. The direction on the Compass application is found using the direction of the drawn arrow.



Journey #1

From the Start Location
(marked in blue)

- A.
- B.

From the End Location (marked in
blue)

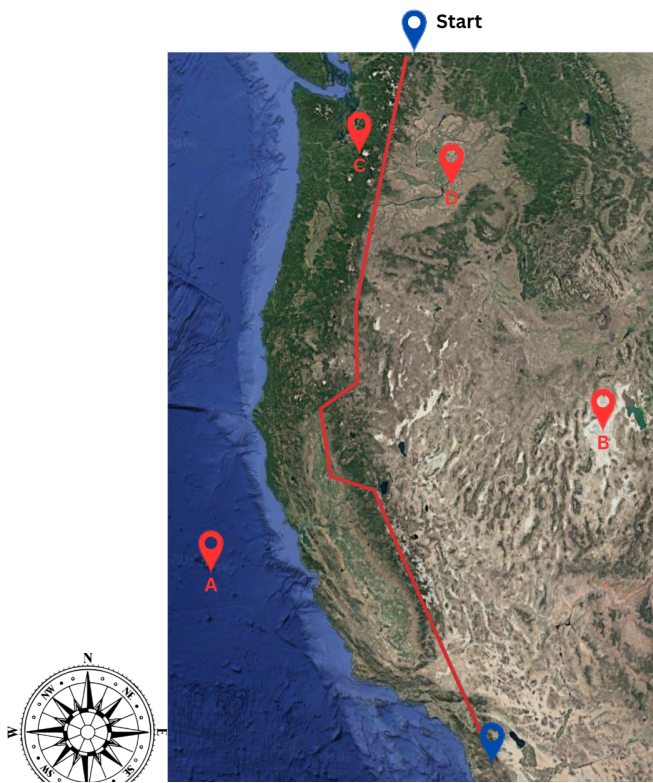
- C.
- D.

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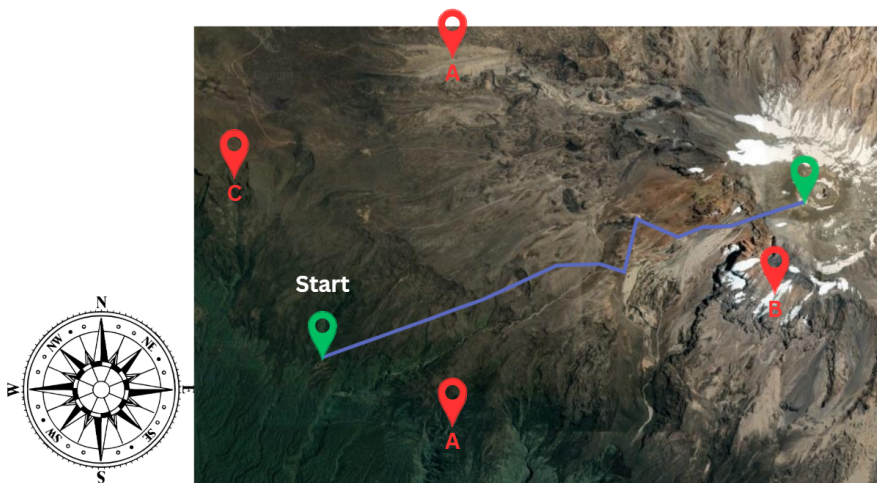
Journey #2

From the Start Location
(marked in blue)

- A.
- B.

From the End Location (marked in blue)

- C.
- D.



Journey #3

From the Start
Location
(marked in green)

- A.
- B.

From the End Location
(marked in green)

- C.
- D.

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Lesson 11

Date: _____

Activity 2

Decimal Degrees to Degrees Minutes Seconds

Below, you'll be given the latitude and longitude of the start and end locations of each of the journeys to help determine the location. Convert the latitude and longitude provided in decimal degrees to degrees, minutes, and seconds.

Decimal Degrees Conversion to Degrees Minutes Seconds

Decimal Degrees **15.125°**

15°

$0.125 \times 60\text{min} = 7.5$

15° 7'

$0.5 \times 60\text{sec} = 30$

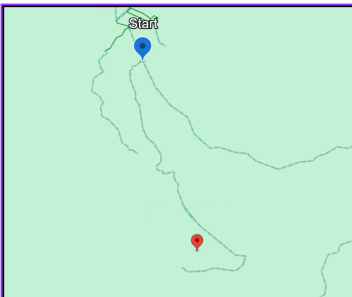
(If this last calculation is still a decimal, round to the nearest whole number)

15° 7'30"

Decimal Degree 15.125° = Degrees Minutes Seconds 15° 7'30"

1

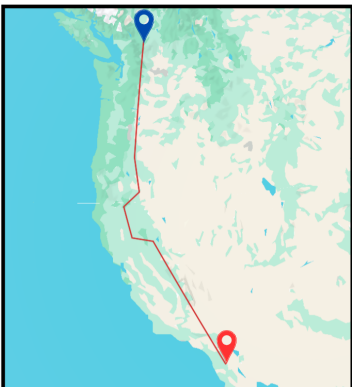
Journey #1



Start Location (DD)	Start Location (DMS)
13.166 S -72.543 W	
End Location (DD)	End Location (DMS)
-13.174 S -72.541 W	

2

Journey #2



Start Location (DD)	Start Location (DMS)
48.999 N -120.802 W	
End Location (DD)	End Location (DMS)
32.590 N -116.463 W	

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Lesson 11

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Date: _____

3

Journey #3



Start Location (DD)	Start Location (DMS)
-3.095 S 37.266 E	
End Location (DD)	End Location (DMS)
-3.067 S 37.355 E	

Activity 3

What's the Famous Journey?

Based on the previous activities, predict which famous trail each of the journeys shows.

Journey #1 = _____

Journey #2 = _____

Journey #3 = _____

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Exit Ticket

Please respond to the following prompts.

Criteria for Success:

- Use the proper formulae and process to convert from one coordinate format to another.
- Accurate input of the found coordinates into Google Maps and using landmarks and relative position to describe the location.

1. Convert the following coordinate from degrees–minutes–seconds to decimal degrees.
48°35'30" N 107°60'15" W

2. Plot this location on Google Earth and explain how its latitude and longitude indicate its position on the map.
