Fantasy Travel

Objective

Students will identify various countries and cities from around the world.

Students will calculate the distance between various cities.

Student will identify indigenous species from various countries.

Materials

For each student pair or trio:

- ❑ copy of one country from the Tour
- ❑ Brochure Funsheets
- ❑ Library or Internet Access
- ❑ one atlas
- ❑ one calculator (optional)

For instructor:

- ❑ copy of Teacher's Guide answer pages

Action

1. Divide the class into groups of two or three.

2. Explain that there are many fascinating places all around the world to visit. Although this activity only describes a few countries and cities to visit, there are many more. All countries have unique animals and attractions that can be a special part of your visit. This activity will enhance geography skills and perhaps pique your curiosity about future travel destinations!

3. Assign each group one of the eight countries in the set of Tour Brochure Funsheets (Germany, Indonesia, United States of America, South America, Australia, China, United States of America-Alaska, and South Africa).

4. Instruct students to research and calculate the following information to complete the travel brochure for their assigned country.

   · Label the three cities listed in the middle of the brochure on the map provided.

   · Identify three to five attractions for each city listed.

   · Identify five to ten animals native to the cities' surrounding areas.

   · Calculate the distance between all three cities using the equation listed on the Tour Brochure. The resulting answer will be in miles. Note: the equation listed on the travel brochure is accurate ~ ±10%.

   · Answer the question on the bottom of the tour brochure using the answers from the above mentioned calculations.

5. Instruct students to present their country's Tour Brochure to the class. Students may choose to bring photographs or souvenirs from their designated country.

Tour Of South Africa

Johannesburg: 26° S & 28° E

Things To Do:

Cape Town: 33° S & 18° E

Things To Do:

Pretoria: 25° S & 28° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

Distance $_{Lat}$ = 69.1 x (Lat$_2$ – Lat$_1$)
Distance $_{Long}$ = 69.1 x (Long$_2$ - Long$_1$) x cos(Lat$_1$ / 57.3)

Distance = $\sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$

Distance between Cape Town & Johannesburg

Distance between Johannesburg & Pretoria

Distance between Pretoria & Cape Town

If you begin your tour in Cape Town, you should visit _____ next, since it is closer than _____.

Tour
Of
Alaska

Anchorage: 61° N & 150° W

Things To Do:

Fairbanks: 64° N & 147° W

Things To Do:

Kodiak: 57° N & 152° W

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$

$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$

$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$

Distance between Anchorage & Fairbanks

Distance between Fairbanks & Kodiak

Distance between Kodiak & Anchorage

If you begin your tour in Kodiak, you should visit
_____ next, since it is closer than
_____.

Tour Of Australia

Alice Springs: 23° S & 133° E

Things To Do:

Melbourne: 37° S & 144° E

Things To Do:

Adelaide: 34° S & 138° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$

$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$

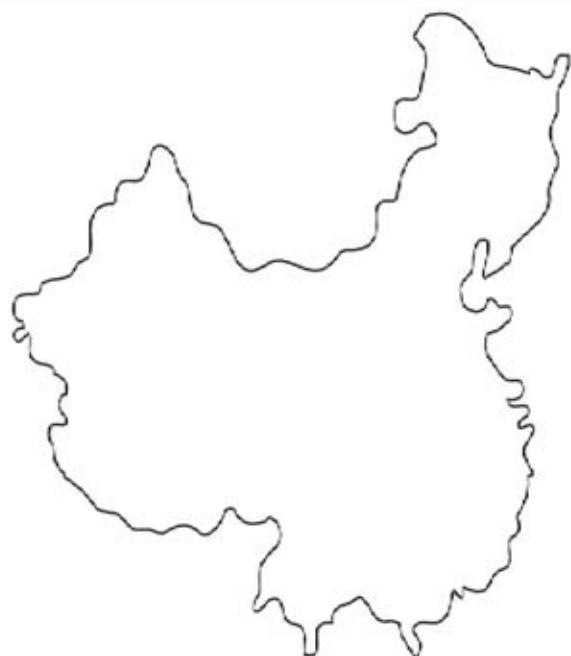$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$

Distance between Alice Springs & Adelaide

Distance between Adelaide & Melbourne

Distance between Melbourne & Alice Springs

If you begin your tour in Alice Springs, you should visit _____ next, since it is closer than _____.

Tour

Of

China

Please label the cities mentioned above on the map

Beijing: 39° N & 116° E

Things To Do:

Shanghai: 31° N & 121° E

Things To Do:

Kunming: 25° N & 102° E

Things To Do:

Native Animals

Distances

Formula

Distance $_{Lat}$ = 69.1 x (Lat$_2$ – Lat$_1$)

Distance $_{Long}$ = 69.1 x (Long$_2$ - Long$_1$) x cos(Lat$_1$ / 57.3)

$$Distance = \sqrt{(\text{Distance }_{Latitude})^2 + (\text{Distance }_{Longitude})^2}$$

Distance between Beijing & Shanghai

Distance between Shanghai & Kunming

Distance between Kunming & Beijing

If you begin your tour in Kunming, you should visit _____ next, since it is closer than _____.

Tour Of Germany

Please label the cities mentioned above on the map

Berlin: 52° N & 13° E

Things To Do:

Hamburg: 53° N & 9° E

Things To Do:

Munich: 48° N & 11° E

Things To Do:

Native Animals

Distances

Formula

$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$

$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$

$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$

Distance between Berlin & Hamburg

Distance between Hamburg & Munich

Distance between Munich & Berlin

If you begin your tour in Berlin, you should visit
_____ next, since it is closer than
_____.

Tour Of Indonesia

Jakarta: 6° S & 106° E

Things To Do:

Surabaya: 7° S & 112° E

Things To Do:

Palembang: 3° S & 104° E

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

Distance $_{Lat}$ = 69.1 x (Lat$_2$ – Lat$_1$)

Distance $_{Long}$ = 69.1 x (Long$_2$ - Long$_1$) x cos(Lat$_1$ / 57.3)

$$Distance = \sqrt{(Distance_{Latitude})^2 + (Distance_{Longitude})^2}$$

Distance between Jakarta & Palembang

Distance between Palembang & Surabaya

Distance between Surabaya & Jakarta

If you begin your tour in Jakarta, you should visit _____ next, since it is closer than _____.

Tour Of South America

Please label the cities mentioned above on the map

Buenos Aires: 34° S & 58° W

Things To Do:

Brasilia: 15° S & 47° W

Things To Do:

Rio De Janeiro: 22° S & 43° W

Things To Do:

Native Animals

Distances

Formula

$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$

$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$

$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$

Distance between Rio De Janeiro & Brasilia

Distance between Brasilia & Buenos Aires

Distance between Buenos Aires & Rio De Janeiro

If you begin your tour in Buenos Aires, you should visit _____ next, since it is closer than _____.

Tour Of United States Of America

Tampa: 27° N & 82° W

Things To Do:

Miami: 25° N & 80° W

Things To Do:

Cape Kennedy: 28° N & 80° W

Things To Do:

Please label the cities mentioned above on the map

Native Animals

Distances

Formula

Distance $_{Lat}$ = 69.1 × ($Lat_2 - Lat_1$)

Distance $_{Long}$ = 69.1 × ($Long_2 - Long_1$) × cos(Lat_1 / 57.3)

Distance = $\sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$

Distance between San Francisco & Seattle

Distance between Seattle & San Diego

Distance between San Diego & San Francisco

If you begin your tour in Tampa, you should visit _____ next, since it is closer than _____ .

Tour Of South Africa

Johannesburg
Pretoria
Cape Town

Johannesburg: 26° S & 28° E

Things To Do:

1. Lesedi Cultural Village *Cultural Villages*
2. Westcliffe Heritage Trust *Historic Homes*
3. Gold Reef City *Historic Mining Town*
4. Conservation Tours *Hiking*
5. Carlton Panorama *Tallest Building in Africa*

Cape Town: 33° S & 18° E

Things To Do:

1. Castle of Good Hope *Castle Tour*
2. South African Museum & Planetarium
3. Cape of Good Hope Nature Reserve *Sightseeing*
4. Table Mountain & Cableway *Scenic Horticulture*
5. Victoria Alfred Waterfront *Bird Sanctuary &*

Pretoria: 25° S & 28° E

Things To Do:

1. De Wildt Cheetah & Wildlife Centre *Endangered Species Research & Breeding Facility*
2. African Window *Natural History Museum*
3. Ndebele Village *Tribal Village*
4. Cullinan Diamond Mine Tours
5. Transvaal Museum *Science Museum*

Please label the cities mentioned above on the map

Native Animals

1. Giraffe
   Giraffa camelopardalis
2. Cheetah
   Crocuta crocuta
3. Eland
   Taurotragus oryx
4. Grevy Zebra
   Equus grevyi
5. Greater Kudu
   Tragelaphus strepsiceros

Distances

Formula

$$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$
$$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$$

Distance between Cape Town & Johannesburg

$$\text{Distance}_{Lat} = 69.1 \times (26° - 33°)$$
$$69.1 \times (-7°) = -483.7$$

$$\text{Distance}_{Long} = 69.1 \times (28° - 18°) \times \cos(33°/57.3)$$
$$69.1 \times (10°) \times \cos(0.57591623)$$
$$691 \times 0.999949482 = 690.97$$

$$\text{Distance} = (-483.7)^2 + (690.97)^2$$
$$(233965.69) + (477439.5409) = 711405.2309$$

843 miles

Distance between Johannesburg & Pretoria

$$\text{Distance}_{Lat} = 69.1 \times (25° - 26°)$$
$$69.1 \times (-1°) = -69.1$$

$$\text{Distance}_{Long} = 69.1 \times (28° - 28°) \times \cos(26°/57.3)$$
$$69.1 \times (0°) \times \cos(0.453752181)$$
$$0 \times 0.999968641 = 0$$

$$\text{Distance} = (-69.1)^2 + (0)^2$$
$$(4774.81) + (0) = 4774.81$$
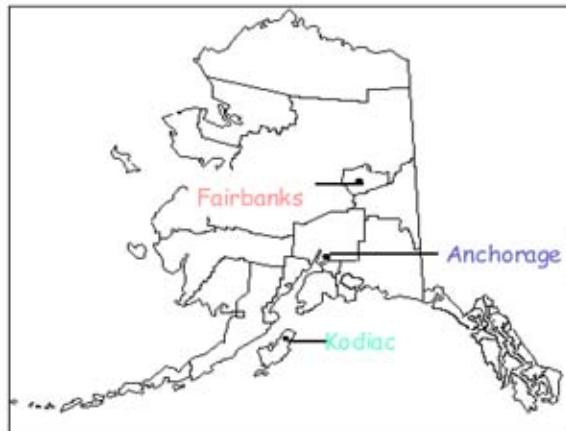
69 miles

Distance between Pretoria & Cape Town

$$\text{Distance}_{Lat} = 69.1 \times (33° - 25°)$$
$$69.1 \times (8°) = 552.8$$

$$\text{Distance}_{Long} = 69.1 \times (18° - 28°) \times \cos(25°/57.3)$$
$$69.1 \times (10°) \times \cos(0.436300174)$$
$$691 \times 0.999971007 = 690.98$$

$$\text{Distance} = (552.8)^2 + (690.98)^2$$
$$(305587.84) + (477453.3604) = 783041.2004$$

884 miles

If you begin your tour in Cape Town, you should visit Johannesburg next, since it is closer than Pretoria.

Tour Of Alaska

Anchorage: 61° N & 150° W

Things To Do:

1. Alaska Botanical Garden
2. Chugach State Park *Hiking*
3. Hillside Park *Wildlife Viewing*
4. Goose Lake *Cross Country Skiing*
5. Oscar Anderson House *Anchorage 1st Wood Framed House*

Fairbanks: 64° N & 147° W

Things To Do:

1. Alaska Bird Observatory
2. Alaskaland Theme Park
3. El Dorado Gold Mine
4. Riverboat Discovery *Scenic Boat Trips*
5. University of Alaska Museum

Kodiak: 57° N & 152° W

Things To Do:

1. Dig Afognak *Archaeological Dig*
2. Baranof Museum
3. Orion's Boards and Cords *Skiing*
4. Barometer Mountain *Hiking*

Please label the cities mentioned above on the map

Native Animals

1. Caribou
   Rangifer tarandus
2. Muskox
   Ovibos moschatus
3. Polar Bear
   Ursus maritimus
4. Willow Ptarmigan
   Lagopus lagopus
5. Killer Whale
   Orcinus orca

Distances

Formula

$$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$$

Distance between Anchorage & Fairbanks

$\text{Distance}_{Lat} = 69.1 \times (64° - 61°)$
$69.1 \times (3°) = 207.3$

$\text{Distance}_{Long} = 69.1 \times (147° - 150°) \times \cos(61°/57.3)$
$69.1 \times (-3°) \times \cos(1.064572426)$
$-207.3 \times 0.999827391 = -207.3$

$\text{Distance} = (207.3)^2 + (-207.3)^2$
$(42973.29) + (42973.29) = 85946.58$
293 miles

Distance between Fairbanks & Kodiak

$\text{Distance}_{Lat} = 69.1 \times (57° - 64°)$
$69.1 \times (-7°) = -483.7$

$\text{Distance}_{Long} = 69.1 \times (152° - 147°) \times \cos(64°/57.3)$
$69.1 \times (5°) \times \cos(1.116928447)$
$345.5 \times 0.999809996 = 345.4$

$\text{Distance} = (-483.7)^2 + (345.4)^2$
$(233965.69) + (119301.16) = 353266.85$
594 miles

Distance between Kodiak & Anchorage

$\text{Distance}_{Lat} = 69.1 \times (61° - 57°)$
$69.1 \times (4°) = 276.4$

$\text{Distance}_{Long} = 69.1 \times (150° - 152°) \times \cos(57°/57.3)$
$69.1 \times (-2°) \times \cos(0.994764397)$
$-138.2 \times 0.999849285 = -138.18$

$\text{Distance} = (276.4)^2 + (-138.18)^2$
$(76396.96) + (19093.71) = 95490.67$
309 miles

If you begin your tour in Kodiak, you should visit <u>Anchorage</u> next, since it is closer than <u>Fairbanks</u>.

Tour

Of

Australia

Alice Springs

Adelaide
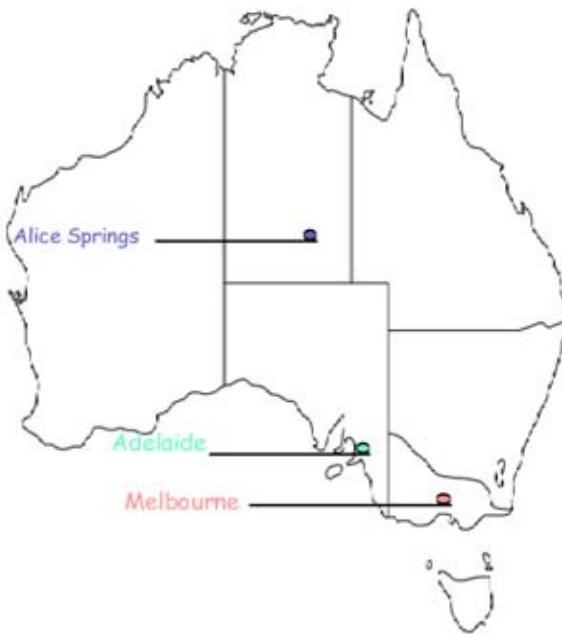
Melbourne

Alice Springs: 23° S & 133° E

Things To Do:

1. Larapinta Trail *Hiking*
2. Alice Springs Desert Park *Wildlife Park*
3. Alice Springs Reptile Centre *Nature Center*
4. Alice Springs Telegraph Station *Historical Reserve*

Melbourne: 37° S & 144° E

Things To Do:

1. Melbourne Zoo
2. Federation Square
3. Rialto Towers Observation Deck
4. Melbourne Aquarium
5. Melbourne Tank Museum

Adelaide: 34° S & 138° E

Things To Do:

1. Adelaide Zoo
2. Adelaide Symphony Orchestra *Symphony*
3. National Railway Museum Port Adelaide *Railroad Museum*
4. Tandanya Aboriginal Cultural Institute *Cultural Museum*
5. Botanic Gardens

Please label the cities mentioned above on the map

Native Animals

1. Cassowary
   Casuarius casuarius
2. Koala
   Phascolarctos cinereus
3. Western Gray Kangaroo
   Macropus fuliginosus
4. Emu
   Dromaius novaehollandiae
5. Great White Shark
   Carcharodon carcharias

Distances

Formula

$Distance_{Lat} = 69.1 \times (Lat_2 - Lat_1)$

$Distance_{Long} = 69.1 \times (Long_2 - Long_1) \times cos(Lat_1 / 57.3)$

$Distance = \sqrt{ (Distance_{Latitude})^2 + (Distance_{Longitude})^2 }$

Distance between Alice Springs & Adelaide

$Distance_{Lat} = 69.1 \times (34° - 23°)$
$69.1 \times (11°) = 760.1$

$Distance_{Long} = 69.1 \times (138° - 133°) \times cos(23°/57.3)$
$69.1 \times (5°) \times cos (0.401)$
$345.5 \times 0.999975508 = 345.49$

$Distance = (760.1)^2 + (345.49)^2$
$(577752.01) + (119363.3401) = 697115.3501$
835 miles

Distance betwee $Distance_{Lat} = 69.1 \times (37° - 34°)$

$Distance_{Lat} = 69.1 \times (23° - 37°)$
$69.1 \times (-14°) = -967.4$

$Distance_{Long} = 69.1 \times (133° -$

Distance between Melbourne & Alice Springs

$Distance_{Lat} = 69.1 \times (23° - 37°)$
$69.1 \times (-14°) = -967.4$

$Distance_{Long} = 69.1 \times (133° - 144°) \times cos(37°/57.3)$
$69.1 \times (-11°) \times cos (0.645724258)$
$-760.1 \times 0.999936494 = -760.1$

$Distance = (-967.4)^2 + (-760.1)^2$
$(935862.76) + (577752.01) = 1513614.77$
1230 miles

If you begin your tour in Alice Springs, you should visit _Adelaide_ next, since it is closer than _Melbourne_.

Tour Of China

Beijing: 39° N & 116° E

Things To Do:
1. Forbidden City
   Administration Site of the Ming & Qing Dynasties
2. Great Wall
   Historic Site
3. Summer Palace
   Imperial Garden
4. Tian' anmen Square
   Historic Site
5. Grand View Garden
   Garden

Shanghai: 31° N & 121° E

Things To Do:
1. Shanghai Museum
   Museum
2. Bund
   Waterfront Boulevard
3. Huangpu River Trip
   Boat Trip
4. Huzhou Pagoda
   Leaning Tower of China
5. Sun Yat-sen
   Former Residence of the Chinese Republic Founder

Kunming: 25° N & 102°

Things To Do:
1. Black Dragon Pool
   Site of Ming Dynasty Temple
2. Dianchi Lake
   Highland Lake
3. Stone Forest
   Limestone Forest Formations
4. Jiuxiang Scenic Spot
   Limestone Caverns
5. West Mountain
   Nature Preserve

Please label the cities mentioned above on the map

Native Animals

1. Siberian Tiger
   Panthera tigris altaica
2. Panda
   Ailuropoda melanolveca
3. Asian Elephant
   Elephas maximus
4. Asian One Horned Rhinoceros
   Rhinoceros unicornis
5. Chinese Alligator
   Alligator sinensis

Distances

Formula

$$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$

$$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$$

Distance between Beijing & Shanghai

$\text{Distance}_{Lat} = 69.1 \times (31° - 39°)$
$69.1 \times (-8°) = -552.8$

$\text{Distance}_{Long} = 69.1 \times (121° - 116°) \times \cos(39°/57.3)$
$69.1 \times (5°) \times \cos(0.680628272)$
$345.5 \times 0.999929443 = 345.48$

$\text{Distance} = (-552.8)^2 + (345.48)^2$
$(305587.84) + (119356.4304) = 424944.2704$
651 miles

Distance between Shanghai & Kunming

$\text{Distance}_{Lat} = 69.1 \times (25° - 31°)$
$69.1 \times (-6°) = -414.6$

$\text{Distance}_{Long} = 69.1 \times (102° - 121°) \times \cos(31°/57.3)$
$69.1 \times (-19°) \times \cos(0.541012216)$
$-1312.9 \times 0.99995542 = -1312.84$

$\text{Distance} = (-414.6)^2 + (1312.84)^2$
$(171893.16) + (1723548.866) = 1895442.026$
1377 miles

Distance between Kunming & Beijing

$\text{Distance}_{Lat} = 69.1 \times (39° - 25°)$
$69.1 \times (14°) = 967.4$

$\text{Distance}_{Long} = 69.1 \times (116° - 102°) \times \cos(25°/57.3)$
$69.1 \times (14°) \times \cos(0.436300174)$
$967.4 \times 0.999971007 = 967.37$

$\text{Distance} = (967.4)^2 + (967.37)^2$
$(935862.76) + (935804.7169) = 1871667.477$
1368 miles

If you begin your tour in Kunming, you should visit Shanghai next, since it is closer than Beijing.

Beijing
Shanghai
Kunming

Tour Of Germany

Hamburg Berlin

Munich

Berlin: 52°

Things To Do:
1. Reichstag *Parliament Building*
2. Brandenburger Tor *Monument*
3. Tacheles *Art Gallery*
4. Komische Oper *Opera House*
5. Markisches Museum *Art and Musical Instrument Museum*

Hamburg:

Things To Do:
1. Agma Zeitbuhne *Theatre*
2. Tierpark Carl Hagenbeck *Zoo*
3. Amburger Kunsthalle *Art Museum*
4. Altonaer Museum *History Museum*
5. Altonaer Rathaus *Historic Site*

Munich: 48° N & 11° E

Things To Do:
1. Tierpark Hellabrunn *Wildlife Park*
2. Alter Hof *Medieval Castle and Royal Residence*
3. Botanischer Garten *Botanical Gardens*
4. Altes Rathaus *Old Town Hall*
5. Alte Pina Kothek *Art Gallery*

Please label the cities mentioned above on the map

Native Animals

1. Bechstein's Bat
   Myotis bechsteini
2. European Squirrel
   Spermophilus citellus
3. Garden Dormouse
   Eliomys quercinus
4. Eurasian Otter
   Lutra lutra
5. Pond Bat
   Myotis dasycneme

Distances

Formula

$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$

$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$

$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$

Distance between Berlin & Hamburg

$\text{Distance}_{Lat} = 69.1 \times (53° - 52°)$
$69.1 \times (1°) = 69.1$

$\text{Distance}_{Long} = 69.1 \times (9° - 13°) \times \cos(52°/57.3)$
$69.1 \times (-4°) \times \cos(0.907504363)$
$-276.4 \times 0.999874566 = -276.37$

$\text{Distance} = (69.1)^2 + (-276.37)^2$
$(4774.81) + (76380.3769) = 81155.1869$
284 miles

Distance between Hamburg & Munich

$\text{Distance}_{Lat} = 69.1 \times (48° - 53°)$
$69.1 \times (-5°) = -345.5$

$\text{Distance}_{Long} = 69.1 \times (11° - 9°) \times \cos(53°/57.3)$
$69.1 \times (2°) \times \cos(0.92495637)$
$138.2 \times 0.999869696 = 138.18$

$\text{Distance} = (138.18)^2 + (-345.5)^2$
$(19093.7124) + (119370.25) = 138463.9624$
372 miles

Distance between Munich & Berlin

$\text{Distance}_{Lat} = 69.1 \times (52° - 48°)$
$69.1 \times (4°) = 276.4$

$\text{Distance}_{Long} = 69.1 \times (13° - 11°) \times \cos(48°/57.3)$
$69.1 \times (2°) \times \cos(0.837696335)$
$138.2 \times 0.999893121 = 138.19$

$\text{Distance} = (276.4)^2 + (138.19)^2$
$(76396.96) + (19096.4761) = 95493.4361$
309 miles

If you begin your tour in Berlin, you should visit Hamburg next, since it is closer than Munich.

Tour Of Indonesia

Palembang
Jakarta
Surabaya

Jakarta: 6° S & 106° E

Things To Do:
1. Old Batavia
   Historic Site
2. Jakarta Museum
   History Museum
3. National Monument
   Historic Monument
4. Sunda Kelapa
   Old Dutch Port
5. Taman Ismail Marzuki
   Site of Western & Indonesian Performances

Surabaya: 7° S & 112° E

Things To Do:
1. Kali Mas *Ship Viewing & Wharf*
2. Kayun Flower Market
3. Mpu Tantular *Archaeological museum*

Palembang: 3° S & 104° E

Things To Do:
1. Negeri Sum-Sel   *Museum*
2. Rubber and Coffee Plantations
3. Benteng *Historic Fort*
4. Ampera Bridge *Ship Viewing*
5. Floating Markets *Shopping*

Please label the cities mentioned above on the map

Native Animals

1. Sumatran Rhinoceros
   Dicerorhinus sumatrensis
2. Orangutan
   Pongo pygmaeus
3. Malayan Sun Bear
   Helarctos malayanus
4. Asian Small Clawed Otter
   Amblonyx cinereus
5. Sumatran Tiger
   Panthera tigris sumatrae

Distances

Formula

$$\text{Distance}_{Lat} = 69.1 \times (Lat_2 - Lat_1)$$
$$\text{Distance}_{Long} = 69.1 \times (Long_2 - Long_1) \times \cos(Lat_1 / 57.3)$$
$$- \quad \sqrt{ (\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2 }$$

Distance between Jakarta & Palembang

$\text{Distance}_{Lat} = 69.1 \times (3° - 6°)$
$\quad 69.1 \times (-3°) = -207.3$

$\text{Distance}_{Long} = 69.1 \times (104° - 106°) \times \cos(6°/57.3)$
$\quad 69.1 \times (-2°) \times \cos (0.10471204 1)$
$\quad -138.2 \times 0.9999983 = -138.20$

$\text{Distance} = (-207.3)^2 + (-138.20)^2$
$\quad (42973.29) + (19099.24) = 62072.53$

249 miles

Distance between Palembang & Surabaya

$\text{Distance}_{Lat} = 69.1 \times (7° - 3°)$
$\quad 69.1 \times (4°) = 276.4$

$\text{Distance}_{Long} = 69.1 \times (112° - 104°) \times \cos(3°/57.3)$
$\quad 69.1 \times (8°) \times \cos (0.05235602)$
$\quad 552.8 \times 0.999999582 = 552.80$

$\text{Distance} = (276.4)^2 + (552.80)^2$
$\quad (76396.96) + (305587.84) = 381984.8$

618 miles

Distance between Surabaya & Jakarta

$\text{Distance}_{Lat} = 69.1 \times (6° - 7°)$
$\quad 69.1 \times (-1°) = -69.1$

$\text{Distance}_{Long} = 69.1 \times (106° - 112°) \times \cos(7°/57.3)$
$\quad 69.1 \times (-6°) \times \cos (0.122164048)$
$\quad -414.6 \times 0.999997726 = -414.60$

$\text{Distance} = (-69.1)^2 + (-414.60)^2$
$\quad (4774.81) + (171893.16) = 176667.97$

420 miles

If you begin your tour in Jakarta, you should visit Palembang next, since it is closer than Surabaya.

Tour Of South America

Brasilia
Rio De Janeiro
Buenos Aires

Buenos Aires: 34° S & 58° W

Things To Do:

1. Casa Rosada *Presidential Palace*
2. Teatro Colon *Theatre*
3. Cabildo *Government Building*
4. Museo Historico Nacional *Museum*

Brasilia: 15° S & 47° W

Things To Do:

1. TV Tower *Scenic Tower*
2. Parque Nacional de Brasilia *Ecological Reserve*

Rio De Janeiro: 22° S & 43° W

Things To Do:

1. Sugar Loaf *Scenic Peek*
2. Tijuca Forest *Atlantic Rainforest*
3. Copacabana Beach
4. Maracana *Soccer Stadium*
5. Forte de Copacabana *Historic Fort*

Please label the cities mentioned above on the map

Native Animals

1. Prehensile Tailed Porcupine
   Coendou prehensilis
2. Hoffman's Sloth
   Choloepus hoffmanni
3. Howler Monkey
   Alouatta caraya
4. Red-lored Amazon Parrot
   Amazona autumnalis autumnalis

5. Green Iguana
   Iguana iguana

Distances

Formula

$$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$
$$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$$

Distance between Rio De Janeiro & Brasilia

$\text{Distance}_{Lat} = 69.1 \times (15° - 22°)$
$69.1 \times (-7°) = -483.7$

$\text{Distance}_{Long} = 69.1 \times (47° - 43°) \times \cos(22°/57.3)$
$69.1 \times (4°) \times \cos(0.383944153)$
$276.4 \times 0.999977547 = 276.39$

$\text{Distance} = (-483.7)^2 + (276.39)^2$
$(233965.69) + (76391.4321) = 310357.1221$
557 miles

Distance between Brasilia & Buenos Aires

$\text{Distance}_{Lat} = 69.1 \times (34° - 15°)$
$69.1 \times (19°) = 1312.9$

$\text{Distance}_{Long} = 69.1 \times (58° - 47°) \times \cos(15°/57.3)$
$69.1 \times (11°) \times \cos$
(0.261780104)
$760.1 \times 0.999989562 = 760.1$

$\text{Distance} = (1312.9)^2 + (760.1)^2$
$(1723706.41) + (577752.01) = 2301458.42$
1517 miles

Distance between Buenos Aires & Rio De Janeiro

$\text{Distance}_{Lat} = 69.1 \times (22° - 34°)$
$69.1 \times (12°) = 829.2$

$\text{Distance}_{Long} = 69.1 \times (43° - 58°) \times \cos(34°/57.3)$
$69.1 \times (-15°) \times \cos$
(0.593368237)
$-1036.5 \times 0.999946374 = -1036.4$

$\text{Distance} = (829.2)^2 + (-1036.4)^2$
$(687572.64) + (1074124.96) = 1761697.6$
1327 miles

If you begin your tour in Buenos Aires, you should visit Rio De Janeiro next, since it is closer than Brasilia.

Tour Of
United States Of America

Cape Kennedy
Tampa   Miami

Tampa: 27° N & 82° W

Things To Do:

1. Busch Gardens   *Theme Park*
2. Tampa Bay Performing Arts Center   *Theatre*
3. Bayshore Boulevard   *Hiking*
4. Tampa Art Museum
5. Florida Aquarium

Miami: 25° N & 80° W

Things To Do:

1. South Beach
2. Miami Seaquarium
3. Metrozoo
4. Everglades Safari Park   *Conservation Tour*
5. Pelican Harbor Seabird Station   *Rehabilitation*

Cape Kennedy: 28° N & 80° W

Things To Do:

1. Kennedy Space Center
2. LC39 Observation Gantry   *Observation Deck*
3. Rocket Garden   *Museum*
4. Kennedy Space Center Launch Complex

Please label the cities mentioned above on the map

Native Animals

1. American Alligator
   Alligator mississippiensis
2. Roseate Spoonbill
   Ajaia ajaia
3. Florida Panther
   Puma concolor coryi
4. Wood Stork
   Mycteria Americana
5. Black Bear
   Ursus americanus floridanus

Distances

Formula

$$\text{Distance}_{Lat} = 69.1 \times (\text{Lat}_2 - \text{Lat}_1)$$
$$\text{Distance}_{Long} = 69.1 \times (\text{Long}_2 - \text{Long}_1) \times \cos(\text{Lat}_1 / 57.3)$$

$$\text{Distance} = \sqrt{(\text{Distance}_{Latitude})^2 + (\text{Distance}_{Longitude})^2}$$

Distance between Tampa & Miami

$\text{Distance}_{Lat} = 69.1 \times (25° - 27°)$
$69.1 \times (-2°) = -138.2$

$\text{Distance}_{Long} = 69.1 \times (80° - 82°) \times \cos(27°/57.3)$
$69.1 \times (-2°) \times \cos(0.471204188)$
$-138.2 \times 0.999966182 = -138.2$

$\text{Distance} = (-138.2)^2 + (-138.20)^2$
$(19099.24) + (19099.24) = 38198.48$
195 miles

Distance between Miami & Cape Kennedy

$\text{Distance}_{Lat} = 69.1 \times (28° - 25°)$
$69.1 \times (3°) = 207.3$

$\text{Distance}_{Long} = 69.1 \times (80° - 80°) \times \cos(25°/57.3)$

$$\text{Distance}_{Lat} =$$
$$69.1 \times (27° - 28°)$$
$$69.1 \times (-1°) = -69.1$$

Distance between Cape Kennedy & Tampa

$\text{Distance}_{Lat} = 69.1 \times (27° - 28°)$
$69.1 \times (-1°) = -69.1$

$\text{Distance}_{Long} = 69.1 \times (82° - 80°) \times \cos(28°/57.3)$
$69.1 \times (2°) \times \cos(0.488656195)$
$138.2 \times 0.999963631 = 138.19$

$\text{Distance} = (-69.1)^2 + (138.19)^2$
$(4774.81) + (19096.4761) = 23871.2861$
154 miles

If you begin your tour in Tampa, you should visit __Cape Kennedy__ next, since it is closer than __Miami__.

SeaWorld. Busch Gardens.