

# Contents

<b>Foreword</b> .....	<b>v</b>
<b>Preface</b> .....	<b>vii</b>
<b>Introduction</b> .....	<b>1</b>
<b>Part I: Geography: Time Zones, Maps and Population</b>	
<b>Counts</b> .....	<b>9</b>
Activity 1: The IBA: Globe Trotting .....	13
Activity 2: The IBA: Time Zones .....	17
Activity 3: The IBA: Playoff Schedule .....	20
Activity 4: The IBA: Satellite TV .....	25
Activity 5: Maps of the World .....	30
Activity 6: World Population Clock Projections .....	49
<b>Part II: Cultures: Mystery from History</b> .....	<b>53</b>
Activity 7: Succession to the British Throne (Part 1) .....	57
Activity 8: Succession to the British Throne (Part 2) .....	62
Activity 9: Royal Surfing (Part 1) .....	64
Activity 10: Royal Surfing (Part 2) .....	66
Activity 11: Roman Numerals .....	68
Activity 12: Mayan Maths (Part 1) .....	70
Activity 13: Mayan Maths (Part 2) .....	73
Activity 14: Search for the Zytar (Part 1) .....	79
Activity 15: Search for the Zytar (Part 2) .....	84
Activity 16: Search for the Zytar (Part 3) .....	86

<b>Part III: History: Perspectives on Past Events .....</b>	<b>91</b>
Activity 17: The American Revolution .....	94
Activity 18: The Election of 1824 .....	96
Activity 19: The 1850s .....	101
Activity 20: The Roaring Twenties .....	105
Activity 21: The Goldrush Period .....	107
Activity 22: Five Great U.S. Presidents.....	110
<b>Part IV: Economics: My Money, Our Money .....</b>	<b>113</b>
Activity 23: Interest(ing) Times .....	117
Activity 24: The Power of Diversification .....	120
Activity 25: Family Matters .....	123
Activity 26: Social Security Retirement Benefits .....	129
Activity 27: Watch Your Money Grow .....	133
Activity 28: Watch Your Money Go! .....	138
Activity 29: Mortgage Smorgasbord .....	141
Activity 30: To Buy or Not to Buy .....	143
Activity 31: Real and Personal Property Taxes .....	145
<b>Part V: Politics: U.S. Political Processes .....</b>	<b>149</b>
Activity 32: The President’s Cabinet .....	153
Activity 33: Apportionment .....	156
Activity 34: Apportionment: The Equal Proportions Method .....	162
Activity 35: Gerrymandering a State .....	168
Activity 36: Gerrymandering a County.....	173
Activity 37: The Electoral College and the Election of 1824 .....	175
Activity 38: ‘Capitol’ Murder: How to Kill a Bill .....	180

# Geography:

## Time Zones, Maps and Population Counts



This part of *Catch Them Thinking in Social Studies* is designed for geography and maths classrooms as well as for some history classrooms. The activities require students to take time and take care as they work with measurements, formulas and/or visual clues.

The first four activities centre around the fictional International Basketball Association (IBA).

'Globe Trotting' familiarises students with latitude and longitude and challenges them to discern the itineraries of five IBA representatives. Students deduce the sequence of the representatives' destinations (described only by latitude and longitude), plot the coordinates on a grid, and use a world map to name the cities at those coordinates.

In 'Time Zones,' students construct a calculator that determines the time of day in IBA cities around the world. Each team makes a calculator with two dissimilarly sized paper plates and a fastener. They draw marks 15 degrees apart to simulate the world's 24 time zones on both wheels. On the smaller wheel, guided by information in the clue cards, students correctly place names of IBA cities.

In 'Playoff Schedule,' students use these calculators (or other reference material on time zones) and follow the league's rules given in the clue cards to schedule the IBA semifinal games. In 'Satellite TV,' they use both the calculators and the playoff schedule to arrange a timetable for simultaneous broadcasts of the games to fans in different time zones.

Students use visual clues and logic to label outline maps of the six inhabited continents in 'Maps of the World'. As they follow the clues, they acquire information not just on the geographical features of each continent but on history and culture also.



## Activity 1

# The IBA: Globe Trotting

Extra materials needed:

- ✓ World atlases
- ✓ Globe

Students identify world itineraries of five representatives of the fictional International Basketball Association (IBA) by adding and subtracting longitude and latitude coordinates that they order in the correct sequence. Only New York City, the single departure point for the five travellers, is named; from that point, students calculate 23 other locations by their relative longitude and latitude. Students then plot the coordinates on a grid and use a world map to name the cities at those coordinates. No two travellers visit the same city, and no traveller visits more than five cities after leaving New York City.

---

### Background Information

Mapmakers use vertical lines called meridians of longitude and horizontal lines called parallels of latitude. Longitude runs north and south, and latitude runs east and west. By following these vertical and horizontal lines and determining where these lines intersect, one can find locations on a map.

Lines of longitude start at 0 degrees at the prime meridian (the first line of longitude) and run to 180 degrees (located in the middle of the Pacific Ocean). Meridians of longitude west of the prime meridian are labelled with a W and those east of the prime meridian are labelled with an E. Parallels of latitude range from 0 degrees at the equator to 90 degrees north (N) at the North Pole and 90 degrees south (S) at the South Pole.

---

**Objective**

Students gain a thorough understanding of latitude and longitude by deducing separate itineraries of five world travellers.

---

**Task**

Discover and describe five persons' different itineraries using a common departure point, latitude and longitude coordinates, a grid (see figure 1.1) and a world map.

---

**Answers**

The league representatives travelled to the following cities in the order given for each.

Linda travelled first to London, then to Madrid, Rome, Athens and Moscow.

Kristin travelled first to New Delhi, then to Jerusalem, Cairo and Johannesburg.

Korey travelled first to Tokyo, then to Beijing, Manila, Sydney and Melbourne.



Leila travelled first to Paris, then to Brussels, Amsterdam, Copenhagen and Berlin.



Conor travelled first to Havana, then to Rio de Janeiro, Buenos Aires and Mexico City.



---


**Metacognitive Discussion**

How do you think the system of using imaginary lines for latitude and longitude came to be invented? How do latitude and longitude lines on a globe differ from those on a map? Which countries are big on a map but much smaller on a globe, and why is there a difference? If you were a captain of a ship, would using only latitude and longitude help you stay on course?

<p>Clue Card <b>A</b></p> 	<ol style="list-style-type: none"> <li>1. Leila's fifth and final city is 1 degree north of London and 13 degrees to the east.</li> <li>2. By flying 25 degrees south and 5 degrees east, Korey arrived at his third city.</li> <li>3. For her third stop, Kristin travelled 1 degree south and 4 degrees west.</li> <li>4. Your job is to name the 23 cities and to list them according to which representative visited them and in the order he or she visited them.</li> <li>5. Conor's first city was approximately 84 degrees west and 25 degrees south of Leila's first stop.</li> <li>6. Kristin travelled 3 degrees north and 42 degrees west to arrive at her second stop.</li> <li>7. Connect the points of each representative's travels. Personalise each rep's travels with a different colour.</li> </ol>
	

<p>Clue Card <b>B</b></p> 	<ol style="list-style-type: none"> <li>1. Linda, Leila, Korey, Kristin and Conor set out from New York City on Monday but headed out on different flights in different directions. New York City is located 40 degrees north by 74 degrees west.</li> <li>2. The second city of Conor's itinerary was 46 degrees south and 39 degrees east of his first city.</li> <li>3. From her first stop, Linda travelled 11 degrees south and 3 degrees west to get to her second destination.</li> <li>4. Leila's first city was 76 degrees east and 8 degrees north of the city of her departure.</li> <li>5. Kristin's second stop was 12 degrees north and 134 degrees east of Conor's final stop.</li> <li>6. Leila travelled only 2 degrees north and 0.3 degrees east to reach her third destination.</li> <li>7. Korey's fourth stop was 48 degrees south and 30 degrees east of his third stop.</li> </ol>
	

<p>Clue Card <b>C</b></p> 	<ol style="list-style-type: none"> <li>1. Fifty-six degrees south and 3 degrees west took Kristin to her fourth and final city.</li> <li>2. Korey's first destination took him to 5 degrees south and 147 degrees west of his origination.</li> <li>3. Leila's third city and fourth city are 3 degrees apart in latitude, but the fourth city is 8 more degrees to the east.</li> <li>4. Linda's final city was 4 degrees northward and 6 degrees to the east of her fourth stop.</li> <li>5. Linda's fourth stop took her 4 degrees to the south and 11 degrees to the east from the third city.</li> <li>6. Travelling south 4 degrees and 6 degrees west, Korey reached his final stop.</li> <li>7. A map or globe would be very useful.</li> </ol>
	

<p>Clue Card <b>D</b></p> 	<ol style="list-style-type: none"> <li>1. Kristin travelled 12 degrees south and 151 degrees east to reach her first assignment.</li> <li>2. Linda's first stop could be located on a map at approximately 51 degrees north and 0.1 degrees west.</li> <li>3. Destination three for Linda was a journey of 1 degree to the north and 16 degrees to the east.</li> <li>4. Conor's third stop was 12 degrees south and 15 degrees west of his second city.</li> <li>5. Korey travelled approximately 4 degrees north and about 23 degrees west to arrive at his second city.</li> <li>6. Leila travelled 2 degrees north and 2 degrees east to get to her second city.</li> <li>7. Plot their travels on the grid system provided.</li> </ol>
