

## Direction

North, South, East and West denotes parts of the world that are also used to signify cardinal (compass) direction (heading) with respect to geographic coordinate system. Sense of geographic space and direction is one of the essential life skills.

### Helper's Guide

#### Answers to Learning by Doing exercises:

2. Example countries:

- |                          |                  |
|--------------------------|------------------|
| a. Northern and western: | <u>USA</u>       |
| b. Northern and eastern: | <u>Ukraine</u>   |
| c. Southern and western: | <u>Brazil</u>    |
| d. Southern and eastern: | <u>Australia</u> |

3. For Nebraska:

- a. Northern or southern  
 b. Eastern or western

4. For Nebraska:

- |          |                             |
|----------|-----------------------------|
| a. North | <u>South Dakota</u>         |
| b. East  | <u>Iowa and Missouri</u>    |
| c. South | <u>Kansas and Colorado</u>  |
| d. West  | <u>Colorado and Wyoming</u> |

5.

	North / South		East / West	
New York is located to the	<i>North</i>	and	<i>East</i>	with respect to California
Colorado is located to the	<i>North</i>	and	<i>West</i>	with respect to Florida
Texas is located to the	<i>South</i>	and	<i>East</i>	with respect to Washington
Ohio is located to the	<i>North</i>	and	<i>East</i>	with respect to Arizona

6.

<b>Flying from:</b>	<b>Heading (words)</b>	<b>Heading (°)</b>
California to New York	<i>North North East</i>	<i>22.5°</i>
Florida to Colorado	<i>North West</i>	<i>315°</i>
Washington to Texas	<i>South East</i>	<i>135°</i>
Arizona to Ohio	<i>East North East</i>	<i>67.5°</i>

#### Need to Emphasize

- Direction is important when relating different objects in space.
- Geographic direction can be expressed in words and numbers.
- Although the concept is the same, angular representation of direction is different from the traditional representation of an angle in polar coordinates that mathematicians use.

**Related Links**

- [http://en.wikipedia.org/wiki/Cardinal\\_direction](http://en.wikipedia.org/wiki/Cardinal_direction)
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