

# Similar (Same) or Different Positions

(Spatial Analogies)

## Background

- The concept of “the same position” is the key to representing large spaces with small maps – a symbol is considered to be an accurate representation if it is “in the same position” on the map as the represented object is in the real world. Ironically, the same concept is also the key to many geographic concepts. Features like porches and bathrooms, for example, tend to be located “in the same position” in many different houses. Gas stations and even large shopping malls tend to be located “in similar positions” on maps of freeways in different cities. Particular kinds of climate occur “in the same position” on different continents. Strategic forts and battles tend to occur “in similar geographic positions” in different countries at different times in history.
- Students in primary school can use classroom objects to build a strong foundation for that kind of middle-school-and-above geographic analysis of climates, settlements, and battles.

## Materials

- a shallow cardboard or wooden box with roughly the same proportions as the classroom
- cardboard rectangles at roughly the same size relative to the model as a desk is to the room.
- drawings of classroom features, such as a clock, globe, easel, etc.; small dolls, boxes, etc.

## Vocabulary

**Review:** shrinking machine, model, symbol, stand for, inside, next to, close to, point (verb)

**Concentrate on:** similar position, between, beyond, middle, edge, corner, north, east, south, west

**Introduce:** analogy, analog

## Procedures

- put a book in the middle of a tabletop and then put a similar-color rectangle in the middle of a rectangle that serves as a map of the table
- move the book to a corner of the table, then ask where the square should be moved so that it is “in the same position” on the map as the book is on the table
- ask questions and listen
- VARIATION: put a book near one edge of a table and ask students to put their book “in the same position” on their tables or desks; repeat with verbal instructions (“Simon says, put your book near the right-hand edge of your table; put your book in the upper left corner.”)
- VARIATION: put a book on a table, then put two small squares on a map or model of the table, one “in the same position” and one in a “wrong” position, and ask students which one is correct
- EXTENSION: put nine pieces of paper on a table in a three-by-three grid, hide a treasure such as a photo or certificate under one, represent all the papers on a map of the table, mark one as the location of the treasure, and have students point to the paper that is “in the same position”
- EXTENSION: do similar things with a map of the playground or a nearby park

## Learner outcomes

- awareness that the relative position of a symbol on a map or model can represent “the same position” in a room, and that two objects can be “in the same position” in different rooms
- enhanced ability to describe relative locations of things and to give and interpret directions

## Issues to be resolved

- At first, the differences in position must be very great – e.g., middle, front or back edge, left or right edge, corner. Later, students can refine their concepts of “similar position.” The jury is out on how concrete the symbols must be. The focus of this lesson is on the concept of similarity or difference in position, so students should have mastered the basic idea of representation with prior lessons.
- Frame of reference matters – “same” can mean to every individual’s left, or to a common north

# Similar or Different - Developmental Sequence

**Background:** As with any statement of developmental sequence, this list is an indication of what *might* happen with a typical child. It is not a prescription of what *must* happen in precisely this order in a classroom, nor does it reflect the fact that some children may have already passed through all of these “stages” before the lesson starts, whereas others might need considerable coaching to get past stage 1.

**Stage 1:** Students place objects in specific locations on desks or tables as modeled and instructed.

Teacher models the activity by placing a book, block, or other small object in the middle of a desk, and then asking students to place a similar object in a similar position on their desks.

Teacher places an object near the left edge of a desk, describes its position verbally, and asks students to place similar objects in similar positions on their desks. Repeat with variations (e.g., edge close to me, front right corner) until the concept of similar position is clear.

CAUTION: “Similar” means with respect to the individual table; SEE CAUTION BELOW.

VARIATION: Describe the positions of forks, spoons, plates, etc. in a table setting as spatial analogs.

VARIATION: Connect to the geographic directions that are marked on the wall, e.g., “Put the book near the east edge of your desk.” This can be done during any or all of the steps in this list.

**Stage 2:** Students place objects in specific positions as instructed verbally.

Teacher asks students to place objects in a specific locations on their desks – left edge, southeast corner, etc. This could be a “Simon says” game – if Simon says to do it, you do it; if not, don’t.

VARIATION: Children can take turns being the caller who issues instructions.

**Stage 3:** Students observe an object on a desk and put similar objects in similar places on their desks.

Teacher points to an object in a specific place on one desk and asks students to describe its position and then place similar objects in “the same position” on their own desks.

**Stage 4:** Students observe objects on two desks and describes their positions as similar or different.

Teacher places books in similar or different positions – both in the middle, both near one edge or a corner, or one near an edge and the other in the opposite corner, etc. – and asks students to say whether their positions are similar or different. Keep it simple: no distinctions more precise than middle, edge, corner, and maybe not even that complicated at first.

**Stage 5:** Students move objects on their desks according to instructions.

Teacher asks student to place books in the middle of their desks, then asks them to move the book to the front edge, the east edge, the upper left corner, the corner toward the door, etc.

**Stage 6:** Students observe objects in larger spaces and describe their positions as similar or different.

Teacher asks whether the bathroom, rug, clock, etc. in another classroom has a similar position as the same feature in their own classroom. This can be extended to familiar stores, theaters, homes, etc.

CAUTION: The specific instructions depend in part on the arrangement of furniture in the room. Keep in mind that 5-year-old students can follow all of these instructions if their tables or desks are parallel to each other, but if some are rotated 180 degrees, it’s tough until they are 6, and if rotated 90 degrees, it can be difficult to align with other desks or larger spaces until age 8. Research suggests that it is a short-term memory problem rather than a cognitive one, but it is still a problem! At the same time, learning how to mentally rotate spaces is important in many situations, such as finding your way around in a park or store.

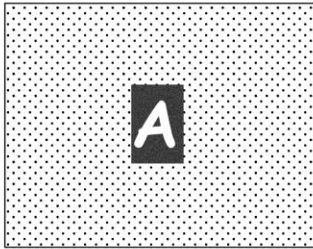
**Assessment game:** Hide an object (e.g., a bear, photo, “treasure card”) in the room, represent it in a classroom map or model with the kind of “analogy language” used in this lesson, and have students search for it. Reverse the process: students hide a treasure and describe its location.

**Forward:** repeat the process for larger areas – corridor, playground, park, neighborhood – as appropriate. This activity builds a really important foundation for map reading in later grades – many global features (e.g., icecaps, rainforests, lion habitat, hurricanes, port cities, food-surplus areas, good beaches, etc.) occur in similar positions on different continents. At a more detailed scale, many features in cities, parks, or farms are located “in analogous positions.”

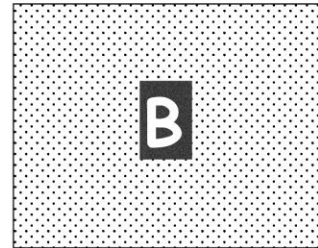
# Similar Position

# 1

Imagine two tables.  
Each one has a book on it.



Book A is  
in the middle  
of its table.



Book B is  
in the middle  
of its table.

The two books are "in the same position."

Similar or Different - similar position

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# Different Position

# 2

Imagine two tables.  
Each one has a book on it.



Book A is  
in the middle  
of its table.



Book B is  
near the edge  
of its table.

The two books are "in different positions."

Similar or Different - different position

New York Center for Geographic Learning

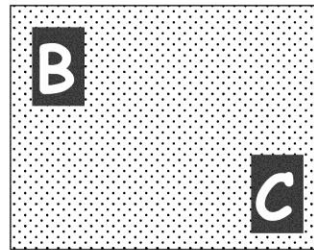
## Similar Position

# 3

Imagine two tables with books on them.



Book A is  
in the corner  
of its table.



Is book B or C in "the same position as A?"

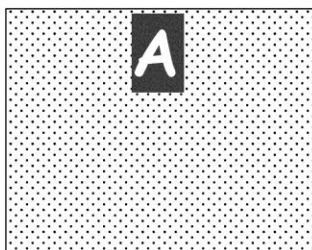
Similar or Different - similar quiz

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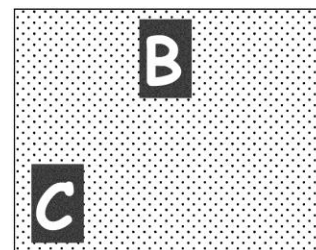
## Different Position

# 4

Imagine two tables with books on them.



Book A is near  
the front edge  
of its table.



Is book B or C in "a different position than A?"

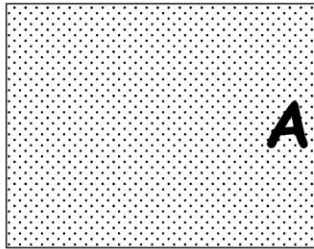
Similar or Different - different quiz

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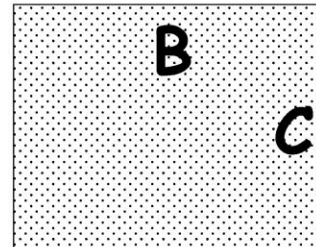
# Similar Position

# 5

Compare positions of easels in two rooms.



Easel A is near the greenboard on the east wall of its room.



Is easel B or C in a position similar to A's?

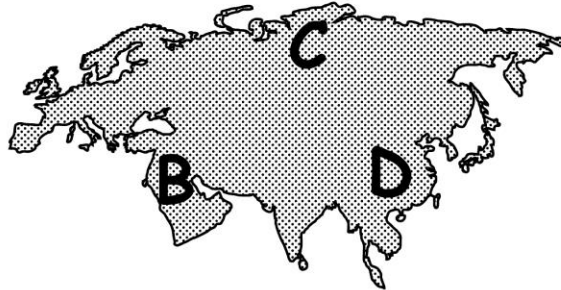
Similar or Different - comparing rooms

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# Similar Geographic Position

# 6

Place A is cold.  
It's close to the North Pole.



This middle-school kind of geographic analysis; is the goal for which we are trying to build a good foundation

Is place B, C, or D in a similar location at the north edge of a continent and therefore also likely to have cold weather?

This particular example doesn't work for Africa or South America, because those two continents are not "in the same position" as North America or Eurasia with respect to the Equator. In fact, "the same position" in South America would be at the southern tip of the continent, and it's cold there!

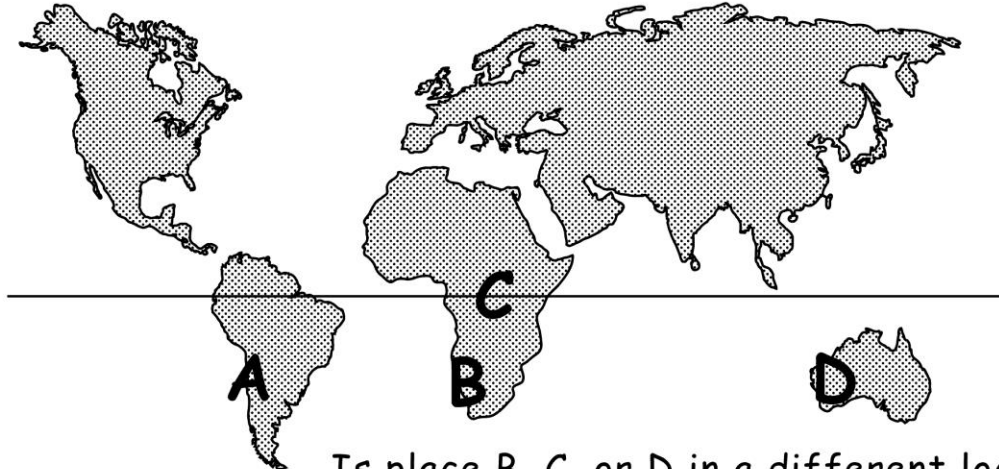
Similar Geographic Position - cold

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# Different Geographic Position

# 7

Place A has a desert.



Is place B, C, or D in a different location on its continent and therefore not as likely to be a desert?

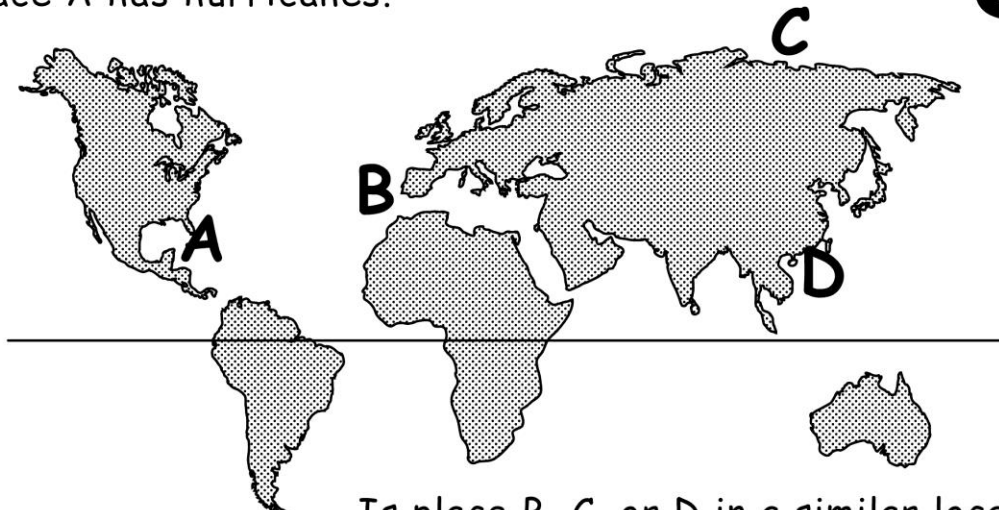
Different Geographic Position - deserts

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# Similar Geographic Position

# 8

Place A has hurricanes.



Is place B, C, or D in a similar location near its continent and therefore also likely to have hurricanes?

Similar Geographic Position - hurricanes

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## General Idea of "Same Position" 9

The concept of "same position" can apply at many different geographic scales:

- porches or bathrooms in different houses
- gas stations near different freeway exits
- strategic forts in different countries
- good campsites in different parks
- rich neighborhoods in different cities

Same Position, Different Scale

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## Geographic Analogs 10 (places in analogous positions)

Places that have similar relative positions on different continents (cities, mountains, etc.) and therefore might have similar conditions.

San Francisco and Lisbon, Portugal, are geographic analogs. Each city is located on low hills close to a large bay on the western coast of its respective continent, about 38 degrees of latitude north of the Equator.

Not surprisingly, both cities have warm and dry summers, mild and rainy winters, a threat of wildfires in autumn, etc. These conditions are ideal for wine grapes, which are grown near both cities, etc.

Analogous Position - definition

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