

Together or Separate

(Spatial Associations)

Background

- Research clearly shows that people (both children and adults) often organize information about places by noticing spatial associations – the tendencies for particular features to occur together in particular kinds of places. Spatial associations can be as simple as the “proper” position of a fork on the left sides of a plate, and as complex as the particular mix of environmental conditions that allow a specific kind of virus to survive and infect people with diseases.
- Students who learn to notice spatial associations will have an enhanced ability to organize their observations about places and environments.

Materials

- (from previous lessons) a classroom model or map and materials for symbols
- table settings; bathroom materials; photos of animals in their “typical” habitats; photos of landscape features in the neighborhood, community, and state.

Vocabulary

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

Concentrate on: together, separate, associated, near, far, environment

Introduce: conditions, neighbor(ing) [later: cause, effect, correlated]

Procedures

- put a plate on a table and then hold up a fork and ask where it should go; or place both on the table in the “normal” position and ask if that is correct
- put a plate, fork, spoon, and glass on each side of a table, one arranged together and the other scattered, and ask which ones are in the “proper” positions and which ones are not.
- VARIATION: hold up various objects and ask in what part of a classroom these are usually found
- VARIATION: hold up various objects and ask in what room of an apartment or house these “go”
- VARIATION: hold up a picture or model of a memorable animal (penguin, camel, monkey, lion, giraffe, bear) and a picture of an environment (Antarctica, desert, rainforest, savanna) and ask “Does this animal like to live in this place?”
- VARIATION: hold up pictures or models of common landscape features and have students decide which ones go in cities, suburbs, or rural areas (have pictures of those communities to consult). Focus on examples that follow the rule: “when you see one, you are likely to see the other.”
- Middle-school EXTENSION: match natural hazards with the environments where they occur

Learner outcomes

- awareness that specific features tend to occur together, often because they have some kind of cause-and-effect connection
- enhanced ability to describe relative locations of things, and to give and interpret directions

Issues to be resolved

- A BIG ISSUE. How fast can we move “up” the scale from room to school to community to country? A common problem is to move too fast, assuming that children get the idea of “typical environment where X tends to occur.” The crucial step is outside of the classroom – can students notice things that tend to occur together in their environment? It takes plenty of local examples to help students move from tabletop and parts-of-a-classroom to features-in-the-landscape.
- Precision in language helps. Focus on the if-you-see-one-you-are-likely-to-see-the-other rule, call it “together” at first, and only later add terms like “associated” or, even later, “correlated.”

Together or Separate - Developmental Sequence

Background: Like any statement of developmental sequence, this list indicates what *might* happen with a typical child. It is not a prescription of what *must* happen in precisely this order in a classroom.

Stage 1: Individuals examine simple, familiar arrangements and decide if things “go together.”

Teacher points to a table setting and asks if things are arranged “correctly.”

Use other simple examples until the concepts of *together* and *separate* are clear – plates and forks tend to occur together in the same places; so do patios and grills; spoons and snowboots do not.

Stage 2: Students select symbols to show relative positions of objects on a classroom map/model.

Teacher displays small photos of features that tend to be associated with particular places in the classroom (e.g. near sink, on teacher’s desk, in reading areas, etc.) and asks students to place those objects “together with their usual neighbors” on the classroom map or model

VARIATION: Teacher places a pair of objects on the map/model, and asks students if those objects tend to occur near each other (in the same part of the room). Repeat with various combinations, occasionally including pairs of objects that seldom occur near each other. Like other concepts that seem “intuitively obvious” to adults, the idea of spatial association may take some time to learn.

Stage 3: Students describe features that tend to occur together in specific parts of the community.

Teacher shows photos of features and has students decide if they tend to occur “on busy streets” or “on side streets where people live” (or in cities vs. rural areas, or hilly vs. flat areas, or forested and open areas, whatever distinctions are more meaningful in your local area).

Teacher places a feature on the map and asks which of several alternative features would be most likely to be found near that one (several stores, or a car and garage, small garden and apartment).

VARIATION: repeat with other features – signs and specific kinds of business (this is a good place to add common street sign words like restaurant, grocery, and bank to their vocabularies). It might help to note that we are learning words that can help us when we go on a field trip.

Stage 4: Students match animals, plants, houses, other features with their environments.

Teacher holds up a photo of a distinctive animal and asks what kind of place it likes to live in. This should start very simple – giraffes and small trees, penguins and ice, camels and desert, bears and cold places (“why else would it have a fur coat on all the time?”)

Teacher holds up a photo of a house and asks “In what kinds of environment – hot, cold, rainy, dry – are you likely to see this kind of house?”

Teacher holds up a photo of a community and asks what kinds of things might go on in this place. Pick photos that start with mostly familiar features and gradually stretch into less familiar environments – students can start noticing spatial associations in kindergarten, but they can continue to learn more about them into graduate school!!!

VARIATION: Have students put small models of furniture into a larger map of an apartment. Teacher could also demonstrate with a map of a museum or mall. (Did someone say field trip? If so, find or make a map of the place to be visited, and have students “visit it” in imagination first!)

Stage 5: Students arrange models of buildings on a map of several blocks.

Teacher holds up a picture of a bank and asks where it usually goes on a rectangle that represents a city block. (Pick features that have “predictable” locations in the local community.)

Stage 6: Students place models of animals on a world outline map.

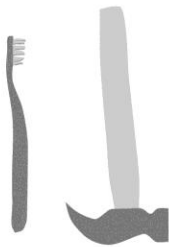
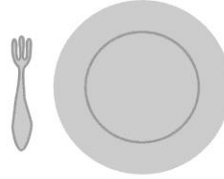
Assessment game: Put towels of different colors on tables in the room, hide a flat object (e.g., a photo) under a towel, represent it as under a similar-color piece of construction paper on the classroom map, and have students search for it. Reverse the process: students hide a treasure and show its location by noting its association with some other feature on a map.

Forward: repeat the process for larger areas – city, state, country, continent, world – as appropriate.

Together or Separate

1

Think about a plate and a fork.
You usually find them together
in the same room.



What about a toothbrush and a hammer?
These two things are usually found
in different places in a house.
Why? because people usually
do not use them together.

Together or Separate - Definitions

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Together or Separate in the Home

2

Which of these pairs of things
usually occur together in the same place?

BASEBALL AND BAT

FLOWER AND SHOE

PAN AND SPOON

CAR AND STOVE

POPCORN AND BRICK

TELEVISION AND CHAIR

Together or Separate - Examples

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Together or Separate on the Street

3

Which of these pairs of things
usually occur together in the same place?

BANK AND MONEY

BIG SIGN AND HOUSE

CAR AND GARAGE

STOPLIGHT AND CORNER

THEATER AND BIG SIGN

CAR AND SWIMMING POOL

Together or Separate - Street

New York Center for Geographic Learning

Together or Separate on the Map

4

Which of these pairs of things
usually occur together in the same place?

MONKEY AND TREE

WHALE AND DESERT

PENGUIN AND ICE

BUFFALO AND GRASS

CAMEL AND DESERT

LION AND LAKE

DOLPHIN AND OCEAN

Together or Separate - Biomes

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Together or Separate

5

Which numbers often are together
in the same places? 1&2 1&3 or 2&3

1 2 3 2 1
2 13 31 2 13 2
1 31 22 31 31 2

Together or Separate - Street

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Together or Separate

6

What sign-words usually occur together
with the items listed below them?

DRUG STORE
hammer shoes

BANK
coins checks

RESTAURANT
food drink

GROCERY
soup milk

BAKERY
brick glass

CLOTHING
candy milk

MUSIC
CD earphone

Together or Separate - Biomes

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