

Spatial Reasoning

Some Questions to Ask about a Place

Modes of spatial reasoning are ways of thinking. They make it easier to learn about places and to organize that knowledge in our heads. Each mode of thinking is a way of looking at relationships among places. Here are some starter questions to ask about a "new" place:

Comparison - How is this place like a place you already know? How is it different? Is it colder, hotter, or about the same? Are the trees the same or different? How about the buildings? Is it more or less crowded? Are people younger or older? Do they wear the same kind of clothes or speak the same language?

Aura - Is this place near something that has an influence on it (like a noisy highway)? Is there a shopping center, movie theater, or nice park nearby? (That might make people think this a better place to live.) On the other hand, is there a polluted stream, smelly factory, or high-crime area nearby? A crazy dictator?

Region - Is this place part of a bunch of similar places (like a group of apartments)? Is this in an area of farms with cornfields and cows? If so, you can draw a line around the group of similar places on a map. The result is a geographic region (e.g., the Corn Belt, an industrial area, or an area where most people speak French).

Hierarchy - Is this place located inside of a specific large geographic area, like a state, country, watershed, or medical service area? (Unlike a region, the larger area in a hierarchy might have many different kinds of places or regions within it.) If your city is inside a certain state, that political hierarchy has an effect on what you do, because you have to obey the laws of the state as well as the city.

Transition - Is this place part of a sequence of places? A spatial sequence is a line of places that go in a particular direction, like from a valley to the top of a mountain, or from the center to the edge of a city. How do conditions change as you go from one end of the sequence to the other? Are the conditions in your place more like one end, or does it have a mix of features from both ends of the sequence?

Analogy - Is there another place that is located in a similar position? For example, maybe another continent has a place that is at the same latitude as this place. If so, the two places might have the same kind of weather, even though they are thousands of miles apart. Or maybe another city also has a place that has a position like this place in this city. For example, both places might be next to a river that is downstream from a factory.

Pattern - Is your place part of a group of places that are arranged in a particular way? Maybe they are all on one side of a state. Or they occur in short lines that run north-south. Or maybe they form rings, waves, or some other arrangement. What forces might be responsible for the spatial pattern that you observe? How does that pattern affect transportation or other human activity?

Association - Are two features likely to occur together, in the same places? On a local scale, gas stations often are located close to exits from a freeway. On a continental scale, a disease called malaria is spatially associated with Anopheles mosquitoes. They occur together in the same parts of Africa, because people catch malaria only if that kind of mosquito bites them after it has bitten someone else with the disease.