

Sooner or Later (along a journey)

(Spatial Sequences and Transitions)

Background

- Research shows that people organize and store impressions about the world in the form of a description of what changes along a spatial sequence. For example, one can interpret the natural environments of West Africa as a gradual transition from very rainy to nearly dry. Viewing it in that way, rather than as a set of discrete regions to memorize –rainforest, savanna, grassland, and desert – can make it much easier to understand how global warming can contribute to a large number of local climate changes and resulting cultural dislocations.
- The idea of transition can also be used to describe the boundaries around regions. Some boundaries are quite sharp, others very blurry, a fact that is not evident on typical colored maps of regions.

Materials

- a long piece of paper or cloth to serve as the basis for a journey scroll (see transparency)

Vocabulary

Review: model, map, stand for, start, finish, beginning, end

Concentrate on: first, then, last; sooner, later; uphill, downhill, level; all, mostly, some; more, less; increasing, decreasing; noisier, quieter; cleaner, dirtier; etc.

Introduce: sequence, border, gradual, abrupt

Procedures

- Find two places that are different, and have students describe the differences (comparison). Then ask whether the change from one to the other happens quickly or gradually. For example, . . .
 - Some classrooms have desks that are arranged in one part of the room, and there is a sudden change from the desk part of the room to the desk-free part.
 - Some classrooms have bright windows on one side. If the lights are turned off, the transition from a bright area to a darker area is usually quite gradual.
- Lead a field trip that goes from one local area to another that is distinctly different (suburb to forest, perhaps, or single-family to apartment, residential to industrial, Spanish to English, whatever works in your community). In early grades, the main focus of the lesson should be on building vocabulary and enhancing student ability to compare and describe differences, but one should not ignore the opportunity to introduce ideas about sequences and transitions where appropriate.
- VARIATION: arrange blocks or dolls on a table in different ways and ask students to describe how things change from one specified place to another. One way to organize this is to identify the beginning and end of a journey with a distinctively colored block or a card with a name on it.
- VARIATION: if the local community has some sloping areas, ask students what is different about walking or riding a bike in one direction as opposed to another. Discuss until you elicit the idea that the change in elevation is what makes it harder to go uphill rather than downhill. (This concept will become far more important in middle school when they study transportation.)
- EXTENSION: look at a map of elevation or rainfall and describe the change along a path (not just decode the colors on the map in order determine the elevation or rainfall at a specific place).

Learner outcomes

- awareness that the nature of change between places can be as important as the conditions at either place
- introduction to some important environmental gradients in the world – low to high, hot to cold, wet to dry, crowded to empty (and, later, rural to urban, Arab to Persian, Hindu to Confucian, etc.)

Issue to be resolved: How fast can we move “up” the scale hierarchy from room to school to community to state to country? Remember, we are trying to build a foundation for later inquiry.

Sooner or Later - Developmental Sequence

Background: As with any statement of developmental sequence, this list notes 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: Differences. Students examine places in the classroom or community and describe the differences. Starting with the classroom is usually easier, but if the classroom is too small or crowded to have distinctly different areas, a teacher might have to substitute some other well-known local area. For example, have students describe the area near their home and compare it with the area near the school.

Repeat with variations until students show an ability to focus on the main differences between places.

Stage 2: Sequences. Students try to describe a journey from one place to the other.

At first, this is likely to be just a chronological arrangement of separate descriptions – “this is what I see first, and then I see this . . .” Making a “Journey Scroll” is an enjoyable way to organize these descriptions (see the Figures).

Summarize the differences in a single sentence (“So, when you start, the first buildings you see are apartments, but later you see a lot of stores, right?”) Then ask whether things change suddenly or gradually as you go from one place to the other. Those terms may need several illustrations and explanations, but they are the major vocabulary component of this lesson, so it is worth investing some time in clarifying their meaning.

VARIATION: have student make a journey scroll about a story that they hear or read.

Stage 3: Representation. Students select symbols to show the locations of the desks, apartments, or other objects that constitute the main differences between two places (this is what in geographical jargon might be called the indicators of one region, though that is a term for much later use!) Students arrange the symbols on the classroom model or other map. Teacher encourages/leads discussion until the symbols reflect the differences between the regions AND students are able to say why (“all the boxes should be on that side of the model, because all of the desks are on that side of the room”). If the students are comfortable with the idea of direction, add that to their descriptions (“on the east side . . .”)

VARIATION: Students could become the symbols, standing inside a marked volleyball court, for example, in a way that reflects the position of the swings in the larger square that is the playground. Take advantage of the specific features that help you make this point – not all schools have playgrounds with volleyball courts of the right size and shape, etc!

Stage 4: Transitions. Students focus on one aspect of a journey – for example, the desks in a classroom, apartments on the street, or trees in a park. Ask them to describe things at each stage of the journey: “are there a lot of trees here, or just some trees, or no trees?” This question is helping to build their math sense (the idea of proportion), especially if you also introduce terms like “mostly” or “a few.”

Stage 5: Representation. Students make a physical “graph” of the differences along a journey.

Their journey scroll could have a bunch of leaves glued to it in the first place, which they describe as having many trees. The second and third places might have only a few leaves, to represent a few scattered trees. The end of the journey scroll would have no leaves if the area has no trees.

Or it could have a drawing of a tall building with many windows, then a shorter building with fewer windows, and so on. The point is to represent differences in something that can be observed along a journey, and to link the idea of transitions with both language and number sense.

Stage 6: Students arrange pictures in the right order to represent a journey between specific places

Teacher provides photos of places along clear gradients – bottom to top of a hill, crowded to empty, residential to commercial, urban to rural, and later, rainforest to desert, rich to poor, etc. Then ask students to arrange the photos in order. Start with just three photos, then four, and so forth.

Assessment game: Teacher makes several journey scrolls to represent journeys in different directions from some easy-to-reach starting point, and students try to match the scrolls with the journeys. This has to focus on very obvious differences at first. The goal is to build a vocabulary for place and path description that will be useful later, when they try to analyze and remember map patterns.

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

Spatial Transition

1

How do things change
as you go from one place to another?

goes uphill

gets colder

noisier

more trees

rainier

*becomes more
crowded*

*more signs
in Korean*

What is the advantage of learning about transitions?
You need to remember only the starting condition and
nature of transition - not facts about every place!

Sooner or Later - Differences

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Spatial Transition

2

What is the nature of the transition
between the places you describe?

steady increase

same at first, then abrupt change

down quickly, then basically level

like a cliff!

goes up and down a lot

Later, students will learn how to make graphs
that show the nature of the transition.

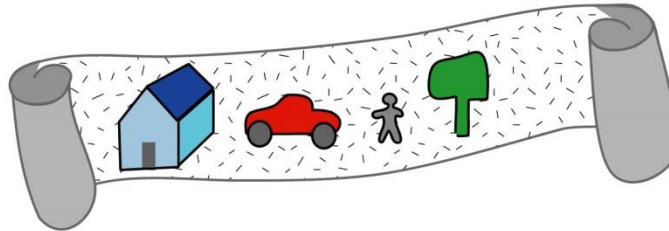
Sooner or Later - Transitions

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What is a Journey Scroll?

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A long strip of paper or cloth on which someone can arrange a sequence of images.



Those images show features observed along a journey.

It is a good way to communicate about spatial transitions.

Sooner or Later - Journey Scrolls

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Journey Scrolls - Images

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What kind of image can a student put on a journey scroll?

Photo

Color

Drawing

Number

*Sketch
map*

Leaf

Ticket

Word

Newspaper

Anything that can remind you of what is at a particular place along the route of the journey.

Sooner or Later - What is an Image?

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Journey Scrolls - Kinds

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Kinds of journey scrolls

1. from desk to another place in the classroom
2. from classroom to another place in the school
3. from one place to another on the playground
4. from school to home or vice versa

...

- n. from New York to another city on a map or globe

Works best with a physical globe - they can describe oceans, mountains, deserts, rivers, lakes, etc.

Sooner or Later - Kinds of Journeys

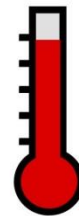
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Journey Scrolls - Variations

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What are some other applications of the idea of a journey scroll?

1. giving-direction scroll - tells how to go to a particular place
2. finding-treasure scroll - tells how to find a hidden treasure
3. measurement scroll - records temperature, building height, yield, noise . . .
4. emotion scroll - tells how you feel along a journey



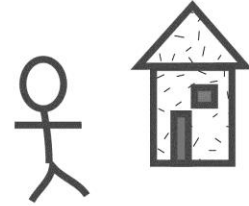
Sooner or Later - Variations

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Journey Scrolls - Reading

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One outstanding application of the idea of a journey scroll is when children try to illustrate a story they hear in class (or, later, read on their own).



The nature of their journey scroll (its focus, detail, and accuracy) can give a teacher great insight into their comprehension of the story.

Sooner or Later - Language Arts

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Journey Scrolls - Cultures

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Scroll-like representations of journeys have been important parts of cultures in many other parts of the world.

Aboriginal Australian story sticks

Chinese line paintings

Polynesian dances

Inuit shoreline maps

Children who make journey scrolls in early grades will be better prepared to appreciate those aspects of cultures they encounter in middle school.

Sooner or Later - Cultures

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