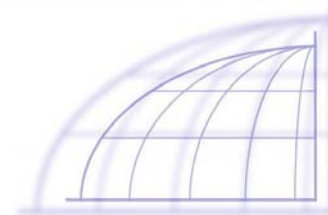


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### Section B-5•



#### R-4: Temporal Orientation

This knowledge construction function is used to order objects or events along a parameter of time. Good temporal orientation is necessary to allow a student to relate to objects or events in the past and future and not just in the immediate present. A student who experiences difficulties with temporal orientation may have trouble understanding units of time and how they are organized such as seconds, minutes, hours, days, weeks, etc. This student may thus not be able to organize a timetable for school activities. Some students have difficulty understanding the relational aspects of time and therefore derive little meaning from words such as earlier and later, before and after (see also T-9) A student who is disoriented in time is often confused about when things begin and end and may be frequently late or early for events.

Temporal orientation is critical for understanding causal relationships (for example how the past has influenced the present or how the present may influence the future) and for understanding how change may occur over time. A student with a need to develop this knowledge construction function may have difficulty placing objects or events in order of occurrence, such as first, second, third and so forth or describing the series of events leading to a particular episode in the correct chronological order. Difficulty with this knowledge construction function will show up in math, history, science or other school subjects, as ordering and sequencing are basic to any organized body of knowledge. The student may be unorganized because of his difficulty sequencing steps (T-10) which is necessary for planning (T-23) and goal achievement (T-24). He may thus have trouble getting things done on time.

Young children view time subjectively, not objectively. That is, they understand it in terms of their own feelings. So they do not really understand time according to the clock. Three hours has no real

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meaning for a four year-old. As adults, we sometimes view time subjectively also. Think about when you are waiting in a doctor's office. It can feel as if you have been waiting for an hour, but when you look at your watch, you learn it has really only been fifteen minutes. As adults, we can compare the subjective to the objective, but young children cannot. Teachers must mediate time for young children.

Time and space are not separated as concepts until around eight years of age. Young children confuse age (time) with size (space). They believe that if you are bigger, then you must also be older. Time is not understood as a continuum. After age eight however, children begin to understand the concept that time is successive (ordered along a continuum) and the concept of stable age differences, that is, if my sister is four years older than me now, she will always be four years older.

As time is such an abstract concept, it is very difficult for children to grasp on their own. It is particularly important to mediate this function. Use language to guide you to help students become aware of time. Talk about words such as yesterday, tomorrow, before, after, past, present, future, early, late, now, next, and when. "We need to put our books away *before* we go to recess." Engage students in experiences whereby they need to deal with time concepts. Make calendars, arrange projects around the seasons of the year, and have them keep time schedules or charts. Encourage and guide students to plan activities and set a schedule for them. "Today we will do .", "How will you plan your project for this week, month, etc."

You can help students understand about time by pointing out beginnings and endings of things. "We have finished our group projects, now it is time to begin work on your journals." Today is the last day of winter. Tomorrow will be the first day of spring." Encourage students to describe events in their daily lives and make them aware of ordering them in the correct chronological sequence. You can relate this to the study of history. "History is the story of humankind and the events that took place over time." You can thus have students relate historical events and time periods to students' personal lives or their families' history. Constructing a family tree can be an enjoyable and interesting learning experience. Have students investigate when different family members lived in time and what were the corresponding historical events that took place during those time periods.

Other activities that you can do to help mediate temporal orientation include: (1) discussing the subjective aspects of time as compared to

the objective. Have students share experiences when time felt longer or shorter than it really was. Talk about the meaning of different expressions such as "Time flies when you're having fun." Discuss how people in different occupations or situations can view time differently such as a firefighter and a poet. (2) Discuss how different cultures view time. You can have interested students look up how different cultures arrange their lives around time. Also students can discuss or study how people from rural communities view or use time differently than people in urban communities. What are the factors that cause these differences? (3) Study how different instruments can be used to measure time, such as sundials, clocks both analog and digital, metronome and hourglass. (4) Talk about time as measured by the clock and calendar and how it relates to planetary movement. Discuss seasonal changes and their recurrent nature.

As you mediate the development of this knowledge construction function have your students discuss the importance of temporal orientation in their work both at school and at home. Help them take possession of this brain tool by realizing that they can apply it at will in any given situation i.e. they can chose to look for sequential relationships, they can look for cause-effect relationships, they can work backward from a desired goal to the steps they need to sequence in order to reach it (see also T-24 and T-25).