

LEARNING CENTERS

OVERVIEW

One form of differentiated instruction within a 5E lesson is the use of learning centers. Learning centers provide the needed change in classroom routines as well maximize the use of limited equipment or other resources. Learning centers enable students to work at their own pace, in different ways while obtaining the same goal of learning. Centers don't have to be anything elaborate.

If you have only one computer in your room, make it one of the learning centers. Both cooperative learning groups and learning centers provide hands-on learning experiences, require that students practice essential knowledge and skills, and are more likely to meet the needs of individual students. Learning centers are located on the periphery, and spaces are designated for students to engage in individualized, self-paced learning experiences that address individual interests, talents, academic levels, and modality strengths.

PHYSICAL LAYOUT

The physical layout of each learning center should reflect the center's purpose. For example, if the center's focus is to allow students to explore a particular math concept using manipulatives, then there needs to be present specific detailed, sequential instructions for the student(s) to follow either posted on the wall or taped to the desk; easy access to the manipulatives such as in a plastic container; and available space to use the manipulatives.

Note: Don't hesitate to give each learning center your personal touch with plants, rugs, or posters.

One of the physical benefits of operating learning centers is that it gives students the opportunity to spend additional time working on a particular math concept without disrupting the flow of your regular 5E lesson.

PHYSICAL ENVIRONMENT

Several important environmental factors influence the level of productivity within any learning center. These factors include temperature, lighting, and noise level. These factors affect students in different ways and are directly related to individual learning styles. Studies suggest that when teachers adjust the environment to students' preferences, the students perform better academically and are better behaved.

LEARNING CENTERS

PHYSICAL ENVIRONMENT (CONTINUED)

Provided below are some tips for addressing different environmental factors.

- Create both well-lit and dimly-lit areas in the classroom by using bookcases, screens, plants, and other furniture. Some students learn best in bright light, but others do significantly better in low light. Bright light actually makes some students restless and hyperactive. Try allowing students to sit where they feel most comfortable, or try placing fidgety students in low-light areas and listless students in brighter areas.
- Limit the length of time spent at any one learning center. Sometimes, we might assume that students learn best when sitting still, but research now proves that many students need extensive mobility while learning. Learning centers should not extend longer than 30 minutes before moving students back to the regularly scheduled 5E lesson or perhaps to another center.
- Establish informal furniture arrangements where students can sit on soft chairs or pillows, or lounge on the carpet. Another myth is that students learn best when sitting up straight in hard chairs. About 75 percent of the total body weight is supported on only four square inches of bone when humans sit up straight in a hard chair, so it is easy to understand how the resulting stress on the buttock tissues causes fatigue, discomfort, and the need for frequent changes in posture. Research supports the common-sense notion that many students pay better attention and achieve higher grades in more comfortable settings.

PRE-REQUISITES

Diagnostic Inventory: It is recommended that students engage in some type of diagnostic inventory or assessment prior to their placement within any learning team. This diagnostic inventory or assessment could be generated from the following sources: benchmark assessments, student interviews, teacher observation, or sample math tasks. The information generated from an inventory or assessment will enable you to group students based partially on their math strengths and weaknesses.

Informal Assessments: If you are new to learning centers, classroom management is probably a top concern. Alleviate any anxiety with the learning center concept by organizing a series of informal assessments to ensure that students complete each activity, understand the critical math concepts, and evaluate their performance in each learning center. The use of a personal agenda, exit cards, and math journals can ensure that each activity embedded in each learning center is performed correctly and thoroughly.

LEARNING CENTERS

PRE-REQUISITES (CONTINUED)

Think Big, But Start Small: For many students participating in learning centers was something they experienced three to four years ago when they were in kindergarten. It is critical that students feel comfortable again with this type of learning. You are encouraged to offer maybe one learning center during the first few weeks so that students can get acclimated to moving from their desk to a learning center and then back to their desk again. After two weeks, you can expand the number of learning centers based on students' earlier performance.

Directions and Rubrics: Successful learning centers enable students to work in a self-paced style based on clearly defined directions and expectations. It is recommended that directions for operating within any learning center be visible for all to see and review.

ANATOMY OF A LEARNING CENTER

Learning centers should:

- be developmentally appropriate
- provide practice time for previously taught skills and strategies
- provide opportunities for enrichment
- be multi-leveled and reflect the range of abilities and needs in the class
- provide small group opportunities for interacting with materials that would not be possible in large group situations

Learning centers should provide specific guidelines or steps for the students to follow so as to minimize the direct involvement of a teacher. A planning sheet for a center should include: (1) Name of the Activity, (2) Objective, (3) Step-by-Step Instructions, (4) Student Response Sheet(s), and (5) student evaluation (e.g., exit card).

The use of learning centers in elementary math classrooms can be a valuable means for meeting the instructional needs of a wide variety of students, provide accountability for these students, and allow students opportunities to practice and apply what they are learning. Well-designed centers, where students can work independently, may provide the teacher with opportunities to work with individuals or small groups of students, while the other students are engaged in center activities.

LEARNING CENTER TEMPLATE

Math Benchmark: _____

Big Idea: _____

Type of Center: *Choose One*

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Game | <input type="checkbox"/> Investigation |
| <input type="checkbox"/> Simulation | <input type="checkbox"/> Survey |
| <input type="checkbox"/> Review | <input type="checkbox"/> Other |

Activity Card: (*Student Instructions – Be Specific*)

Purpose: _____

Materials Needed: _____

Step 1: _____

Step 2: _____

Step 3: _____

Step 4: _____

Step 5: _____

Step 6: _____

Step 7: _____

Step 8: _____

Step 9: _____

Step 10: _____
