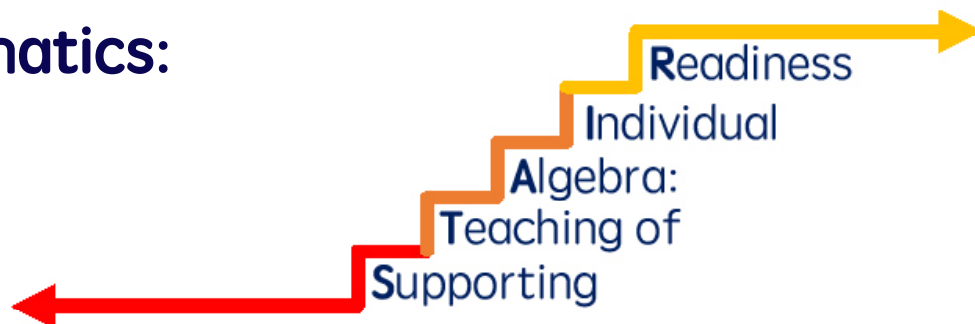


Ideas in Mathematics:

Grouping



Preparing for ALL Learners:

Teachers should plan strategies that support the range of different academic backgrounds found in classrooms that are academically, culturally, and linguistically diverse.

First the teacher should consider the learning profile of each student. The learning profile is derived from the consideration of the student needs such as learning disabilities, and each student's strengths and weaknesses. In addition, language and culture must be a consideration. Second the teacher should consider what can be differentiated across three critical elements: Content, Process, and Product. Third consider how the physical learning environment might be adapted.

Some of the choices for differentiating content: Manipulatives, strategies to develop Math vocabulary, non-examples and examples, and teacher directed groups.

Learning Centers and tiered lessons are two ways to differentiate the process.

Learning Center:

Plan for tasks that lend themselves to work at different locations of the room. Each station can use a different visual (scenarios) for a problem. Technology supported tasks such as practicing skills using a program or platform or discussing a concept using pre recordings of the teacher are two strategies that are manageable and easy to implement.

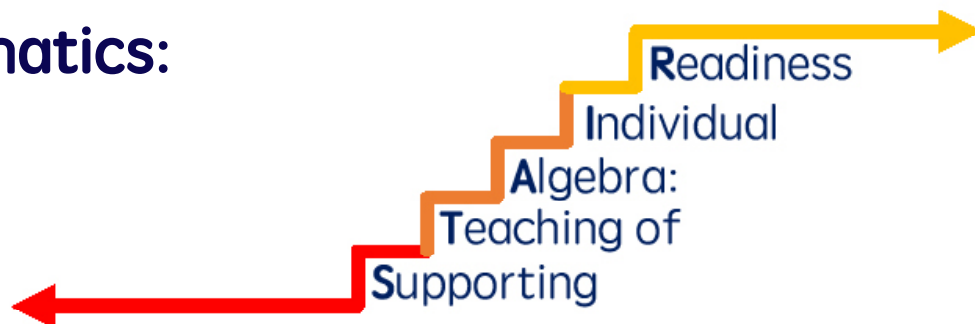
Games are good candidates for learning centers since they are tasks that can be repeated. <https://illuminations.nctm.org/allgames.aspx>

Students can work at the centers in groups or individually. The teacher might prepare 4-8 different activities (Teachers can also double a station by having two activities at one center). Materials should be placed at the center for the activity or game (e.g., counters, recording sheets, algebra tiles).

An essential teacher habit should be to model or teach the activity to the full class ahead of centers time in addition to having instructions at the center.

Ideas in Mathematics:

Grouping



Tiered Lessons:

The teacher determines the learning goal for all learners but adapts the task up and down to meet the range of learners.

Teachers might adapt the degree of assistance which could include providing examples or partnering students. The structure of tasks for example students might benefit from highly structured tasks if they struggle with the content or switching it to open ended for the students that have mastered the material.

The complexity of task which can include a task that is more concrete or more abstract or including a range of problem difficulty. Finally, the complexity of the process which could be the pace of the lesson, the number of instructions given before a task, or the amount of higher-level thinking questions included as part of the task.

Flexible Grouping:

Allowing students to collaborate on tasks provides support and challenges. It is often effective to use mixed-ability (heterogeneous) groups, strategically placing struggling learners with more capable students who are likely to be helpful.

The most important components to create a successful grouping environment: Instill and expect individual accountability, build a sense of shared responsibility,

One strategy that ensured individual accountability and shared responsibility is a jigsaw grouping technique. In this strategy, students go to an expert on content, skill or process and come back to the whole group to debrief how to solve a problem. Each expert can present different representations of the same problem or solve using a different strategy the same type of problem.

Teachers should always promote students to discuss their questions with the entire class before they ask the teacher. The intent is to have students they should always use their teammates as first resource.

Avoid ability grouping! Which is creating groups based on level of mastery (or lack of mastery) of content or skill. Ability grouping tends to segregate students with low performance together.