

PUZZLE: TEACHER-CENTERED AND CONTENT - ORIENTED TOWARDS SHAPING MATHEMATICAL ABILITIES OF PUPILS

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Pedagogical science has always struggled to identify effective methods for obtaining educational outcomes. This challenge is more pressing now, since in a rapidly changing environment, technologies that may be utilized to encourage school children's enthusiasm in mathematics study and provide an opportunity for their mathematical talents to improve soon become obsolete. Today, it is critical to look for innovative ways to help pupils develop using mathematics, as well as mechanisms for incorporating mathematics into the educational process.

The puzzle is a challenging assignment depending on the age and psychological qualities of the pupils, and in order to complete it, students must have intelligence, mastery of certain arithmetic abilities, but no expertise. So, for example, arithmetic puzzles, magic squares, sudoku, and so on; tasks for rearrangements, such as tasks with matches or games of 15 and similar; dividing and folding of shapes, similarly as picture puzzle, tangram, made up of spatial ones, such as Soma cubes; topological puzzles, such as flexagons, tracing figures, and so on.

Below are some benefits of puzzles that support a child's overall development.

1. Enable pupils to improve Gross and Fine Motor Skills

Extensive movements of a child can enhance by engaging with larger puzzle pieces, stacking puzzle games and blocks. Bigger muscles in the arms, legs and torso involves in building up gross motor skill. These skills are essential for everyday physical actions such

as walking, running, throwing, lifting, and kicking. When a toddler plays with large puzzle pieces, he gets the mobility he needs to develop gross motor skills.

It is one of the most critical areas of child development. Puzzles supports in forming of fine motor skills. Children strive to grab with their fingers, hold with their palms, and adapt by balancing their hands and strengthening the muscles in their palms. The advancement of fine motor skills is vital upon its child's writing ability is dependent.

2. Hand-eye coordination improvement

Repeated practice with puzzles improves hand-eye coordination. Coordination is an important motor ability for youngsters since it aids with perception. Parents should give a shot in arm with children to do a turn in certain games and activities to shape up as it develops over early years. Hand-eye coordination is the ability of a kid's eyes and hands to work together quickly and accurately, allowing them to complete tasks that require their hands to be guided by their eyes. Pupils learn to make an idea that which pieces of the puzzle are going to fit where and perform accordingly. It may put on the map with reading the game better and positioning oneself in the right place at the right time with a souped-up hand-to-eye co-ordination.

3. Problem-solving skills

Puzzles hand out test to perform. Pupils who make use of puzzles have problem-solving abstraction and they know how to perform the challenge. Teachers can help them to learn about the strategies to work out a puzzle. All puzzles are essentially problems that must be solved. Each one is a challenge and necessitates strategic thinking to complete.

When a pupil set a seal on a puzzle, they are coming into many skills without even realizing it. It helps them develop problem-solving skills, cognitive skills through visual-spatial awareness, fine motor skills to learn how to grasp and pick up pieces through

manipulation, hand/eye coordination by setting down puzzle pieces in the scrupulous order, and social skills by completing puzzles with peers.

4. Memory Training

Puzzles pitch in to enhance and increase memory. Pupils working out with puzzles have to remember which piece is going to fit. This practice helps them to increase memory. It requires pupils to see things in terms of parts and wholes at the same time. They necessitate both logic and imagination. The brain trains itself to integrate multiple styles of thinking for long-term benefits as diverse parts of the brain collaborate to get the optimal results. Indeed, studies demonstrate that subjects such as mathematics are best grasped when the entire brain can collaborate on tasks. Isolated brain areas view only one aspect of a situation, but educators have discovered that a whole-brain approach is far more successful for deep, long-term knowledge.

A puzzle must be completed for a youngster to believe they have completed it correctly. This suggests they are likely to work on the task for as long as it takes. Pushing the attention span repeatedly will result in general improved concentration over time.

5. Boost Self-esteem

Give them the satisfaction of doing constructive work once they have completed a puzzle or tried it in a positive way. They are confident in their abilities and believe they can solve any other puzzles. This good emotion propels individuals forward in their lives. Puzzles encourage children to interact with one another. They learn to share, cooperate, communicate, engage, wait for their turn, be humble, feel entire, and be more active in groups. Children require cooperation and collaboration, and they gain joy from working toward a common goal. As a result, it encourages children to socialize.

Puzzles are a type of game that provides a sense of accomplishment upon completion. It is not like building with blocks, where you may construct anything for an indefinite

period. Most Pupils like having a sense of accomplishment after completing a task. This is a receipt for tenacity since it builds on a child's drive to accomplish the puzzle to feel the achievement of having accomplished something.

6. Assist Language skills and Concept Development

Shape, color, animal, and transportation puzzles help to build vocabulary. They can also assist children in developing expressive language skills such as requesting (gestures count) and receptive language abilities such as following simple commands. The shapes and images on the pieces represent many objects and ideas. These will be reinforced even more if a parent takes the time to expand their children's vocabulary.

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