

## Not So New to Us!

So often things that are reported as new "discoveries" or trends in education are things that Maria Montessori observed 100 years ago and incorporated into the time-tested, scientifically proven approach we use at Hilltop. Three such ideas are: the importance of movement in learning, the benefit of developing internal motivation rather than being given external rewards, and how to have STEAM (Science, Technology, Engineering, Arts, and Mathematics) in education in an integrated, concrete, real-world way. These are all important components of the curriculum and experience that students have at our school from toddlers through Middle School.

### **The connection of the Hand to the Mind:**

This article, "[Why Kids Need to Move, Touch and Experience to Learn](#)," explains the reason behind our classrooms that encourage movement, and materials that require manual manipulation. The human mind is wired to learn through moving and experiencing, not through sedentary rote memorization. The classroom and outside environments at Hilltop, encourage concentration, movement and experiential learning.

### **Internal Motivation, Not External Rewards:**

This article "[Could Autonomy, Mastery, and Purpose be the Keys to Motivating Students?](#)" uses a TED talk by Daniel Pink to suggest that, just as financial incentives have been seen to not motivate employees to do creative problem solving, so using tests and grades and other external motivators are not beneficial to children. To foster intrinsic motivation students should be given opportunities to do real-life problem solving and feel a sense of purpose from doing real tasks where they can develop a sense of skill, pride and accomplishment. This can be:

- serving a friend snack, as the toddlers do with great enjoyment and pride
- washing a table, a classic Montessori activity often accomplished in our Children's House classrooms
- writing persuasive letters to the Head of School on why Lower EI needs a bigger garden, and seeing it through with materials, digging, and planting!
- building lamps for the auction, using precise measurements, calculations, and skilled craftsmanship
- running a bagel business, soup business, coffee cart, and providing childcare to raise money for an odyssey (as our Middle Schoolers do.)

### **STEM and STEAM have been what Montessori is all about for 100 years:**

There is a movement in education circles to talk about Science, Technology, Engineering, and Math (STEM) or when you throw the Arts back in there it becomes STEAM. This approach emphasizes how all fields relate to each other and that project based learning on real life situations is a better approach to learning that segmented subjects with hypothetical questions. Again, this is what Montessori is based on and what happens every day at Hilltop Montessori School.

- The metal insets combine art with geometry, and are a preparation for writing.
- The "timeline of life" is a lesson in history, biology, geology, and can be beautifully rendered in colored pencils, or felted wool!
- Developing the "Museum" projects in Upper Elementary requires combining disciplines to prepare a written and physical illustration to communicate a complex concept.
- Building water wheels combines math, physics, and design in a hands-on building project

At Hilltop Montessori School we do STEAM!

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