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LEARNING IN ACTION

The pace of world change is so rapid that the jobs of tomorrow might not yet have been imagined [1]. In the last 20 years, technology has completely transformed what is possible. Given this pace of change, educators can only hypothesize what newly invented jobs will exist 20 years from now. Therefore, education should not be solely the ingestion of information, but the development of skills so students can adapt to an uncertain world.

The new approach to learning STEAM – science, technology, engineering, arts and mathematics is an interdisciplinary method aimed at helping students develop vital transferrable skills and learning across subjects, through experimentation, trial and error and creativity. The cross-functional approach to STEAM exemplifies how students can prepared for the real world. It works on the premise that the world is complex and messy; that there is no such thing as a problem that can be solved through knowledge of chemistry or forensic science alone. Challenges are multifaceted and the thinking needed to find a solution must be as dynamic as the world around us. STEAM is therefore not only about preparing our students for the future – it also can act as a potential catalyst to accelerate learning [2].

The world we live in will only continue to become more complex, and it's up to us to adjust to its complexities. STEAM is based on the understanding that innovation is often found where different subjects intersect. By learning these subjects at the same time, students consider a wider range of perspectives when solving a particular problem. Whereas traditional learning develops fact-based knowledge, STEAM course will develop the skills needed to thrive – flexibility, critical thinking, creativity and communication. Active participation and freedom to explore and express ideas with others while solving these real-world and open-ended challenges is proven to enhance learning [3]. Teaching students to think "outside of the box" causes them to approach tasks differently. They learn to be creative by using a wide variety of thought processes and skills throughout a classroom day.

Approaches grounded in visual art, drama, and creative writing give students hands-on training in delivering a message and doing so with confidence. When combined with science,

mathematics, and technology-based topics, students learn to tackle tough subjects with self-assurance.

Learning new skills, whether technical or artistic, teaches students to approach new, potentially challenging situations with a positive attitude. Using STEAM, teachers can help students solve problems creatively using a variety of methods.

STEAM classrooms are highly collaborative, with students working together to grasp new information using multiple access points. They learn to share responsibility and compromise by working on group projects that incorporate multiple disciplines.

At the National Academy of Internal Affairs, we aim to inspire our students through excellence by challenging them to reach for their dreams and to be active participants in the world around them. We encourage ambition and curiosity and prioritize the development of real-world skills so that they will go into the world, ready to learn and discover, keen to be challenged, able to thrive. Explorations in problem- based STEAM inquiries take time and require students to synthesize ideas and work collaboratively to solve real-world problems; as such, engaging in these types of learning environments complements the goals for twenty-first-century learning. The power of STEAM teaching and learning derives from the aim to improve life and solve problems through innovation, design, and creative thinking [4].

References

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