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Science Instruction Aids in Social-Emotional Well Being

#stayathome2020, who saw that coming? Remote-learning became a trend overnight. Teachers became creative as they sought to continue instruction from a distance. Students were forced to admit they actually liked going to school. What a time! Is it over, we definitely hope, but the governor has yet to say. One thing, students were likely denied was the opportunity for hands-on Science instruction.

There is great concern about how students fared at home. We have all seen the death toll due to Coronavirus and we know that among the deceased were parents, grandparents, aunts, and uncles, some of whom were primary caregivers for our students. We have also seen the jobless rate rise and the extended lines at food banks. We won't know exactly how the stay at home orders affected each student, but we know that it was stressful for everyone. While we wonder how much "summer slide" we will see, and we worry if our students have been reading, we must ensure they experience academic excitement upon their return to school.

Science instruction can be the excitement to reinvigorate academic interest. Hands-on-minds-on Science instruction can be a healthy diversion to the things plaguing the minds of our students. According to the [Social and Emotional Learning Alliance for South Carolina](#), upon their return, we will need to help students redevelop self-awareness. This includes the confidence in their strengths and the ability to seek help or find answers. It also includes self-efficacy, the feeling that they have control over their circumstances. Students may be lacking in self management skills, including the ability to control impulsive behaviors and the ability to set goals and work towards them. Students will also need to develop social awareness. They will need to learn how to empathize with others whose experiences and background are different from their own, and how to verbalize their empathetic feelings.

A few Science-based activities that may help students socially and emotionally are as follows:

- Have students create a survey, administer it to friends (possibly from another class or on another team) and analyze the data. *This will help students develop self-confidence. They can write questions that others understand and they can accurately analyze data and present it in understandable formats.*

- Have students make scientific models from play dough, then give one another feedback for improvement. *This is for the kinesthetic learners. It may help with motor control and impulse control, too. Giving students a goal and allowing them time to work towards it may give them confidence, too.*
- Have kids make free-hand folded designs from paper. The designs can vary from making an envelope, to making a cup or a boat. The teacher can add rules like no left over paper, only 3 inches of tape, or the cup must remain standing while holding 4 pencils, etc. Once the object has been designed ask students if they would build it the same way if given the opportunity to change it. *This activity builds confidence in personal ability, efficacy as the design is the student's own design. It will help students learn to think before they begin a project and it will help them with goal setting as they must organize the steps in their mind before they begin. This activity alludes to the design cycle, and constructing devices or designing a solution is one of the Science & Engineering Practices.*
- Have students make origami designs following directions. Stress to them that there will be variation in the end. *Like the activity above, this folding activity will help students become confident in their ability to follow directions. It can help with impulse control.*
- Have students combine vinegar and baking soda! This age-old favorite never disappoints! Because students have likely seen the reaction before, think of how it can be varied. Will the reaction be the same with cold vinegar and warm vinegar? Will the reaction inflate a balloon? Does it matter if the baking soda or the vinegar are added to the cup last? Have students, in pairs or small groups, pose a question then develop a way to test the ingredients and answer the question. *This activity will build confidence, efficacy, help students develop impulse control and set goals. They will need a partner and should develop an appreciation for their partners' ideas and opinions. Additionally it meets SEP 1, Ask Questions and define problems, and plan and carry out investigations. The materials are cheap and the excitement will be great.*

These are just a few ideas for Social and Emotional Learning through the lens of Science instruction, but the possibilities are many. Hands-on-minds-on Science is the perfect diversion to thoughts about the problems in the world. Additionally, hands-on-minds-on Science activities will encourage students to have meaningful, focussed discussions with one another as they work towards common goals.