USING A "MAD SCIENCE DAY" TO PROMOTE A SENSE OF WONDER AND CURIOSITY IN EARLY YEARS STUDENTS: REFLECTIONS FROM A TEACHER

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THEME:

Innovative STEM pedagogy and curriculum

BACKGROUND AND AIMS

This presentation will reflection on a special event called the "mad science day" that was run for kindergarten to year three classes. As a secondary science teacher, the value of using my specialist science knowledge to engage students in science from the early years was recognised through collegial discussions with teaching peers from the early primary years. Early engagement in science is important (Timss et al., 2018), and drawing on a sense of wonder and curiosity in the science classroom is one avenue of supporting such engagement (Hadzigeorgiou, 2012). Though wonder has been recognised as desirable by some science educators, its use as a pedagogical tool has currently received limited attention. Thus, such an approach could be considered innovative pedagogy in STEM education.

METHODOLOGY OR PROCESS(ES) UNDERTAKEN

This presentation will report on the activities that promoted a sense of curiosity and wonder in young students to engage them in science. The importance of hands-on inquiry in science is well documented (Riga et al., 2017), thus I approached the mad science day with a philosophy that hands-on = minds-on. The activities chosen to promote a sense of wonder and curiosity in students included making our own slime, making ice-cream without a freezer, a magic milk experiment, making coke and mentos rockets, and creating elephant toothpaste. We also sucked a boiled egg into a flask, sucked water into a cylinder using matches, and crushed a coke can without touching it.

RESULTS AND CONCLUSIONS

The activities used in the mad science day were either examples of discrepant events that injected excitement, wonder and curiosity into learning scientific principles, or they were examples of hands-on inquiry experiences presented in an exploratory play-based format. The impact of the event was seen in the sense of wonder expressed by students, but also in motivation it sparked in their classroom teachers to continue to integrate such experiences into their own practice.

REFERENCES

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