A Framework for Science Inquiry in Preschool

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What can teachers do to prompt, support and deepen science inquiry in their classroom?

- Preschool students have the capacity to engage in scientific practices and inquiry.
- Despite this, science in frequently neglected in preschool classrooms.
- Science is viewed more as an additional, rather than essential, component of preschool curriculum.
- This study reviewed literature on preschool science inquiry and reports on significant teacher strategies and practices found.
- Rather than explaining specific activities, strategies are presented to help educators build and sustain inquiry in their daily classroom routines.

Methods for Literature Review

•Initial search conducted using ERIC via EBSCO and Academic Search Premier.
•Following search terms were used: a) early childhood science; b) inquiry; c) science; d) preschool; and e) STEM in early childhood

REFERENCES PRODUCED

221 found

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40 abstracts screened

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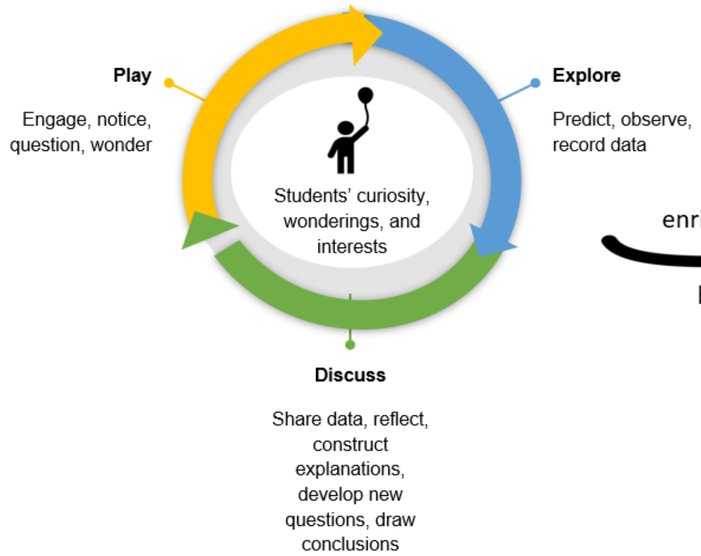
15 articles fulfilled criteria

Results

•Three broad categories:
- Science knowledge and practices
- Engagement in activity
- Features of the learning environment

Major themes are categorized and reported as five teacher strategies seen below.

Preschool Inquiry Cycle
(adapted from Trundle & Smith, 2017)



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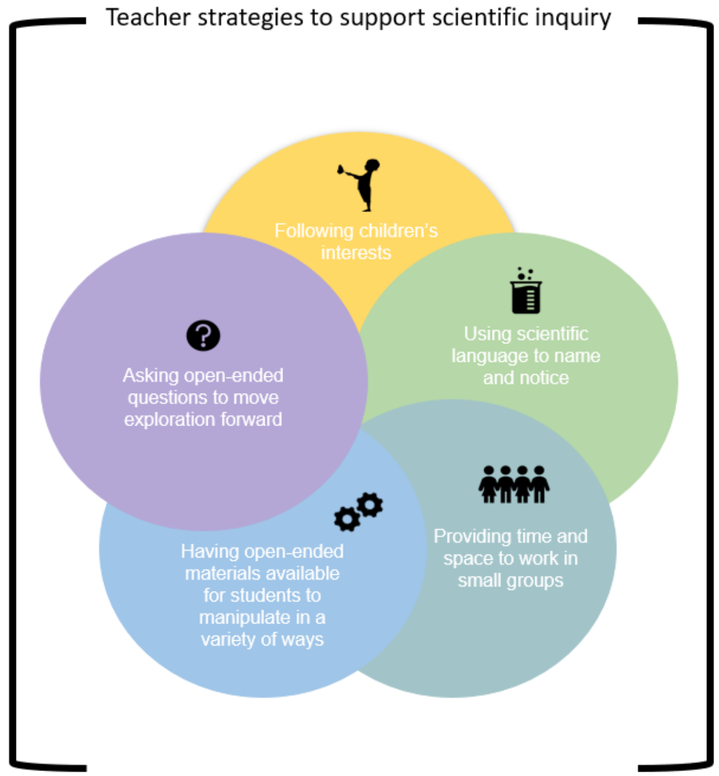

Conclusions

•Students take on an active role in this learner-centered approach.
•Students begin to make sense of the world around them by co-constructing their worldview based on interest and curiosity about science.
•Teachers transition from being transmitters of knowledge to facilitators in the educational process.

Discussion Questions

•As a researcher, what can you add to the knowledge base on preschool science and inquiry?
•As a practitioner, what information do you need to help you engage young children in inquiry?
•What tips or suggestions do you have from your teaching experiences?