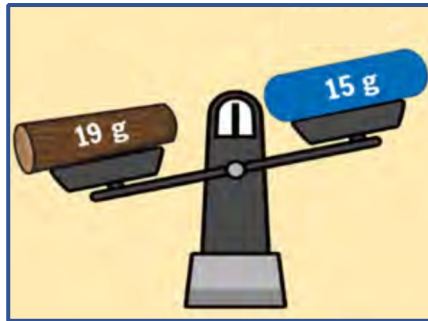


What are effective approaches for teaching floating and sinking?

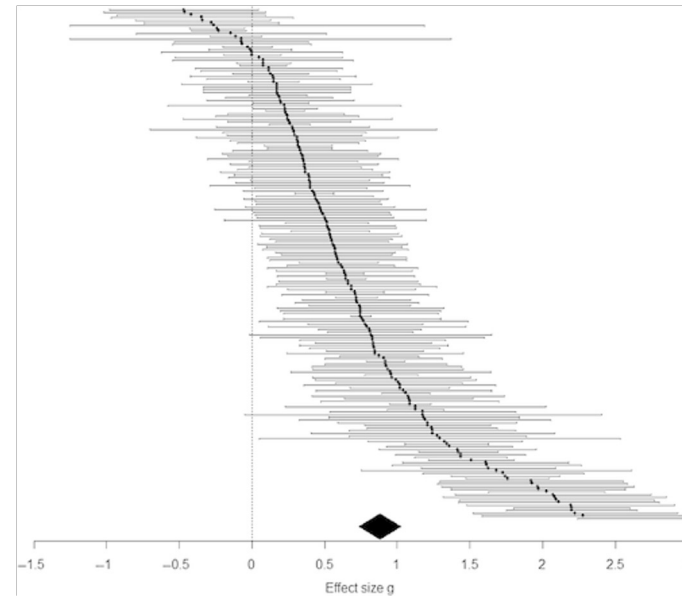
INTRODUCTION



- Large number of studies on teaching floating and sinking
- Studies have diverse teaching approaches
- What is the average effect size over all studies?
- Which approaches are effective?

METHODS

Meta-Analysis to calculate average effect size and moderator effects



FINDINGS

- 191 effect sizes from 69 intervention studies
- Teaching floating and sinking is very effective with a mean effect size of $g = 0.85$
- It requires multiple hours of instruction time to reach this large effect
- Hands-on experiments are more effective than virtual experiments