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Tsamir, Pessia; Tirosh, Dina; Levenson, Esther; Barkai, Ruthi; Tabach, Michal

Early-years teachers' concept images and concept definitions: triangles, circles, and cylinders.

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Summary: This study investigates practicing early-years teachers' concept images and concept definitions for triangles, circles, and cylinders. Teachers were requested to define each figure and then to identify various examples and non-examples of the figure. Teachers' use of correct and precise mathematical language and reference to critical and non-critical attributes was also investigated. Results indicated that, in general, teachers were able to identify examples and non-examples of triangles and define triangles, were able to identify examples and non-examples of circles but had difficulties defining circles, and had some difficulties in both identifying examples and non-examples of cylinders and defining cylinders. Possible reasons for these results are discussed.

Classification: G49 G29 C39 D79 D39

Keywords: concept images; geometric concepts; triangles; circles; cylinders; early education; early-years teachers; mathematical language; difficulties

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