Abstract: This study aimed to investigate the degree of incorporating concepts and applications of artificial intelligence in the curriculum of third grade secondary mathematics in the Republic of Yemen. To achieve the study objectives, the researcher used a quantitative descriptive approach by preparing an analysis card consisting of 24 statements distributed across five domains. After verifying the validity and reliability of the study tool, it was applied to the mathematics curriculum for the third grade secondary - scientific section. The results of the study revealed that the degree of incorporating concepts and applications of artificial intelligence in the curriculum of third grade secondary mathematics in the Republic of Yemen was weak. The degree of incorporating concepts of artificial intelligence in the Algebra course was 3.17%, in the Geometry course was 1.15%, in the Differentiation course was 1%, and in the Integration course was 1.33%. The degree of incorporating applications of artificial intelligence in the Algebra course was 0.29% and in the Geometry course was also low, while it was zero in the Differentiation and Integration courses. The researcher recommended updating the mathematics curriculum in the Republic of Yemen to keep pace with rapid cognitive and technological developments, incorporating concepts of artificial intelligence into mathematics curriculum to a greater extent than currently, and designing mathematics curriculum content that reflects the availability of artificial intelligence applications on those concepts.

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