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# What is your favourite particle and why?

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When introducing the Standard Model of particle physics at secondary level, high-school teachers and students are faced with various abstract concepts and lots of novel terms. Among the many challenging terms is the infamous “particle zoo”, which stems from the early days of particle physics, when every newly discovered hadron was believed to be a distinct elementary particle. Since then, the Standard Model of particle physics has been colloquially compared with the variety of species in a zoo on a regular basis.
Here, it is assumed that such a representation of the Standard Model of particle physics can have a negative impact on students’ understanding of the fundamental concepts underpinning particle physics. Indeed, a careful educational reconstruction of the subject matter is key when introducing particle physics in the classroom. Specifically, within the framework of constructivism it is indispensable to take students’ conceptions into account and to focus instructional strategies on already existing conceptions.
Therefore, we have conducted a large-scale international study with high-school teachers (n=532) and high-school students (n=1003) from all around the world to investigate and document what they consider as their favourite particles. We will present the findings and discuss potential implications for teachers, educational researchers, and policy makers.

## Apply to be<br> considered for a student <br>   award (Yes / No)?

No

## Level for award<br> (Hons, MSc, <br>   PhD, N/A)?

N/A

**Primary author:** Dr WIENER, Jeff (CERN)

**Co-author:** WOITHE, Julia (CERN & TU Kaiserslautern)

**Presenter:** Dr WIENER, Jeff (CERN)

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