Why you should talk to preschoolers about particle physics

Karen Gibson

1. Preschoolers love to discover the world around them! Most young children genuinely want to learn everything they can about the things around them and they can remember a surprising amount of what you tell them! Reaching out to them at a point in their lives when they are naturally curious can spur an interest in the “hard” sciences, like physics, that they might not otherwise develop.

2. Science literacy is like any other kind of literacy. Building literacy in anything (e.g., reading, math) is a gradual process that requires continual exposure!!! You can’t read after someone shows you a book for the first time, the same is true for physics. The more children are exposed to science, the more comfortable they will become with it.

3. You are the only one that can provide exposure to particle physics. Grown-ups want to help and encourage children’s interest in STEAM areas, but often don’t know much about science themselves. By teaching the children, you’re also educating the teachers and parents about particle physics!

4. These are the next generation of taxpayers, voters, and scientists! You need to talk to children about physics when they are forming opinions about what is important in the world. If you don’t tell them now, it probably won’t be something they consider relevant later. Environmentalists and social rights campaigners have recognized this for years - their strongest messages are directed toward children, repeatedly, throughout their school years.

What about older kids? Shouldn’t I spend more time talking with them, since they can understand me better?

Waiting until adolescence is too late, by then many children have already decided science is boring or not relevant to them. A lot of educational programming is now being developed to present math and science to young children in accessible and interesting ways, including shows such as Peg + Cat and Sid the Science Kid. By their teen years, many children simply have other priorities - if science isn’t already on their radar, it’s likely that it won’t start to be.

Summary: Talking to preschool age children doesn’t have to be elaborate or expensive. It might take a bit of time to prepare (especially the first time you do it), but it doesn’t take a lot of time, and it can be an incredibly rewarding experience for both you and the children. YOU are the only one that can teach them about particle physics in an informed and meaningful way. In doing so, you can support the scientific literacy of the next generation and positively impact the future of the field!