I was invited by SciencefromScientists to be the educator on their panel at the STEM Summit 2018 on Tuesday, Nov 14.

[STEM and the Workforce: Preparation During the Early Years](https://massachusettsstemsummit2017.sched.com/event/Bx4m?iframe=no" \t "_blank)

These are the questions I was asked to address. There were many others from the audience (we filled the room).

1) What are some examples of best practices in the classroom to ignite student interest in STEM in this age range?

Response: This is NOT ROCKET SCIENCE Anyone interested in STEM at grades 4-8 should look at the DESE site for the Framework: 2016 Massachusetts Science and Technology/Engineering Framework…

The keys are:

1. Maintaining students’ inherent quality as natural scientists
2. Letting students get their hands on …toy trains, fields and streams, telescopes, animals, building blocks and field trips

 Have students maintain live animals, plants in the classroom

2) What are some examples of best practices in the classroom to increase student literacy in STEM in this age range?

Use reading material from STEM (non-fiction) fiction…identify fictional works that support STEM

Have students read aloud, write and present

Connect with Science and Children’s museums: there are many… Boston and Acton. Easton for fourth grade students and Iowa’s in a shopping center!

3) Why is the 4th – 8th grade range so critical in the process of STEM training and preparation?

Students’ vision of their possibilities are determined. Girls often decide that STEM is not for them at this point.

4) What data can educators and/or during-school STEM programs collect to measure the success of their practices in the classroom?"

Establish a predetermined set of parameters…based on the DESE frameworks… have students “provide a sample of prior knowledge” so that development can be measured (through a writing sample or answers to a set of questions)

Interview students and parents on a schedule—before, during and after the conclusion of a “unit”…(get professional status of parents) to determine their level of knowledge and engagement

Observe student behavior

Ask students to write what they are thinking on a regular basis

5) Starting with elementary and middle school students, what can be done to ultimately increase diversity in the STEM workforce?

Show them as many examples as possible of people from all backgrounds/ genders working in the field…also have them investigate past contributions (like the women who worked on the first computers and Madame Curie) so they see it can be done