My name is Christine Anderson Moorehouse and I started my career in science education as a middle level science teacher. Um, I was a statewide science facilitator in the 1990's during the first iteration of the MLR and I was part of the development um and revision of that process. I was a science consultant across the state of Maine during the 2000 adoption of the new science learning results which are our current standards and I've also worked closely with districts in the Midcoast region um for many years as their professional development director during the time when districts were beginning to work toward the proficiency based diploma system um for graduation. I have a lot of experience with science standards developing them, interpreting what they're intended to look like in the classroom, using them to design curriculum and I really believe that each upgrade has come at a time when new information about teaching and learning meant that the new standards would better serve the needs of students and teachers. Originally I think the standards were kinda meant to make sure that all students had the opportunity to learn the same standard no matter which part of the state of Maine they lived um and that was very important to me as a teacher to be sure that I was teaching what was the most important um. It was a matter of fairness. The existing learning results adopted in 2007 was a huge improvement at the time because they were based on the newer documents that Margo has already showed the benchmarks for science literacy, the ah national science standards and they were um, provided a lot of guidance. They, however they required um to be implemented, they really required fairly elaborate cross walk documents so that as a teacher I could be sure that I was interpreting and understanding each of the performance indicators um in the way that it was intended to be learned by students. Um and also at the time and in the standards that we have, a concern that I have is that the skills and traits of science inquiry which what we call the processes of science are separate. Um which means that I may choose to teach those skills and traits of science separately. For example, ah its not that uncommon at the beginning of the school year to have a complete unit of how to use the science method and then never really deeply work on that process again. So
um it's it's challenging to think that the standards that we have that we're using at the beginning of this revision process might be those standards, when we've come a long way since then. Um so where we are now is we've moved on to the place where every single, instead of thinking about this is what I teach, I'm going to use the standards to help me think about what I teach my students, we're at a place now where the standards are really about what students are going to learn and what they're expected to know and be able to do to graduate. Its not that we give them assessments, it's not that we give them credits for attending a course that address the standards, its that they actually have to cross that line in the sand that I will tell them yes, you've met those standards whatever they are or no, you have not, you cannot graduate. And so the question becomes what are the most important things for a student to understand and be able to do in order to graduate whether they are going to go on and become a scientist or an engineer or whether they're going to become a citizen of Maine who isn't in that field of science. Um so we want to make darn sure that those lines in the sand are important and what I've experienced um in my work with districts is that many of them have begun to adopt the practices of the Next Gen Science Standards as their graduation standards. And um one of the reasons being that those are significant, enduring pieces of knowledge and ways of thinking and ways of understanding the world and another reason is because within the Next Gen Science Standards because those science standards are so intertwined if I as a student want to be able to show evidence that I can make and use models for example, there are many different areas across physics, across earth science across life science within which I can find those performance expectations, excuse me, that's old language. But anyway, I can take those individual concepts intertwined with practices and I can take from my portfolio and put together a body of evidence from which I can prove that I am ready to graduate...that I'm ready to cross those lines in the sand. So because um and I agree with what others have said that there are so many great resources, there is so much support that's coming on line um in terms of best practices for teaching in terms of possible course models and pathways all of those resources that are available to us if we were to work with some set of standards based on the Next Gen Science Standards we would be in a very good place in terms of science for students of Maine. Thank you.