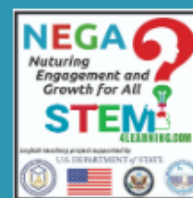


What is STEM - Video Lessons



A collection of short videos explaining the core concepts of STEM including the science and engineering practices and cross-cutting concepts.



This is a series of 17 videos produced in 2020 as part of a project supporting a growing STEM program at School #12 in Bukhara, Uzbekistan. Each video is approximately five minutes long, and they are organized into 6 modules. Each lesson was recorded in English and Russian, however the slide content is identical in both versions (apologies for my less than perfect Russian!). All videos have been uploaded to youtube and can be accessed for playback with the links below. Anyone is welcome to download the English videos, they are available as .mp4 files through the Teachable online education platform and can be found at stem4learning.teachable.com (you will need to join the free course for access).

[Course Overview PDF](#) - provides a short synopsis of each module's videos

Module 2 The 8 Science and Engineering Practices

This set of videos explains the 8 core skills that are really what STEM is all about and which we believe are the goals of using STEM in your classroom. These are: asking questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, constructing explanations, engaging in argument from evidence, and obtaining, evaluating and communicating information.

В этом наборе видеороликов объясняются 8 основных навыков, которые на самом деле составляют суть STEM и которые, по нашему мнению, являются целями использования STEM в вашем классе. К ним относятся: постановка вопросов, разработка и использование моделей, планирование и проведение исследований, анализ и интерпретация данных, использование математики и вычислительного мышления, построение объяснений, участие в аргументах на основе доказательств, а также получение, оценка и передача информации.

Big Ideas:

- **Introduction to the 8 Practices**
- **What are the 8 Practices**
- **What do they each look like?**
- **How can students show that they have these skills?**
- **Как ученики могут показать, что у них есть эти навыки?**
- **Введение в 8 навыков**
- **Каковы 8 навыков?**
- **Как они выглядят каждый?**

English Versions

[2A - What are the practices \(7:31\)](#)

[2B - Expanding on the practices \(5:38\)](#)

[2C - Wrapping up the practices \(7:27\)](#)

Русские версии

[2A – Какие практики \(8:18\)](#)

[2B – Расширение практики \(7:45\)](#)

[2C - Подведение итогов \(8:45\)](#)

[PDF Overview of the 8 Science / Engineering Practices in English, Russian and Uzbek](#)

PDF created by STEM4Learning February 23, 2023 as part of US Embassy in Uzbekistan Grant Project to support English Teachers in Urgench and Samarqand