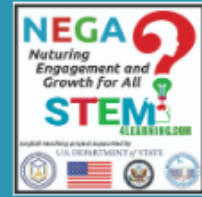


What is STEM - Video Lessons



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 4 The 5 E's and a new model for Lessons

So does research offer a model for the best way to create a STEM lesson - yes! The key elements of a unit need to be "Engage, Explore, Explain, Elaborate, and Evaluate" - with the biggest emphasis being on engaging and exploring before we explain - a counter to the typical instructional model. These videos explore these 5 E's and what it looks like in an actual lesson.

Так же как и исследование предлагает модель лучшего способа создания урока STEM - да! Ключевыми элементами модуля должны быть «Вовлечение, исследование, объяснение, разработка и оценка» — с наибольшим упором на вовлечение и изучение до того, как мы объясним, — в отличие от типичной учебной модели. Эти видео исследуют эти 5 E и то, как они выглядят на реальном уроке.

Big Ideas:

- **What are the 5E's?**
- **Why Engage before Explain?**
- **How do we engage?**
- **What about assessment?**
- **Что такое 5E?**
- **Зачем заниматься, прежде чем объяснять?**
- **Как мы взаимодействуем?**
- **А как насчет оценки?**

English Versions

- [4A - Intro to the 5E's](#)
- [4B - Big Ideas of the 5E's](#)

Русские версии

- [4A - Введение в 5E](#)
- [4B - Большие идеи 5E](#)