

Energy Literacy for Kids: The Role of Biofuels

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Introduction

Two video lessons were created as explanatory resources that explain the basic science of energy, the energy sector’s relationship with climate change, and possible solutions with the NARA wood-to-wing program as a main example. Using videos as the medium for this lesson helps with the engagement of the kids and also functions as an introduction into a discussion.

The first lesson explains energy on a very basic level and how it is conserved. It then applies this with explanations of how we generate and consume electricity. This provides the viewer with the baseline understanding to look into energy issues introduced in the second video.

The second video focuses on why we should care about issues like carbon emissions, possible solutions and difficulties that come with different plans. The primary example of a solution is the NARA forest residual biofuel program as a carbon neutral fuel source. This gives kids an example of how to approach energy issues critically and realistically.



Pilot testing the videos on a group of young kids. (Ages 4-6)

Acknowledgements

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Special thanks the staff at MOSS for providing an inviting learning and living environment

Methodology

Information was collected via questionnaires from kids at the day camp to find their baseline understanding of energy concepts.

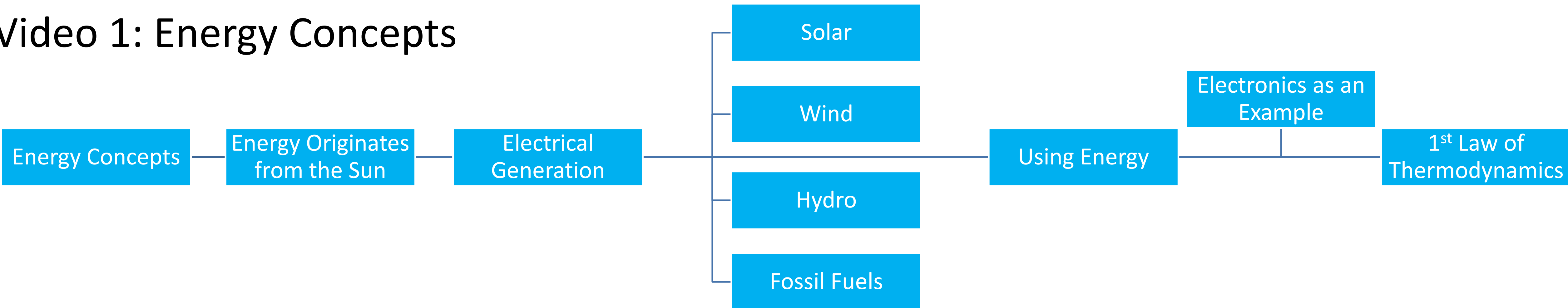
The responses guided the way video scripts were written in order to make the videos appropriate for ages 6-11.

The kids were introduced to the topic of energy and shown the two videos with time for application questions in between. The kids would then be asked to share what they learned and what they didn’t understand, this would then lead into a discussion about addressing climate change.

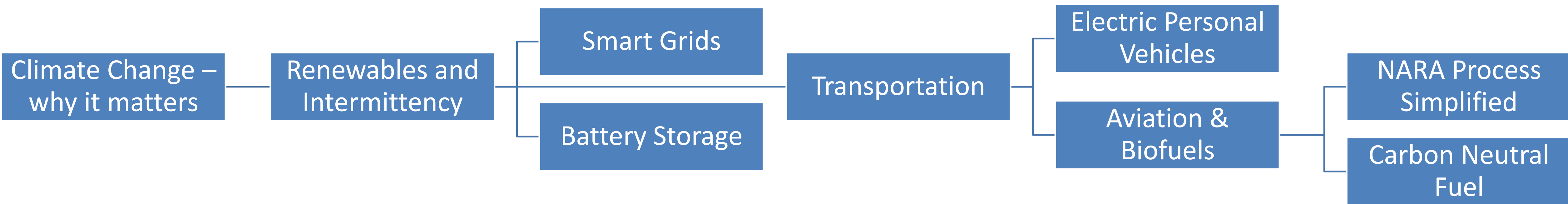
Objectives

- For kids to understand the basics of energy science and to understand how they interact with energy everyday.
- Foster an understanding of the importance of carbon emissions in the energy sector and emission lowering technologies along with their respective difficulties.
- Teach kids the process that NARA uses to create jet fuel from logging waste.
- To deliver the lesson in an engaging format to motivate kids to learn in an informal learning environment.

Video 1: Energy Concepts



Video 2: Roadmap to Zero Emissions



Recommendations/Conclusions

With an important transition underway in the energy sector it is important to educate children and also contextualize the issues pertaining to energy we face today. With the politicizing of energy sources it is important to give young people the proper information to decipher real issues and real solutions to them.

Often times energy issues are discussed in terms that may confuse or deter children. This curriculum starts explaining energy in its most basic terms and functions as an introduction into a discussion of energy issues. The kids will learn potential fixes to energy issues that they will one day inherit when they enter the work force and voting population.

When given a list of different types of energy kids were able to portray their understanding of energy changing form with gasoline becoming heat and movement in a car. Kids also were able to articulate why CO2 emissions should be a concern.



McCall Outdoor Science School (MOSS) where these lessons were developed and tested.