

Grade 4-6 Science Curriculum

Many of the videos are relevant for the Division 2 curriculum, especially Grade 5 and 6 Energy and Grade 4 and 6 Earth Systems. Only a limited number were selected here. For a comprehensive look at our videos, see [this spreadsheet](#).

Here is the [Grade 4 to 6 playlist](#).

	Matter	Energy	Earth Systems	Living Systems	Computer Science	Scientific Methods
Grade 4	Ask An Expert: What happens when we burn garbage? Activity: Become A Sustainability Expert Ask An Expert: What is oil sands process water? Tailings ponds? Lab Tour: Cleaning up heavy metals using carbon based materials		Ask An Expert: What is the importance of cleaning up water? Experiment: Dirty to clean. it's time to Build your own water filter Ask An Expert: Why does soil matter? Ask An Expert: What is water quality monitoring? Ask An Expert: How can we reduce the amount of energy humans use? Experiment: Land Reclamation	Experiment: Tree Rings: Understanding the history of a tree	Experiment: Balloon Powered Car Storytime: Secret Engineer Experiment: Spinning Energy: Flywheels, Crafts and More	Lab Tour: Can spinning store energy? Let's explore flywheels Storytime: I Wonder Why There's A Hole in the Sky (there is a part 2) Experiment: Adventures with Electricity
Grade 5	Mini Talks: How It's Made - Exploration Using Solid-state MNR	Experiment: Efficiency and Ecocar Activity: Renewable or Non-renewable Energy Ask An Expert: How are wind and water turned into energy? Ask An Expert: What would happen if we ran out of non-renewable resources? Ask An Expert: How many kinds of sustainable energy are there? Ask An Expert: What is biomass energy? Experiment: An Introduction to wind energy Experiment: Wind, Electricity and Pinwheels	Ask An Expert: One day, will we have to go to Mars because the world is ruined? Ask An Expert: Is my future going to be affected by the way we treat the Earth? Ask An Expert: What is biomass and biomass energy?	Experiment: Can Plants Grow Without Soil? Experiment: Journey of a Seed	Mini Talks: Modeling the whole world - integrated assessment with GCAM Storytime: The Boy Who Harnessed the Wind	Ask An Expert: What tools do you use in the lab to do your research? Microbiology, machine learning, water monitoring Explore: Exploring Urban Heat Islands Lab Tour: Making Biofuels More Cost Effective

Grade 6	Experiment: The Hot and Cold Of It	Lab Tour: Using heat to make power with stirling engines Storytime: Science Comics - Cars Engines That Move You (parts 1 , 2 , 3 , 4) Explore: Exploring Electrical Grid Activity: Where is your electricity from? Ask An Expert: Will there be enough jobs if we find new ways to store and make energy? Ask An Expert: What is a challenge with solar and wind energy? Ask An Expert: What is energy storage and why does it matter? Version 1 , Version 2 Experiment: Wind, Electricity and Pinwheels	Ask An Expert: What is climate change and how is it different from global warming? Ask An Expert: What is climate change? Ask An Expert: What is the greenhouse gas effect? Ask An Expert: Can farming practices be altered to reduce the impact of climate change? Ask An Expert: How are climate change and farming connected? Ask An Expert: What is climate adaptation? Ask An Expert: Will Climate Change Make Me Sick? Ask An Expert: The idea of climate change makes me anxious? Is that normal?	Experiment: How Does A Peatland Breathe? Ask An Expert: How do plants produce energy?	Ask An Expert: What are the types of machine learning? Ask An Expert: What is artificial intelligence? Experiment: Electrical Circuits	Meet A Scientist: Mechanical Engineering Student , Land Reclamation Student , Biofuels Student , Biofuels Student 2 Lab Tour: Using bacteria to reduce methane and produce biodegradable plastic
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