

Kate Fanelli

Course: Algebra 1 and Algebra 2 (general ed curriculum taught in special education setting)

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Beacon Day Treatment

River Rouge, MI

Course Outline:

The main topics in Algebra 1 as a year long course are number, expressions and equations. For Algebra 2 it's number, polynomials and functions. They follow a pretty predictable scope and sequence. During the 2nd and 3rd quarters of the year we infused the regular curriculum with Climate Change days (working on it about once a week for multiweek sections). The major units of Climate Change were:

Climate Change (analyzing trends by function family, making predictions, and suggesting validity of data via My NASA Data)

Personal Action Plans (watching PBS Nova Power Surge, using those categories of solutions to come up with personal action plans, implementing plans, and reviewing how they went)

Junkyard Wars: Windmills (reading *The Boy Who Harnessed the Wind*, building wind turbines out of "junk," and seeing whose functions the best)

Laboratory Experiment with wind turbines (using wind turbine kits to measure energy output based on various configurations of the blades – used information to inform Junkyard Wars designs, and also used a similar mathematical model used in the Climate Change lesson for analysis)

File attachments:

ICCARS Math Sections – Unit Description and Lesson Sequence for this Climate change study unit

Climate Change Lesson 1 and Lesson 2 – handouts used for Climate Change lesson

JYW Windmills – directions for the Junkyard Wars lesson

Personal Action Plan – handout and directions

Reading Log – to go along with reading of the book

Wind Experiment – handouts for the wind experiment

Mathematics Rubric – assessment tool