The **Curriculum Working Group** was formed at the Regional SCI Conference in July of 2015 to support solar cooking education from primary through university level.

Curriculum Working Group Goals:

- Advance SCI's role as a leading **classroom resource** for educators around the **world**.
- Gather and create **quality lessons**, videos, experiments, and activities that advance the teaching of solar thermal cooking technology.
- Create a place for **long distance collaboration** among schools and sharing of experimentation, data, and observations.
- Develop a **rubric** listing the characteristics of quality solar thermal cooking lessons.

The use of solar thermal cooking as a ***teaching tool***

in our **schools** has the potential to advance the use of this amazing technology in communities everywhere.

Next Generation *Science* Standards for Middle School (6-8)

PHYSICAL SCIENCE / ENERGY

Students who demonstrate understanding can:

MS-PS3-3.

- **Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.**

MS-PS3-4.

- **Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.**

MS-PS3-5.

- **Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.**

PHYSICAL SCIENCE / WAVES & ELECTROMAGNETIC RADIATION

Students who demonstrate understanding can:

MS-PS4-2.

- **Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.**

PHYSICAL SCIENCE / HUMAN IMPACTS

Students who demonstrate understanding can:

MS-ESS3-3.

- **Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.**

MS-ESS3-4.

- **Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.**

PHYSICAL SCIENCE / ENGINEERING DESIGN

Students who demonstrate understanding can:

MS-ETS1-1.

- **Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.**

MS-ETS1-2.

- **Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.**

MS-ETS1-3.

- **Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.**

Common Core ***Math*** Standards Grade 6

EXPRESSIONS & EQUATIONS

CCSS.MATH.CONTENT.6.EE.C.9

- **Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.**

GEOMETRY

CCSS.MATH.CONTENT.6.G.A.1

- **Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving *real-world* and mathematical problems.**

CCSS.MATH.CONTENT.6.G.A.3

- **Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving *real-world* and mathematical problems.**

CCSS.MATH.CONTENT.6.G.A.4

- **Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving *real-world* and mathematical problems.**

Common Core English *Language Arts* Standards Grades 6 - 8

SCIENCE & TECHNICAL SUBJECTS

CCSS.ELA-LITERACY.RST.6-8.1

- **Cite specific textual evidence to support analysis of science and technical texts.**

CCSS.ELA-LITERACY.RST.6-8.2

- **Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.**

CCSS.ELA-LITERACY.RST.6-8.3

- **Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.**

CCSS.ELA-LITERACY.RST.6-8.4

- **Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6-8 texts and topics*.**

CCSS.ELA-LITERACY.RST.6-8.5

- **Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.**

CCSS.ELA-LITERACY.RST.6-8.6

- **Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.**

CCSS.ELA-LITERACY.RST.6-8.7

- **Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).**

CCSS.ELA-LITERACY.RST.6-8.8

- **Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.**

CCSS.ELA-LITERACY.RST.6-8.9

- **Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.**

CCSS.ELA-LITERACY.RST.6-8.10

- **By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.**

Ohio Academic Content Standards – Social Studies

HISTORY

HIS.68.1a

- **Use various sources to describe a historical event or period from different perspectives.**

HIS.68.2a

- **Compare the key physical and human features of societies of the past in the Eastern Hemisphere with society today. Content Connection Examples: Egypt, India, China, Mesopotamia**

GEO.68.1a

- **Use appropriate maps, globes and other geographic resources (e.g., Internet) to locate various sites or places).**

GEO.68.3a

- **Identify the absolute location (latitude and longitude) of major places and features on a globe (e.g., charting locations on a grid).**

ECON.68.1a

- **Identify the short- and long term consequences of a personal economic decision.**

ECON.68.2a

- **Compare the consequences of personal decisions based on wants and needs.**

ECON.68.3a

- **Describe how the wants of people determine what goods and services are produced.**

ECON.68.5a

- **Explain why some goods are easier to find than others and how this affects price.**

ECON.68.6a

- **Compare the prices of similar goods.**