



הנכם מוזמנים לסמינר עם

שחר אברמוביץ

המחלקה להוראת המדעים, מכון ויצמן למדע

**הסמינר יתקיים ביום ה' 17.6.19, י"ד סיון תשע"ט, בשעות 9.00-10.00
בחדר הדיונים במחלקה להוראת המדעים, מכון ויצמן למדע**

נושא ההרצאה:

Conceptualizing energy by practicing scientists, in the online media and by junior high school students

There are two different populations of students who study science together in Junior High School ([JHS](#)) those who may continue to study more advanced science and may become future scientists and engineers, and those who will learn very little more science and usually no more instruction focusing explicitly on energy. Thus, instruction of science in JHS should do the impossible and move between two parallel trajectories, one providing the basis for future STEM studies (future scientists) and the other the basic literacy for those who will not continue to study science and but should be wise consumers of science.

Energy is one of the fundamental concepts of science, in all disciplines. Due to its centrality, energy was identified by the Framework for K-12 Science Education (NRC, 2012) as a cross-cutting concept (CCC) that bridges the different disciplines and should be learned by all JHS students. Instruction on energy in JHS should provide the foundational understanding of energy, whether students will go on to study more science or won't. Underlying the requirement to teach energy as a CCC is the implicit assumption that the different disciplinary perspectives of energy have something in common which should be the focus of instruction and which supports the way energy is used by all participants in the different disciplines.

The goal of this dissertation is to address the dilemma whether the conceptualization of energy as a CCC fits the needs of both future scientists and lay citizens.