

Inquiry and Intellectual Arbitrage

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a passion for discovery



Intellectual arbitrage

- Arbitrage – profiting from momentary differences in price for the same thing in two different markets.
- In intellectual Property - Taking advantage of a difference in IP rules in different countries to take control of someone else's intellectual property.
- For today – the application of knowledge or approaches developed in one field of study to another area to achieve a new perspective or advancement.

NSES and the pipeline

- Much of the interest of the people organizing this conference is establish a pipeline of new scientists, engineers and mathematicians.
- The NSES very much support this process ...

The Standards are Constructivist ... e.g. the physical science standards

K-4	5-8	9-12
Properties of objects and materials	Properties and changes of properties in matter	Structure of atoms
Position and motion of objects	Motions and forces	Structure and properties of matter
Light, heat, electricity, and magnetism	Transfer of energy	Chemical reactions
		Motions and forces
		Conservation of energy and increase in disorder
		Interactions of energy and matter

And this continues beyond K-12 ...

Inquiry – preparing for arbitration

- Scientific inquiry refers to the diverse ways in which scientists study the natural world and propose explanations based on the evidence derived from their work.
- Inquiry is a multifaceted activity that involves making observations; posing questions; examining books and other sources of information to see what is already known; planning investigations; reviewing what is already known in light of experimental evidence; using tools to gather, analyze, and interpret data; proposing answers, explanations, and predictions; and communicating the results.
- But it has great value beyond science ... in every day life

Science for All Americans

- Scientific literacy is the knowledge and understanding of scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity.
- Scientific literacy means that a person can ask, find, or determine answers to questions derived from curiosity about everyday experiences.