

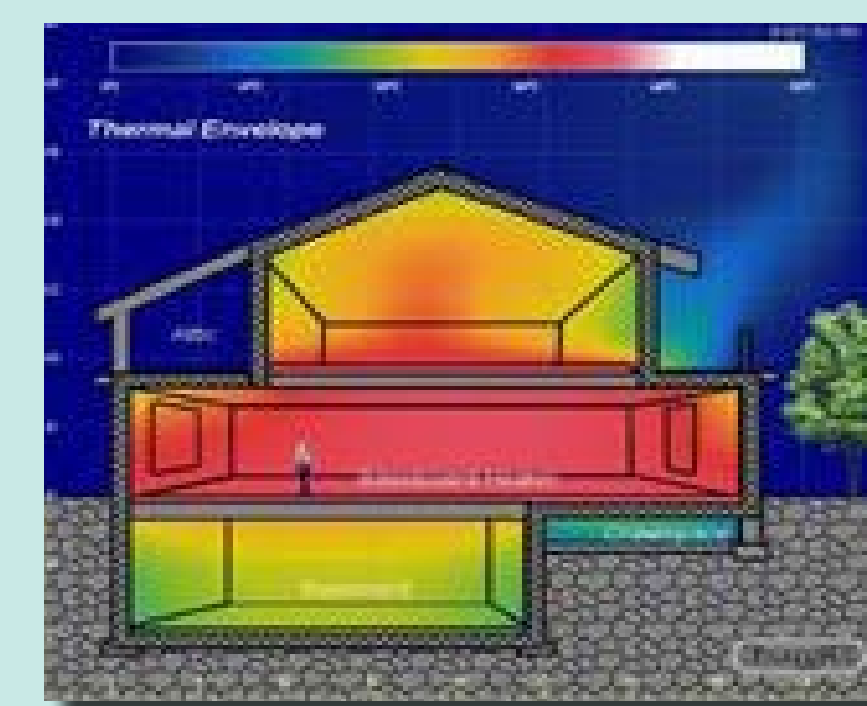
Next Step Learning

"...It felt as if I was getting some amazing experience that professionals do and I am only in high school."



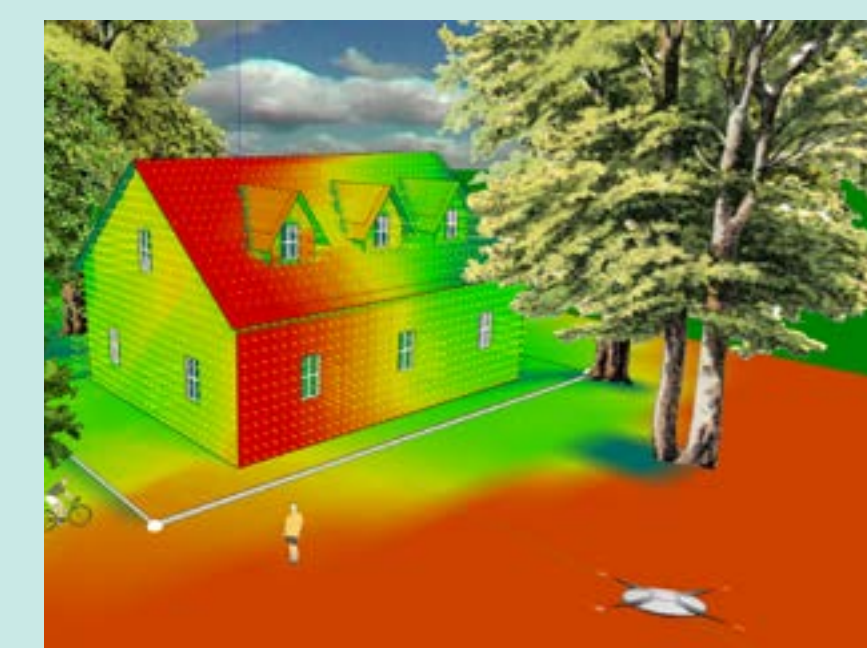
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The Concord Consortium

This project explores an education model that connects schools, homes, and industry. Students learn scientific inquiry and engineering design by investigating and solving real-world energy problems in their homes with state-of-the-art technologies such as infrared thermography and computer-aided design. *Our goal is to translate students into the workforce of today, not just the workforce of tomorrow!*



Home Energy Analyst Tasks (HEAT)

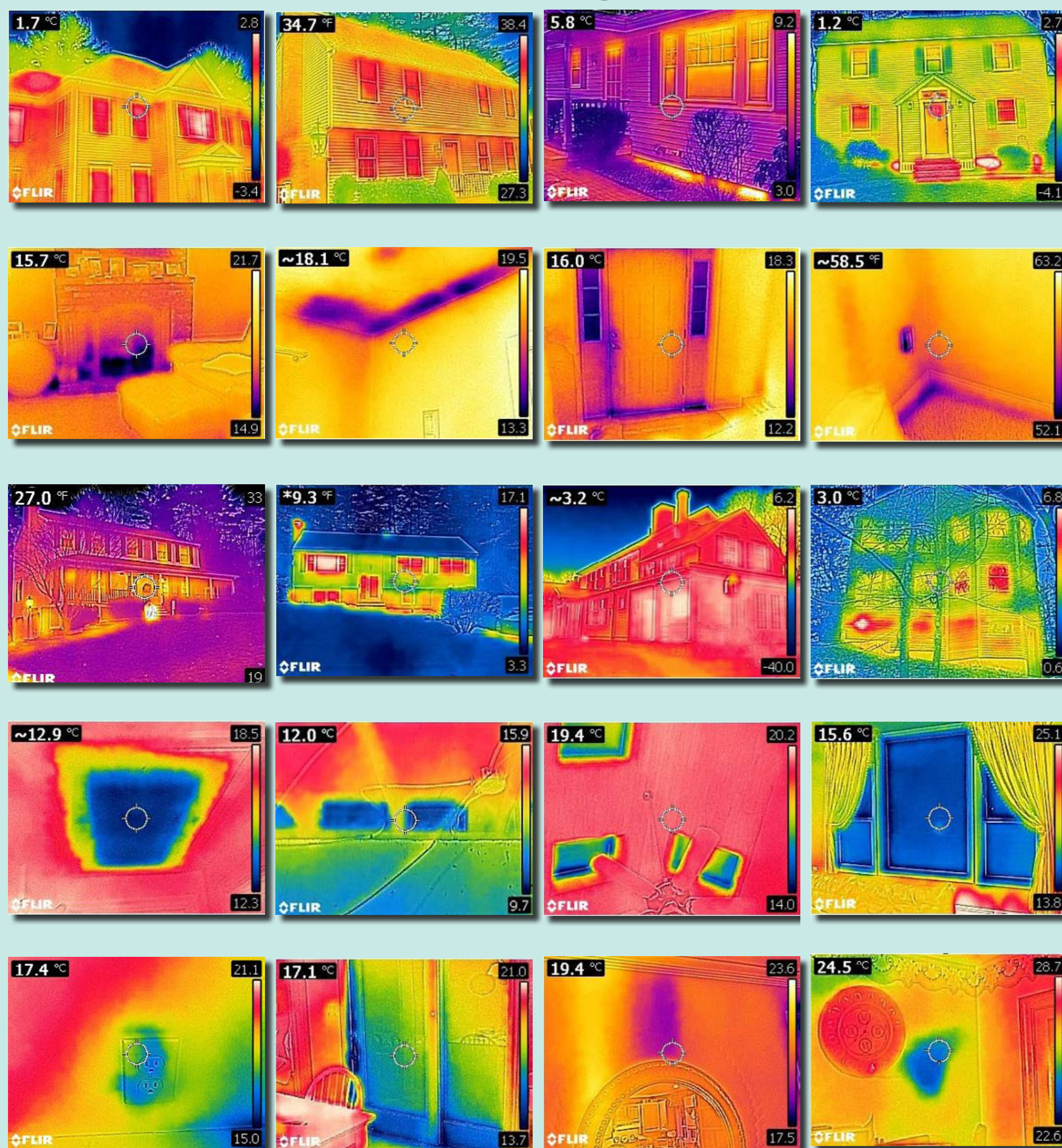
- Unit 1: What is Thermal Energy?
- Unit 2: How is Heat Transferred?
- Unit 3: Building a System
- Unit 4: Home Energy Assessment



Solar Energy Engineering Design (SEED)

- Unit 1: Modeling Your Home
- Unit 2: Utility Bill Analysis
- Unit 3: Solar Science
- Unit 4: Solar Site Assessment

Student infrared images



What parents are saying...

Being an engineer myself, it's great to see him using equipment like this, investigating and discussing what he's seeing and suggesting areas of improvement.

We recently moved into this house and are planning some upgrades. From what [my kid] has shown me I can see we are going to have to budget more for insulation than we expected.

[He] came home very excited about the project. Together we walked around the house using the FLIR camera, looking at windows, doors, floors, and walls of our house.



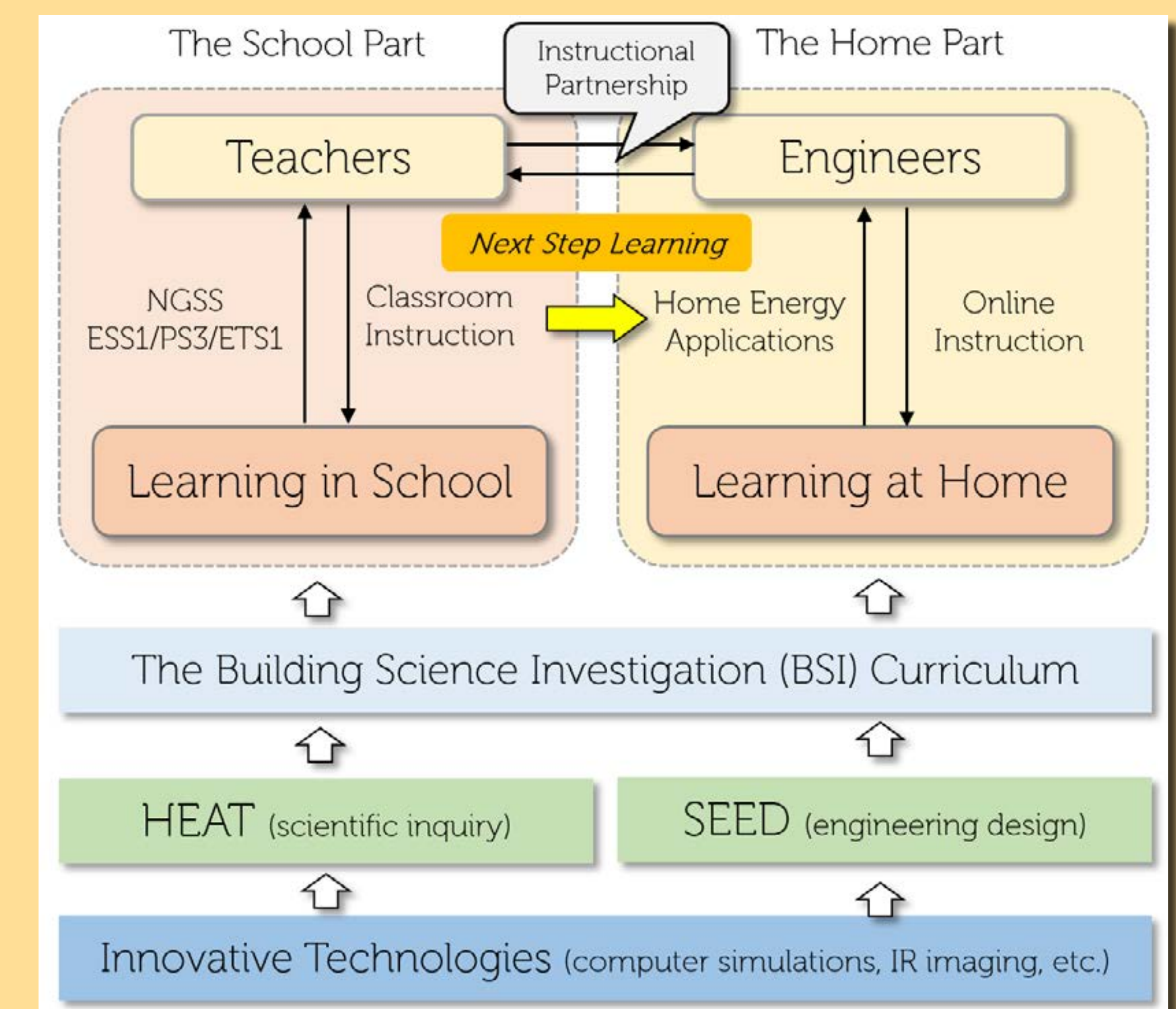
What students are saying...

I felt like I was working a real job; that's the thing, it felt real!

It really helped me understand the material I was learning and it may also save my family a lot of money.

The home energy project allowed for what had seemed to be a very abstract concept a much more realistic feel.

I found it particularly interesting to examine the energy efficiency of my home and see the application of thermodynamics in a real world environment.



The blended education model investigated in this project involves teachers and engineers through classroom and online learning to help students learn and apply science. This research is supported by the integrated BSI curriculum enhanced by innovative technologies that serve as the "connecting tissues" among schools, homes, and cleantech industry.

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