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Mathematics Classrooms*. Preliminary report.

Earth's climate is a fascinating system both in the physical sense and, even more, in the mathematical sense. When viewed as a dynamical system, Earth's climate consists of multiple scales in time and space having various oscillators and feedbacks. Even though this system is vastly complicated, some of the underlying principles are basic and may capture the essence of the climate dynamics at the right time and spatial scale. At this level, there is a wealth of opportunity for incorporation of Earth's climate into mathematics.

In this session, I will start with a brief introduction to conceptual climate models based on the energy balance principle. Then to follow this, I will highlight current efforts and past experiences in bringing Earth's climate into mathematics classrooms and the undergraduate experience using these simple energy balance models. (Received September 19, 2012)