

Thought Lab 1.1: Analyzing Energy Transfers (cont'd)

4. One square metre of land that is planted with rice produces about 5200 kJ of energy per year. A chicken farm produces about 800 kJ/m² of potential food energy per year. Assume that a human must consume 2400 kJ per day to survive. Although it is an oversimplification to imply that a person could survive by eating only one type of food, calculate the total area of land needed to support the student population of your school for year on a diet of (a) rice and (b) chicken.

