



## Building Performance

- Distance from public bus stop in **about 5,000m.**
- Actual MJ/m2 per year primary operating energy for all operating end uses; **447MJ/m2/yr**
- Predicted Kg/m2 per year eCO2 for all operating end uses; **106kg-CO2/m2/yr**
- Actual L/m2 per year of potable water consumption; **580L/m2/yr**(including use for swimming pool and lunch.)
- Other performance information of interest;
  - Predicted primary energy consumption is 447MJ/m2/yr and the reduction rate of it is **18%.**
  - Predicted life cycle CO2 emission is 106kg-CO2/m2/yr and the reduction rate of it is **25%.**
- Floor Heating system: **2,100m2** thermal storage , charged using night rate electricity , is used for floor heating during the day.

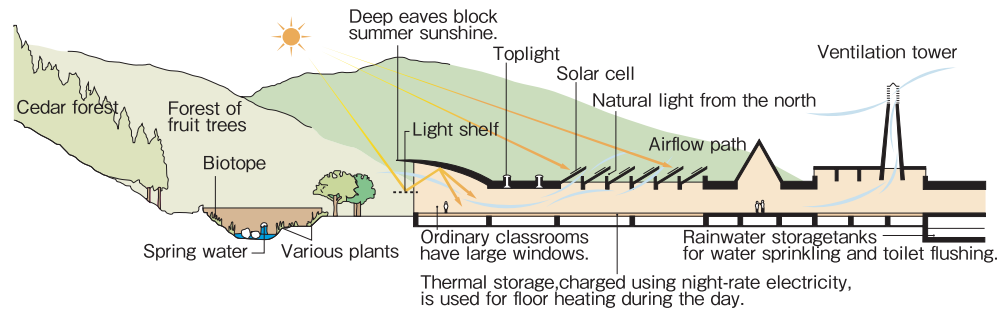


Building Type/Use	School	Site Area:	31,044m2
Country	Japan	Floor Space:	5,642m2
Client	Seto city, Aichi Prefecture	Construction:	RC+S, 2F
Architect	Nikken Sekkei	Mechanical Engineer:	Yoshiaki SAITO
Completion	1999		

## Architectural Features

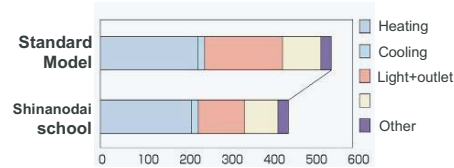
**Eco-school methods are build in everywhere in this school, which has been designated as amodel for the eco-school development pro-**

- Concept**
- **HEAT;** Thermal storage, charged using night-rate electricity, is used for floor heating during the day.
  - **LIGHT;** LIGHT SHELVES which guide light to the interior, Deep eaves block summer sunshine.
  - **WIND;** Airflow path ROOF, Ventilation tower.
  - **WATER;** BIOTOPE, Rainwater storage tanks for water sprinkling and toilet flushing.

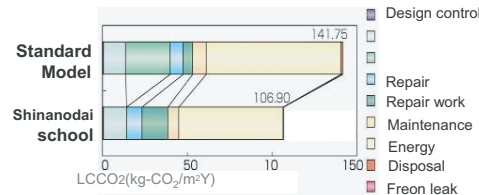


[Conceptual diagram]

## HighLight of Assessment Results

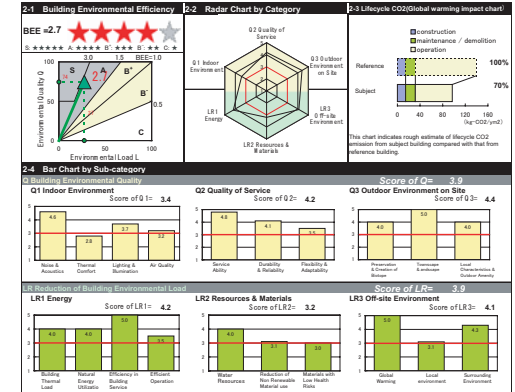


Primary energy consumption (MJ/m<sup>2</sup>Y)  
**→ 18% Reduction**



Life cycle CO<sub>2</sub> (kg-CO<sub>2</sub>/m<sup>2</sup>Y)  
**→ 25% Reduction**

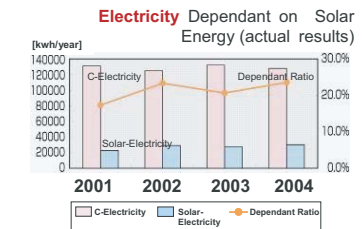
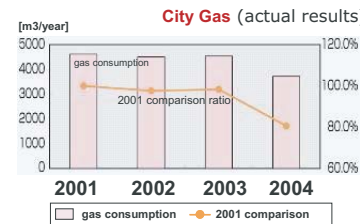
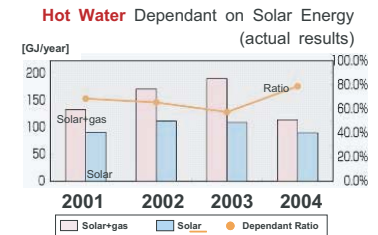
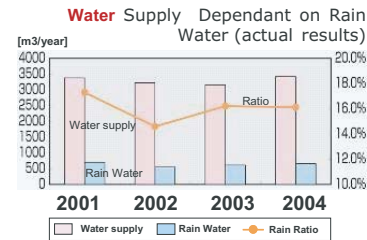
CASBEE-EB **A-class**



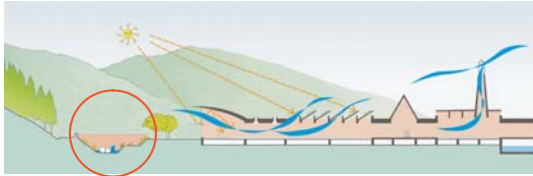
(CASBEE-EB 2007 Edition)

## Building Performance

Energy Consumption for 2001-2004 Period



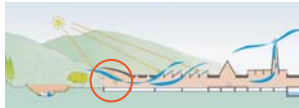
## BIOTOPE



Spring water, Various plants



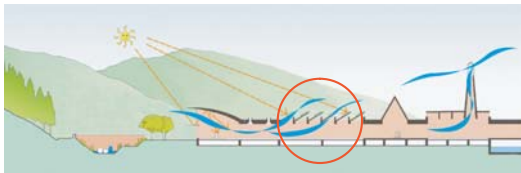
## Ordinary-classrooms



Ordinary Classrooms have Large Windows. Light Shelf guides light to the Interior.



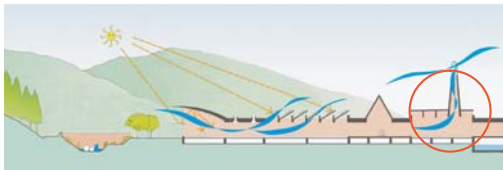
## High&High-sidewindows,Toplight



The High Windows Guide light to the Interior.



## Ventilationtower



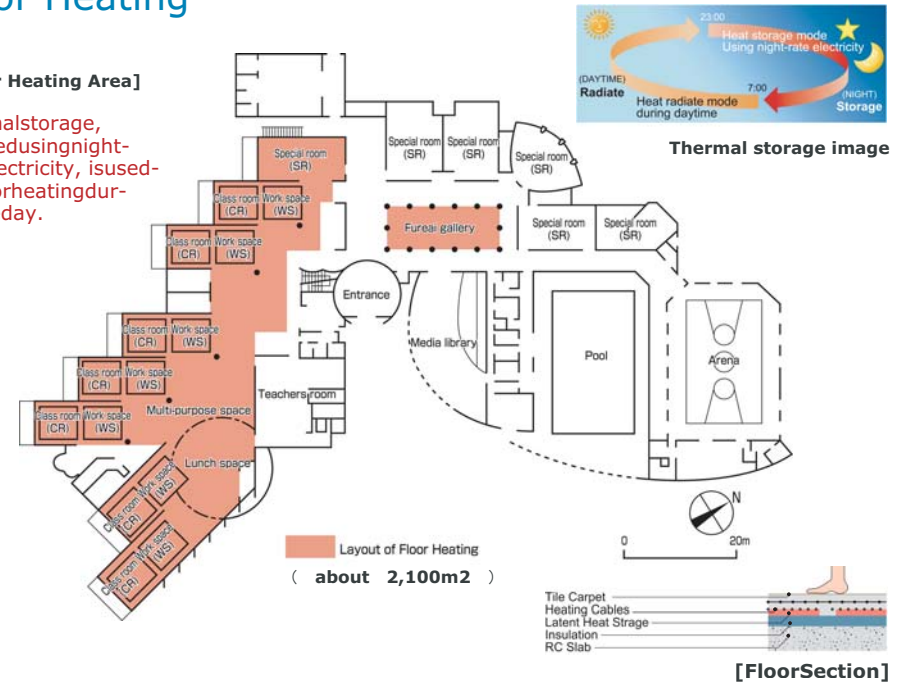
In addition to school functions, the "Fureai gallery" serves as a center for community activities.



## Floor Heating

[ Floor Heating Area ]

Thermal storage, charged using night-rate electricity, is used for floor heating during the day.



## Solar Cell on Roof

Type: Hybrid-System (Amorphous+silicon) Capacities of Solar Generation: 30kW



Roof inclination: 30 degrees