Two-year test of AI heating controls

LEVEL B2

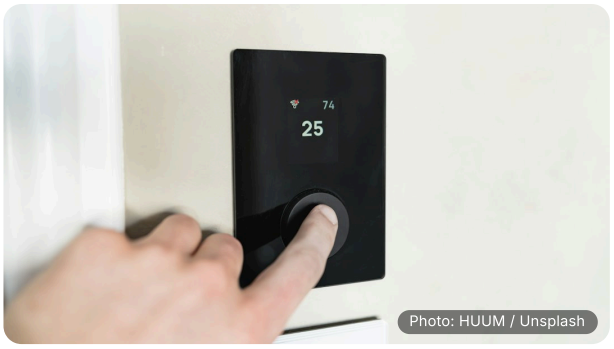


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I. WARM-UP

1. How do you control the heating in your home now?
2. What makes a home feel warm without using more energy?
3. Would you trust an app to manage your heating? Why or why not?

II. KEY VOCABULARY

thermostat
A device that controls the temperature of a heating system.

radiator
A metal device that gives out heat from hot water or steam.

boiler
The machine that heats water for a building's heating system.

subscription
A regular payment to use a service or feature.

protocol
A technical standard that lets devices communicate.

efficiency
How well something works using as little energy as possible.

schedule
A plan that sets times for something to turn on or off.

consume
To use fuel, energy, or resources.

III. READING

Manufacturers say smart thermostats and AI can cut heating costs by around 25%, or about £180 a year, but they add many conditions. To test the claims, Samuel Gibbs compared strict manual control with an AI-governed system for two years in his 1930s house with a loft conversion.

In winter 2024 he ran a Worcester Bosch gas boiler on medium heat, used a Hive thermostat with smart features disabled, and managed 13 radiators by hand with a basic schedule. This was tiring and sometimes cold, but it kept bills low.

The manual setup consumed 14,316.7 kilowatt hours of gas over 213 days from November to May, about 10–15% less than earlier winters. In summer 2025 he installed a Tado X system: 13 smart radiator thermostats, two wireless thermostats for the largest rooms, and a controller wired to the boiler.

The app manages rooms separately and can boost efficiency by turning off radiators that are not needed. If a boiler supports the OpenTherm protocol, Tado can lower flow temperature; his did not. The kit costs about £930, plus roughly £80 labour, and AI features require a subscription.

Reading text adapted from reporting by **The Guardian***: "Can AI really save you money on your...". Original article linked at theenglishwire.com.*

IV. COMPREHENSION QUESTIONS

1. What savings do manufacturers often claim for smart heating?
2. What two approaches did Samuel Gibbs compare?
3. How many radiators were in the house during the test?
4. How much gas did the manual setup consume, and over how many days?
5. What did the Tado X system cost, and what extra payment may be needed?

V. DISCUSSION

1. When is a manual schedule better than automation, and when not?
2. What room-by-room rules would you set in your home?
3. Is the cost of smart controls worth it for you? Why?
4. What data would you track to judge heating efficiency?

VI. GRAMMAR FOCUS

Wish / if only

Wish / if only express regrets or desires. Now: wish/if only + past simple. Past: wish/if only + had + past participle. For a change you want: wish + would + verb.

"I **wish my boiler were** *OpenTherm-compatible."*
"If only we **had insulated** *the loft before 2024."*

VII. GRAMMAR EXERCISE

Complete each sentence with the correct form of the verb in brackets.

1. I wish I (know) ___ how much gas I use, but I don't. _____
2. If only we (install) ___ smart thermostats before summer 2025. _____
3. I wish my flatmate (stop) ___ turning the heating up! _____
4. If only the app (not/require) ___ a subscription. _____
5. My parents wish they (buy) ___ a smart thermostat last year. _____

Teacher's Notes

TEACHERS ONLY

These notes are designed to help you get the most out of this lesson. Please do not share this page with students.

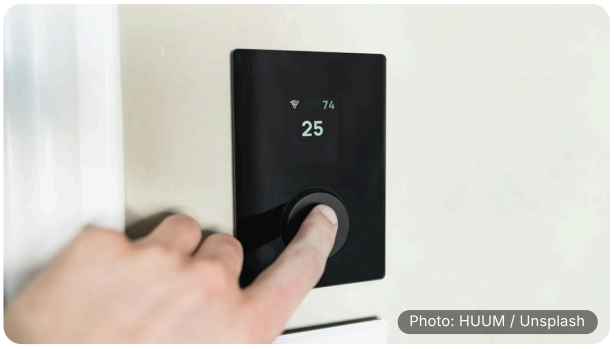


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I. LESSON GUIDE

- Timing: 8–10 minutes warm-up, 10 minutes vocabulary, 12–15 minutes reading, 8–10 minutes comprehension, 10 minutes discussion; integrate the grammar focus within reading/comprehension time.
- Pre-teach or check: thermostat, radiator, boiler, schedule, subscription, protocol, efficiency, kilowatt hour (concept only). Bring a simple floor plan to illustrate room-by-room control.
- Reading and discussion: Students skim for the test setup and numbers, then scan for costs and features. In pairs, compare the two approaches and decide which would suit their home before whole-class feedback.
- Differentiation: Stronger students estimate possible savings using the 25% claim and local prices; others explain pros and cons in simpler terms using the vocabulary list.

II. DISCUSSION FACILITATION TIPS

1. Elicit quick pros/cons, then split the room: one side argues for manual, the other for automation.
2. Have students choose two rooms and set temperatures/times; prompt reasons like use, size, or comfort.
3. Take a show of hands on value for money, then ask dissenters to justify with costs and comfort.
4. List possible data on the board (kWh, room temperature, time on); push for how they would use it.

III. EXTENSION ACTIVITIES

Writing: In pairs, write a 70-word buyer's note: who should choose manual control and who Tado X, with one reason each.

Presentation: Create a 90-second pitch recommending either the manual setup or the Tado system, using two figures from the text.

IV. ANSWER KEY OVERVIEW

Comprehension questions: short factual answers from the text.

Grammar exercise: Wish / if only

Discussion: open-ended. Accept any reasonable ideas supported by examples and reasoning.

Answer Key

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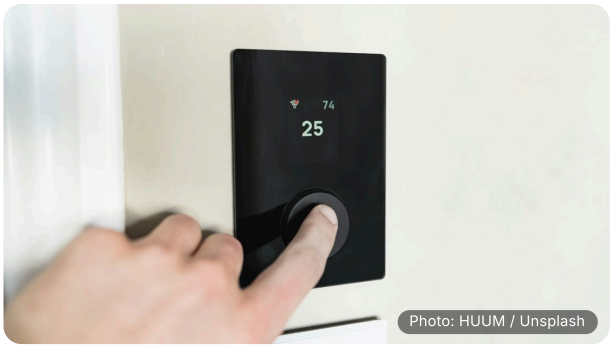


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IV. COMPREHENSION QUESTIONS

1. What savings do manufacturers often claim for smart heating?
   About 25% or roughly £180 a year.
2. What two approaches did Samuel Gibbs compare?
   Strict manual control versus an AI-governed smart system.
3. How many radiators were in the house during the test?
   Thirteen radiators.
4. How much gas did the manual setup consume, and over how many days?
   14,316.7 kWh over 213 days.
5. What did the Tado X system cost, and what extra payment may be needed?
   About £930, plus roughly £80 labour; AI features need a subscription.

V. DISCUSSION

Open answers. Accept any reasonable ideas supported by examples and reasoning.

VI. GRAMMAR FOCUS

Key point: Wish / if only express regrets or desires. Now: wish/if only + past simple. Past: wish/if only + had + past participle. For a change you want: wish + would + verb. (Examples constructed.)

> *"I* **wish my boiler were** *OpenTherm-compatible."*
> *"If only we* **had insulated** *the loft before 2024."*

VII. GRAMMAR EXERCISE

Complete each sentence with the correct form of the verb in brackets.

1. I wish I ___ how much gas I use, but I don't. **knew**
2. If only we ___ smart thermostats before summer 2025. **had installed**
3. I wish my flatmate ___ turning the heating up! **would stop**
4. If only the app ___ a subscription. **didn't require / did not require**
5. My parents wish they ___ a smart thermostat last year. **had bought**