ADULT USE ONLY · SEPARATE FROM LEARNER PACKET

Facilitator Copy — NEW CONCEPT COMPANION ACTIVITIES

Book 1: Tommy and the Talking Thermostat · Fictional thermostat paper model

Scope boundary: This is a stand-alone core-concept companion, not a story excerpt. It does not summarize, quote, verify, or claim anything about Book 1's interior, sequence, chapters, cover, or plot.

What this is

A low-ink, reusable paper model for reading a fictional number, comparing it with a fixed fictional target of 72°F, and selecting a paper request card.

What this is not

- Not a temperature recommendation or a universal comfort claim.
- Not real thermostat adjustment, repair, diagnosis, wiring, or engineering instruction.
- Not a claim that a thermostat creates heat, cold air, or fan energy.

Book material

If you choose to use an actual Book 1 copy, the teacher must provide it. No book interior is included in this packet.

Keep the relationship honest: Use this lesson as a separate concept companion. Do not call any page a chapter activity or imply it matches a specific passage.

Exact learner printing quantities

For each pair	Quantity	Purpose
Learner page 1 — Paper Model Board + request cards	**1 copy**	Shared reusable board and three request cards.
Learner page 2 — Reading cards + decision flow	**1 copy**	Shared set of six fictional reading cards. Adult may cut; whole-page pointing is allowed.
One selected worksheet: learner page 3, 4, or 5	**1 copy**	Select Explorer, Builder, *or* Technician for the pair. Do not print all three unless intentionally differentiating.

Core setup per pair = 3 sheets: page 1 + page 2 + exactly one selected age/readiness worksheet. Print on US Letter, 8.5 × 11 inches, at 100% / Actual size, single-sided. The learner PDF contains five pages; keep these teacher answers separate.

Materials

- Printed learner sheets
- Pencils
- Adult scissors, optional

Choose by readiness

Explorer: picture compare. Builder: rule application. Technician: rule-based evidence, a mismatched request, and optional distance math.

Privacy

No names, initials, home/school temperatures, device settings, or identity information are needed.

Safety: PAPER MODEL ONLY. Learners use printed cards and pencils; they do not change, touch, troubleshoot, or wire real equipment.

ADULT USE ONLY · LESSON LOOP

I Do → We Do → You Do

Estimated 20–25 minutes — unvalidated planning estimate, not a guaranteed duration.

Stage	Estimate	Facilitator move
I Do	4–5 min	Place the 68°F reading card on the board. Say: “The target stays 72°F. 68 is below 72, so this *paper model* uses HEAT REQUEST.” State that this is not a real setting or device instruction.
We Do	6–7 min	Choose 76°F, then 72°F together. Repeat the loop: read → compare → request. Ask which card is above, below, or exactly the same as target.
You Do	7–9 min	Pairs use page 1 + page 2, then complete the one selected worksheet. Circulate for rule language, not personal stories or real-device advice.
Check + close	3–4 min	Check the printed answers below. Restate: a request is a model decision; it does not create heat or cooling. Collect reusable cards.

Repeatable table loop: Choose one reading card → compare it with fixed TARGET 72°F → select one request card → say the rule aloud → clear the board and choose another card.

Answer key and rule language

Learner page	Expected answers	Rule to reinforce
1–2 · board/cards	68, 70, 71 are below 72 → H HEAT. 72 equals target → II NO HEAT OR COOL REQUEST. 73, 76 are above 72 → C COOL.	Reading is compared to the fixed fictional target. A reading does not move the target card.
3 · Explorer	68 vs 72: **cooler; HEAT**. 76 vs 72: **warmer; COOL**. 72 vs 72: **SAME; PAUSE / NO REQUEST**.	The thermometer pictures share one scale; compare the printed readings. No subtraction is required.
4 · Builder	First 76 → **COOL**. New 72 → **NO HEAT OR COOL REQUEST**. Table: 70 → **below / HEAT**; 72 → **exact / NO REQUEST**; 76 → **above / COOL**.	A request does not create heat or cooling; it is the model’s selected direction. Target stays 72.
5 · Technician	70 → **HEAT, distance 2**; 71 → **HEAT, 1**; 72 → **NO REQUEST, 0**; 73 → **COOL, 1**; 76 → **COOL, 4**. Mismatch 72/Cool → **NO; hold NO REQUEST**.	Paper rule only: HEAT ≤71, NO REQUEST at 72, COOL ≥73. Optional distance calculations may be skipped. It is not actual hysteresis, timer, or fault behavior.

Answer-key boundary: “No request” means no heat-or-cool request in this paper model. It is not a diagnosis and does not tell anyone what a real system is doing.

ADULT USE ONLY · SAFEGUARDS

Facilitation, Safety, and Observation

Use concise language, anonymous observations, and paper-only boundaries.

Misconceptions to address

- **“The thermostat makes cold air.”** In this activity, it does not make heat, cold air, or fan energy. Learners are only sorting paper request cards.
- **“72°F is the right setting for everyone.”** No. It is a fictional teaching target, not a universal comfort recommendation.
- **“A new reading changes the target.”** No. The reading is observed information; the printed target stays 72°F.
- **“No request means something is broken.”** No. It means only that this paper rule selects no heat-or-cool request at exactly 72°F.

Useful prompts

- “What number is the reading?”
- “Is it below, above, or exactly the same as 72?”
- “Which paper request card matches the printed rule?”
- “Did the reading change the target card?”
- “What is our boundary: paper model or real equipment?”

Observe learning — no identities

Use anonymous, whole-group observations only. For example, tally class-level counts with symbols: how many pairs selected H, C, or II correctly on a displayed card.

- ☐ Can the pair state “below / exact / above”?
- ☐ Can the pair keep the target fixed?
- ☐ Can the pair choose the matching paper request?

Do not record: names, initials, ages, demographics, real temperatures, home information, device settings, or real-system observations.

Scissors and materials safety

- Adult scissors are optional; whole-page use is valid.
- If cutting, an adult cuts along the printed dashed lines or directly supervises age-appropriate use.
- Keep card scraps off the floor; collect reusable cards after the lesson.
- No body-touch activity, real thermostat adjustment, real wiring, tools, vents, or equipment access.

Out of scope and next steps

Paper Circuit Builder is a separate extension. They are not included in the five-page learner packet and should not be inferred from it. Use the included seven-page Paper Circuit Builder learner kit and its separate two-page answer guide as an optional paper-only extension. Its component cutouts are on circuit page 4. It is not a verified Book 1 scene or a model of Theo’s wiring.

No certification or technical instruction: This packet does not train learners to operate, repair, diagnose, configure, or certify any thermostat, HVAC, electrical, or control system.

Close with one sentence: “We used a fictional paper target and paper requests to practice comparing numbers; we did not operate a real device.”