

Unit 6

Thermal Review and Mixed SPH3U Strategy

SOURCE LOCK

Built from SPH3U video-distilled notes. Teacher moves, examples, and practice prompts are pulled from the local distilled packets.

Big idea

- The thermal review source is shallow, so the useful student move is to classify the situation and keep energy-transfer language consistent.

Lesson map

- Sound and thermal review - 1 source lessons

Core Notes

What to know

- Thermal review should be treated as support material, not the deepest SPH3U source strand.
- Use energy-transfer language before jumping into a formula.
- Separate mechanical energy, electrical energy, wave energy, and thermal energy in mixed review.
- For any SPH3U question, start by identifying the physical model before choosing an equation.
- Units are a built-in check on whether the chosen relationship makes sense.

Problem-solving workflow

- Name the topic: motion, force, energy, wave, sound, circuit, magnetism, or thermal review.
- List known values with units.
- Draw a diagram or state the system.
- Choose the relationship that matches the model.
- Solve and check whether the answer is physically reasonable.

Common traps

- Do not force a formula before naming the model.
- Do not mix different energy stores without saying what is being transferred.
- Do not treat the junior thermal source as a complete senior-level thermal unit.
- Do not drop units during multi-step review problems.

Teacher Moves

HOW TO THINK

These notes preserve the teacher's problem-solving moves: how to decide the model before calculating.

Move 1

- Use energy-transfer language for thermal review instead of inventing missing formulas. | Source: L178 00:00:13.

Move 2

- Read the graph feature first: slope, area, intercept, or trend. | Source: L178 00:06:22.

Worked Examples

Distilled example patterns

Mixed-course model choice (Unit 6 distilled pattern: review source + course model selection)

Read the situation before selecting an equation.

If the problem involves force and acceleration, think $F_{net} = ma$.

If it involves a resistor circuit, think $V = IR$.

If it involves wave frequency and wavelength, think $v = f\lambda$.

Answer pattern: Situation first, equation second, numbers third.

Thermal review boundary (Unit 6 source note: sound/thermal content comes from junior-review parts)

Use the thermal source for vocabulary and energy-transfer intuition.

Keep claims conservative if the source does not provide a full derivation.

Flag any missing formula as a future supplement rather than inventing it.

Practice prompts

- Classify a mixed problem before calculating.
- Explain what kind of energy transfer is happening.
- Match equations to topics across the course.

Source quality note

OCR review flags in this unit: 0 / 23.

Printed slide text is usually reliable; dense handwritten equations should be verified against source frames.

This packet is polished for student reading, but it keeps the source trace instead of inventing missing formulas.