

The Melt Race

TEACHER DEMO · KIDS PREDICT & TIME

RUN AT 1:05

25 MIN

The point

It isn't only water that changes state. Six materials warm together and melt **in order** — because **every material has its OWN melting temperature**. And the cheese proves not everything melts at all.

Materials

- Hot plate / griddle on its **lowest** setting
- Equal pea-size pieces: **ice cube** · **coconut oil** · **chocolate** · **butter** · **gummy bear** · **crayon** (peeled) + the **cheese spoiler**, staged in a muffin tin
- Stopwatch · worksheet BACK + pencils · oven mitt · tape kid line

Steps

- 1 Show the six racers cold.  **Worksheet moment:** each child writes an **ordinal guess** (1st–6th) for the melting order — before any heat.
- 2 Place the six pieces in a **ring on the cold griddle**, evenly spaced from the middle (fair test — same heat, same size).
- 3 Lowest heat on. Start the **stopwatch**.
- 4 Kids call each one the moment it **runs like a liquid**; a timekeeper reads the stopwatch and the group records order + seconds on the worksheet.
- 5 Creep the heat up only as the race stalls — slow heat stretches the drama and keeps the order honest.
- 6 Last: drop the **cheese** on. It softens, bubbles, browns... but never runs. **Not everything melts** — some things scorch and burn instead.
- 7 Compare guesses to results; star the winner and read the order aloud in ordinal words.

Say: "Same griddle, same heat — different finish times. Every material carries its own secret melting number, and the race just read those numbers out loud."

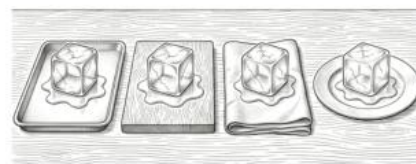


Fig. 5 — six racers, one heat, their own finish times

SAFETY

Hot surface — adult hands only past the tape line; mitt for any repositioning. Nothing from the griddle is eaten (crayon wax shares it). Scorching cheese can smoke — crack a window and pull it off before it burns black.

TEACHER PREP — THE NIGHT BEFORE

Pre-cut all pieces to matched pea size into a labeled muffin tin, fridge overnight (butter and coconut oil must start cold and solid). Unequal pieces ruin the race.

What to watch for

- Expected order $\approx$ ice $\rightarrow$ coconut oil $\rightarrow$ chocolate $\rightarrow$ butter $\rightarrow$ gummy bear $\rightarrow$ crayon — but narrate the order you **SEE**, not the list
- Ice wins from a griddle that barely feels warm — its number (32) is far below all the others
- The gummy slumps slowly — melting can be gradual

EXPECTED RESULT

Six clean finishes in order, one refusal. **Each material changed state at its own temperature; the cheese scorched without melting.**