

The Burn Test

ADULT RUNS · KIDS SEATED BACK

RUN AT 12:40

30 MIN

The point

Animal food is **biological** — it holds the sun's **energy**, saved up by a plant, so it **burns**. “Plant food” (fertilizer) is only Earth **minerals** — no energy of its own, so it **won't burn**. Fire tells the two apart.

Materials

- Long-reach lighter · metal tray · cup of water standing by
- **Will burn:** dried orange peel · potato chip (or shelled peanut) · saltine cracker or dry spaghetti
- **Won't burn:** granular fertilizer · table salt · a pebble · dry garden soil

Steps

- 1 Kids sit a full arm's reach back. Only the adult touches the lighter.
- 2 Hold up the first item. Kids **circle their guess** on the worksheet: burn, or not?
- 3 Light it over the tray. **Watch.** Food flares and chars; minerals just sit.
- 4 Sort it: did it burn? Then it is **food — biological**. Did it sit? **Minerals**.
- 5 Repeat, mixing the two piles so no one can guess by order.

Say: “The chip caught fire because it is FOOD — packed with the sun's energy, saved by a plant. The ‘plant food’ would not burn at all. It is just minerals from the ground.”

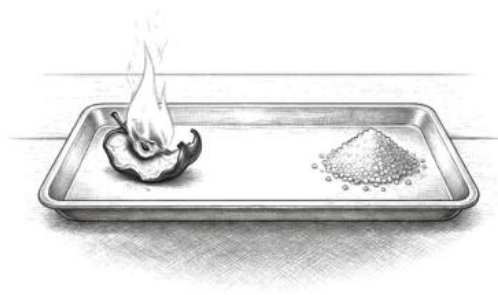


Fig. 1 — food flares; the “plant food” just sits there

SAFETY — ADULT ONLY

Do it near a window or under a range hood so the smoke alarm won't trip; crack a window. A cup of water stays within reach. A **pinch** of each item — a flare, not a bonfire. The adult holds the lighter the whole time.

TEACHER PREP

Dry the orange peel days ahead (fresh peel steams). Bone-dry soil only — damp soil pops and spits. Stage all items in labeled cups out of reach.

EXPECTED RESULT

Orange peel, chip, and cracker **burn** — biological, full of the sun's energy. Fertilizer, salt, pebble, and soil **do not** — minerals, no energy. **That is the line between what an animal eats and what a garden gets.**