Nothing Is Lost

More missing-mass equations, conservation ledgers, balancing, and reaction budgets.

[solving for x] [conservation] [balancing] [QUESTIONS ONLY] [PRINT-FRIENDLY]

NAME	PERIOD	DATE

QUESTIONS ONLY - Practice independently or with a group. Use the class sheet as a model, but solve these numbers yourself.

PART A Find x

A reaction has 14 g of reactant A and x g of reactant B. The products total 39 g.

1 Write and solve the conservation equation 14 + x = 39.

2 If reactant B actually measured 24 g, how much mass is unaccounted for?

PART B Close the ledger

A closed reaction starts with 18 g solid and 7 g liquid. It produces 10 g gas and an unknown solid.

1 Find the mass of the unknown solid.

2 What would happen to the total mass if the gas escaped before weighing?

PART C Balance the count

Use whole-number coefficients to balance: __ H2 + __ O2 -> __ H2O.

1 Count hydrogen and oxygen atoms on both sides after balancing.

2 Explain why changing a subscript would change the substance, while changing a coefficient does not.

PART D The campfire budget

Wood releases 900 kJ. The surrounding air absorbs 540 kJ and the ground absorbs 210 kJ.

1 How much energy is left for light and sound?

2 If the light and sound share it equally, how many kJ goes to each?