GeniusKite

Kids' Thinking Skills

Science Workbook

Grade 4
Ages 9-10



Science Thinking and Safe Experiments

GeniusKite Team

Science Thinking for Parents

A short guide / 1 of 2

How each section works

Every section has six pages. The first page starts with a short "learn it" box that explains the big idea in plain words. Then come practice pages, a short reading or word game, a safe hands-on investigation and a thinking challenge.

Variables and models

Grade 4 science asks children to name variables (what you change, what you measure, what stays the same) and to use models to explain ideas like waves and energy. Ask "What did you change? What is your evidence?"

Safety first

Every activity uses household materials with no heat sources, flames, sharp tools or chemicals. A grown-up does any cutting. Never shine a flashlight or reflect sunlight into anyone's eyes. Pick up marbles so nobody slips.

Wonder out loud

Ask "What do you notice?" and "What do you predict?" A prediction that turns out wrong is still good science: talk about what the evidence shows.

SCIENCE / WARM-UP

Investigation Words



Name: _____ Warm-up 1 / 3

Match each word to its meaning. Write the letter on the line.

Scientists ask questions, plan fair tests and collect data. A variable is something that can change in a test. The independent variable is the one you change on purpose; the dependent variable is what you measure; controlled variables stay the same. Scientists also use models, like a drawing or a small copy, to explain how something works.

1. independent variable **A.** what you decide the evidence shows

_____

2. dependent variable **B.** something you keep the same

_____

3. controlled variable **C.** the one thing you change on purpose

_____

4. model **D.** what you measure to see what happened

_____

5. conclusion **E.** a drawing or copy that explains how something works

_____



Pip's tip: Models help us explain things we cannot see easily.