

Designing a Fair Test

You will need to design a fair test to answer today's investigative question. In order to assist you, please answer the following questions:

1. What are you trying to test?
2. What types of water (hot, cold, salt?) will you need to use for your test?
3. What will you measure for each test?

Scientific Fair Tests

Most people, especially if they have a sister or brother, have a pretty good idea of the concept of “fair”. For example, it’s not fair if I give Samantha a chocolate chip cookie but don’t give one to Charlie or one to Crystal too! So what is “fair” in scientific tests? Think about the different aspects of a science experiment and circle the elements below which would likely be part of a “fair test”.

*Use equal amounts of water
for all tests.*

**Measure the same thing(s)
(volume, mass,
temperature) in all test
groups.**

**RUN SEVERAL TRIALS
AND AVERAGE THE
RESULTS FROM EACH
TRIAL.**

*Set a timer and run each test
for the same time.*

Let each test run for
different lengths of time.

*Run only one trial of an
experimental test.*

For different tests, measure volume in one
test, mass in another, and temperature
only when convenient.

Vary the
amounts of
water in all
test groups.