Count nouns are those that name things that occur in discrete units

Examples: problem, particle, occurrence, sample, capacitor, collision, calculation, analysis, axis

Count nouns can be modified by a number (one atom, 50 000 collisions per ms, 24 sensors, a dozen samples)

Count nouns can be singular or plural

Singular count nouns can take an indefinite article (a or an)

Count nouns may be modified by a singular or plural quantifier (e.g., every, each, several, many, few)
**Mass nouns are those that name things that are indivisible**

**Examples:** knowledge, equipment, helium, money, gravity, destruction, physics, mathematics

They are almost always* expressed as a singular in English and take a singular verb

Although they are treated as singular, mass nouns cannot take an indefinite article (a or an)

Mass nouns cannot be modified by most quantifiers (e.g., many, few, several, each)

Some mass nouns (those that can be weighed or measured) can be modified by a number if a unit of measure is specified (2 kg of flour, 3 ml of water)

*It’s English—there are always exceptions

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**Mass nouns fall into general categories***

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concepts</td>
<td>information, jargon, knowledge, dynamics, evidence, damage, advice</td>
</tr>
<tr>
<td>Activities</td>
<td>research, work, testing</td>
</tr>
<tr>
<td>Elements (modern &amp; ancient)</td>
<td>argon, carbon, lead, K, W, earth, air, wind</td>
</tr>
<tr>
<td>Materials</td>
<td>ice, wood, shielding</td>
</tr>
<tr>
<td>Liquids</td>
<td>water, alcohol, blood, urine</td>
</tr>
<tr>
<td>Natural Phenomena</td>
<td>electricity, superconductivity, heat, cooling</td>
</tr>
<tr>
<td>Physical Things</td>
<td>software, equipment, furniture, stuff</td>
</tr>
</tbody>
</table>

*Adapted from grammar-monster.com

and they are always singular in US English
A mass noun is a grammatical construct

Whether a noun is a mass noun has nothing to do with the inherent qualities of the object or objects to which the noun refers

- car, truck, SUV, motorcycle, freeway, lane (count nouns)
- traffic (mass noun)
- transportation (mass noun)
- rush hour (mass noun)

Dividing a mass noun into its constituent parts or making it plural requires (1) adding a countable noun + of before the mass noun or (2) using a completely different word

- clothing → article of clothing; shirts, a dress
- equipment → piece of equipment; microscope, drill press
- pollution → a pollutant, heavy metals
- literature → work of literature, monograph, poems
- text → letters, words, a phrase, sentence, page, chapter
- research → an experiment, projects, study, investigation
Common mistake—making mass nouns plural (which always changes the meaning)

damage (mass) = physical harm that impairs an object’s value, usefulness, or normal function

damages (mass) = a sum of money claimed or awarded by a court to compensate a victim for a loss or injury
text (mass) = the collection of words on a page or screen
texts (count) = individual books or manuscripts (think textbooks)
work (mass) = activity involving mental or physical effort
works (count) = individual products of human (usually artistic) endeavor—think works of art—OR an industrial complex or engineering structure (steelworks) OR (mass) an internal mechanism (the works of a watch)

Common mistake—using the wrong modifier

“Suppressing epidemics with a limited amount of immunization units”

units are counted; should be number

“Quantum, classical, and total amount of correlations in a quantum state”

correlations are counted; should be number

“Nonlinear optics with less than one photon”

photons are counted; should be fewer than (how can you have less than one photon?)

(all titles from PRL articles, <sigh>
Use the correct modifier!

**Mass Nouns**
- no **indefinite** articles (*a* or *an*)
- more than
- less than (weighed or measured)
- amount of (weighed or measured)
- as much as (weighed or measured)

**Count Nouns**
- can take any article
- more than
- fewer than (counted)
- number of (counted)
- as many as (counted)

Writing “The Raman studies showed the effects of varying excitation energies on the type and **amount** of defects in graphene” is not strictly wrong, and people will understand what you mean, but it sounds witless. *Defects* are counted, not weighed or measured.

Some words may be used as both mass and count nouns, but their meanings are different

- **chickens** (count noun—bird)
- **chicken** (mass noun—foodstuff)
Some words may be used as both mass and count nouns, but their meanings are different

faculty (mass noun—professors)

faculties (count noun—person’s senses or intellect)

A collective noun refers to a collection of things taken as a whole

Examples: audience, committee, faculty, ensemble, class, team, array, group, bunch

Most collective nouns are treated as singular in US English and take singular verbs and singular pronouns

The committee nominates the club’s officers.
The finance group tabled its discussion of the budget.

If the members of a group are not acting in unison, plural verbs and pronouns might be used

The faculty are fighting among themselves.
The team took a break to stretch their legs.

Collective nouns can be mass (audience) or count (team)
To recap:

Don’t make mass nouns plural

Don’t use an indefinite article (a, an) with a mass noun

Make sure you are using the correct modifier (few vs. less; amount of vs. number of)

A good resource for practice:
https://grammar-monster.com/glossary/non-countable_nouns.htm

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http://physics.illinois.edu/people/Celia/