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CURRICULUM

Introduction to material technology

The physical properties

The mechanical proper

- **Materials**
 - <u>Wood</u>
 - <u>Glass</u>
 - Ceramics
 - Concrete
 - <u>Metals</u>
 - <u>Composites</u>
 - <u>Membranes</u>
 - <u>Textiles</u>
 - <u>Cardboard</u>



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Introduction to mater

The physical properties of materials

The mechanical properties of materials

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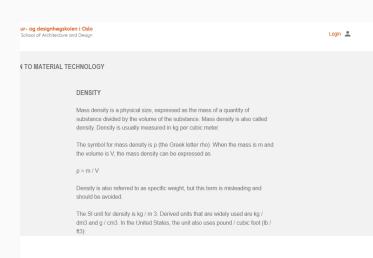
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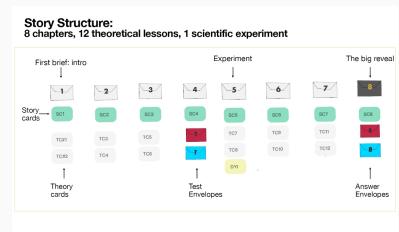
Text

The good old way of receiving the subject material.



Illustration

Illustration is a visually based way of receiving the subject material.





Interactive

Interactive learning means using games or interactive courses. There are som physical games as well that can be lent out at the library.

Demo / Example

This mode focus on 'reality' and presents use cases and examples form practical use. The subject matter put in a context that is relevant for you.

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There are different preferences when it comes to learning.

- How do you want to learn today? It's up to you.
- Don't worry you can change it any time you want.

Video

Learn through video. Watch a prerecorded lecture or an experiment.

Audio

The subject material is read aloud for you.





Physical

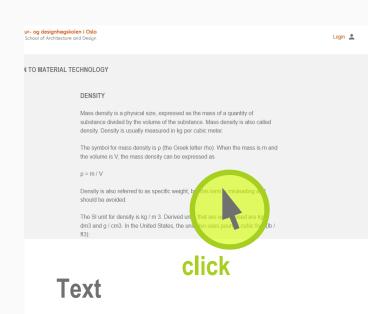
This mode takes learning out of the digital domain. There are different kits that can be lent from the library.

Summary

You want it short and straight to the point? This mode gives it to you.



MODE

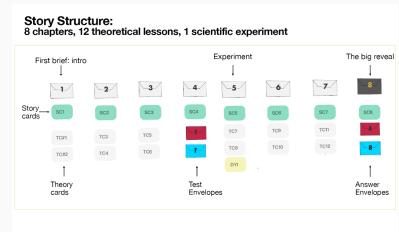


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Illustration

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Interactive

Example **Physical**

Summary



Dictionary Forum

Mass density is a physical size, expressed as the mass of a quantity of substance divided by the volume of the substance. Mass density is also called density. Density is usually measured in kg per cubic meter.

The symbol for mass density is ρ (the Greek letter rho). When the mass is m and the volume is V, the mass density can be expressed as

 $\rho = m / V$

should be avoided.

The SI unit for density is kg / m 3. Derived units that are widely used are kg / dm3 and g / cm3. In the United States, the unit also uses pound / cubic foot (lb / ft3):

1 lb / ft3 = 16.019 kg / m3

The definition of density assumes that the substance is homogeneous. This is not always the case; for example, the atmosphere has a higher density along the ground than higher up. Calculated mass density then becomes an expression of average mass density in the area being measured.

Relative bulk density Relative mass density is often defined as the ratio of mass density to two substances, and this unit is thus dimensionless.

In the case of liquids, specific densities are often stated in relation to water, while air is often used as a reference in relation to gases.

Variation in mass density



Density is also referred to as specific weight, but this term is misleading and

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Physical

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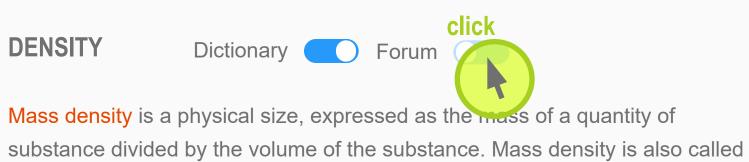
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Variation in mass density





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Variation in mass density The density of a substance varies with temperature and pressure. For solids and -

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Physical

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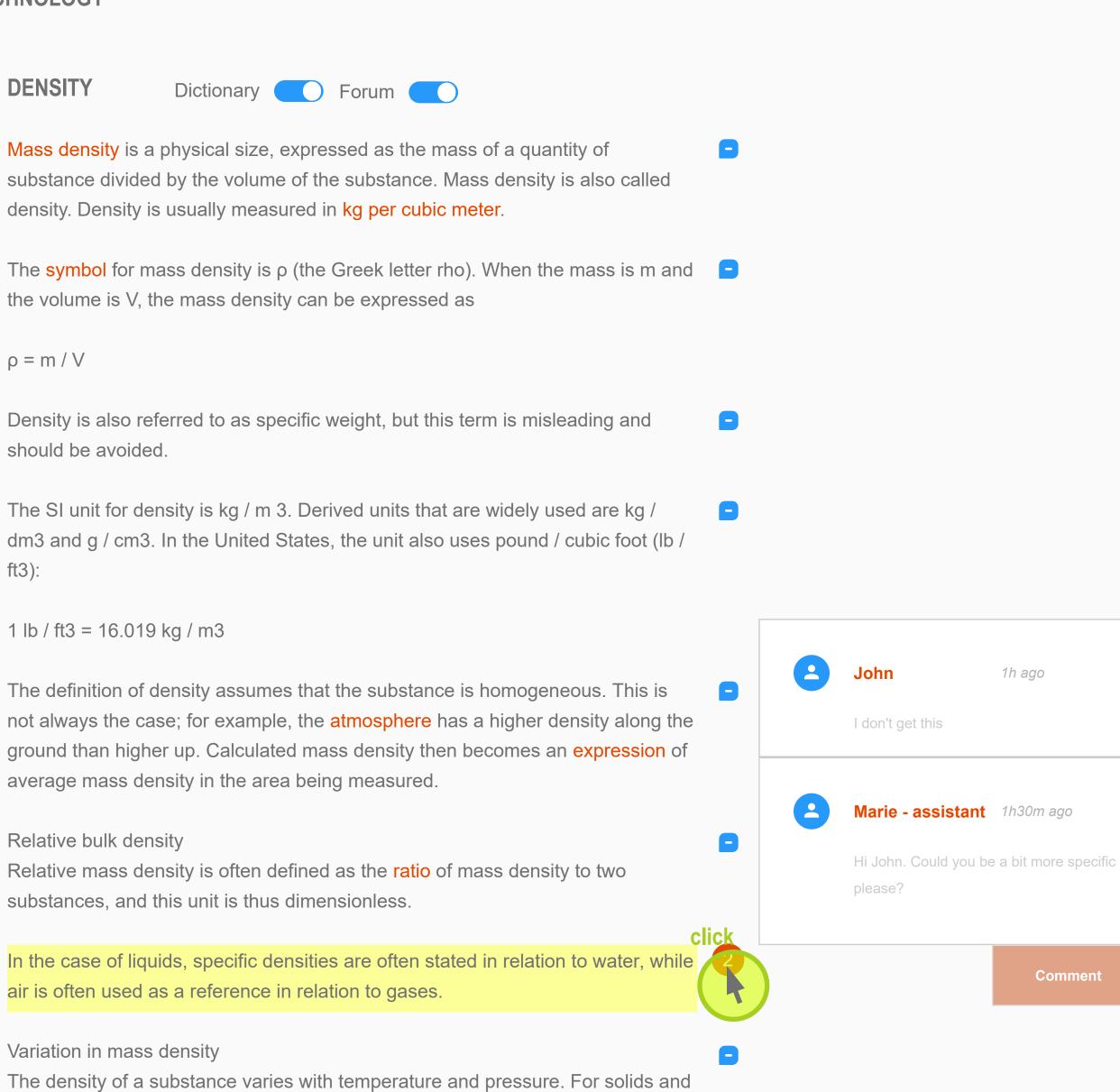
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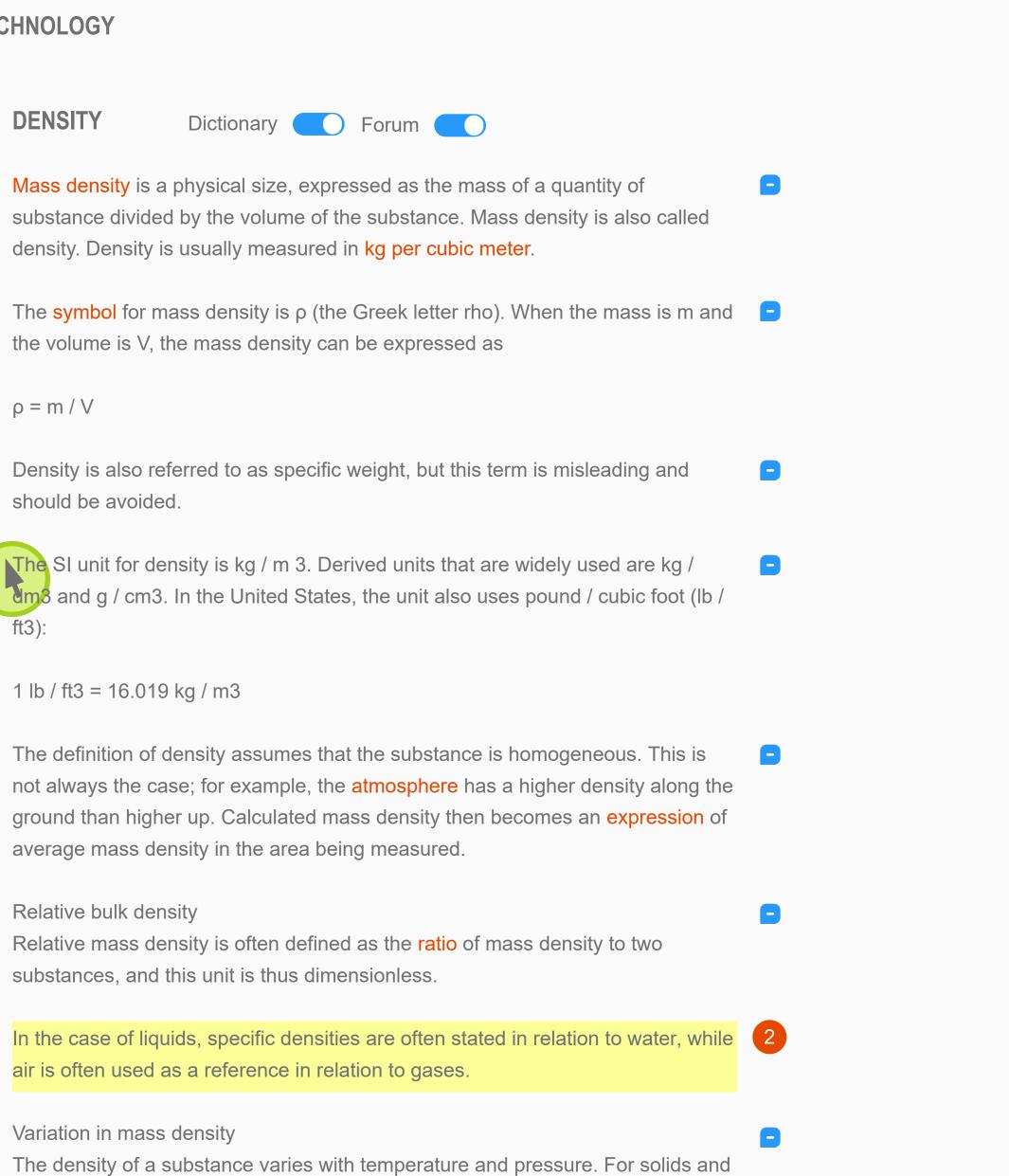
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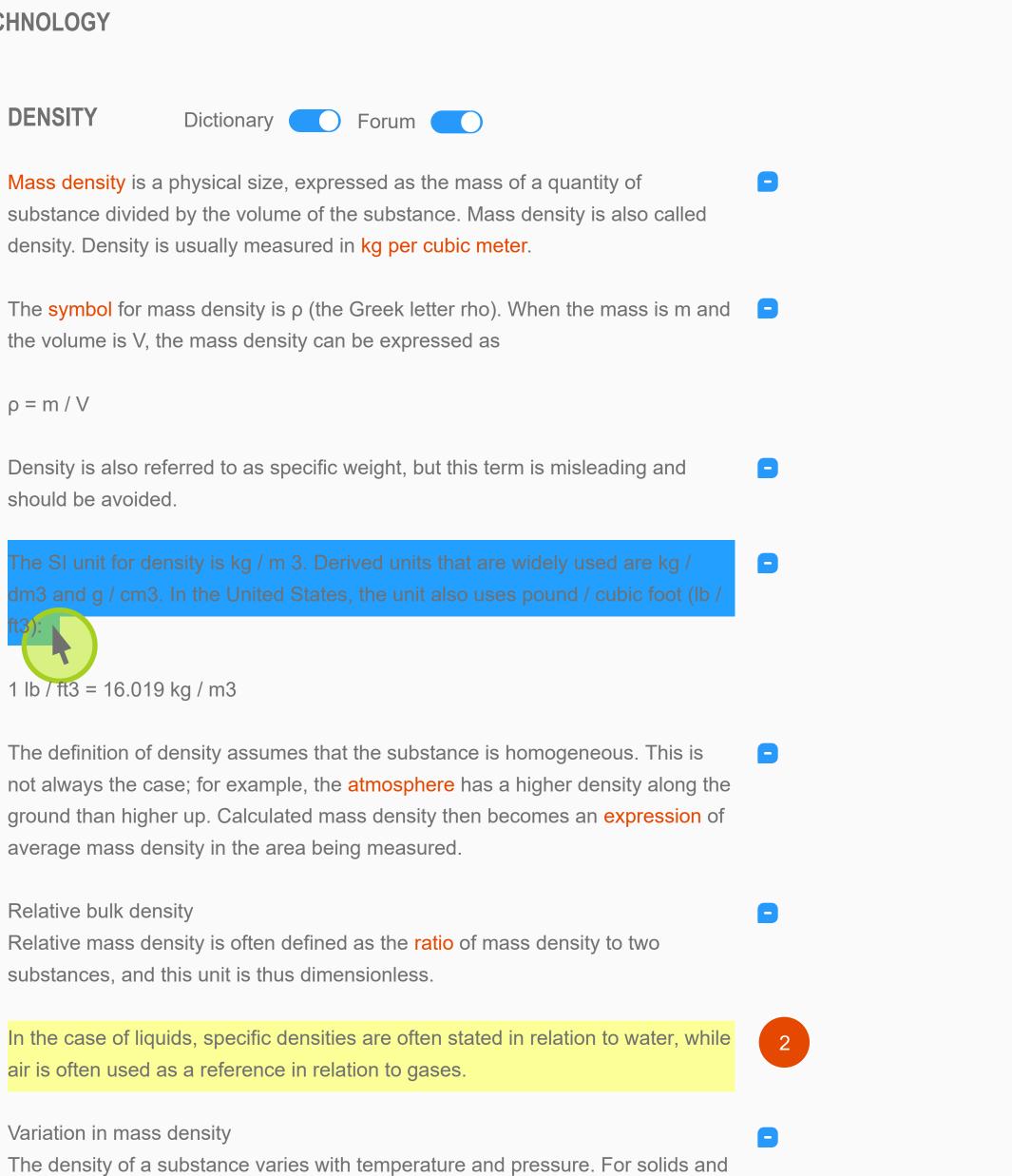
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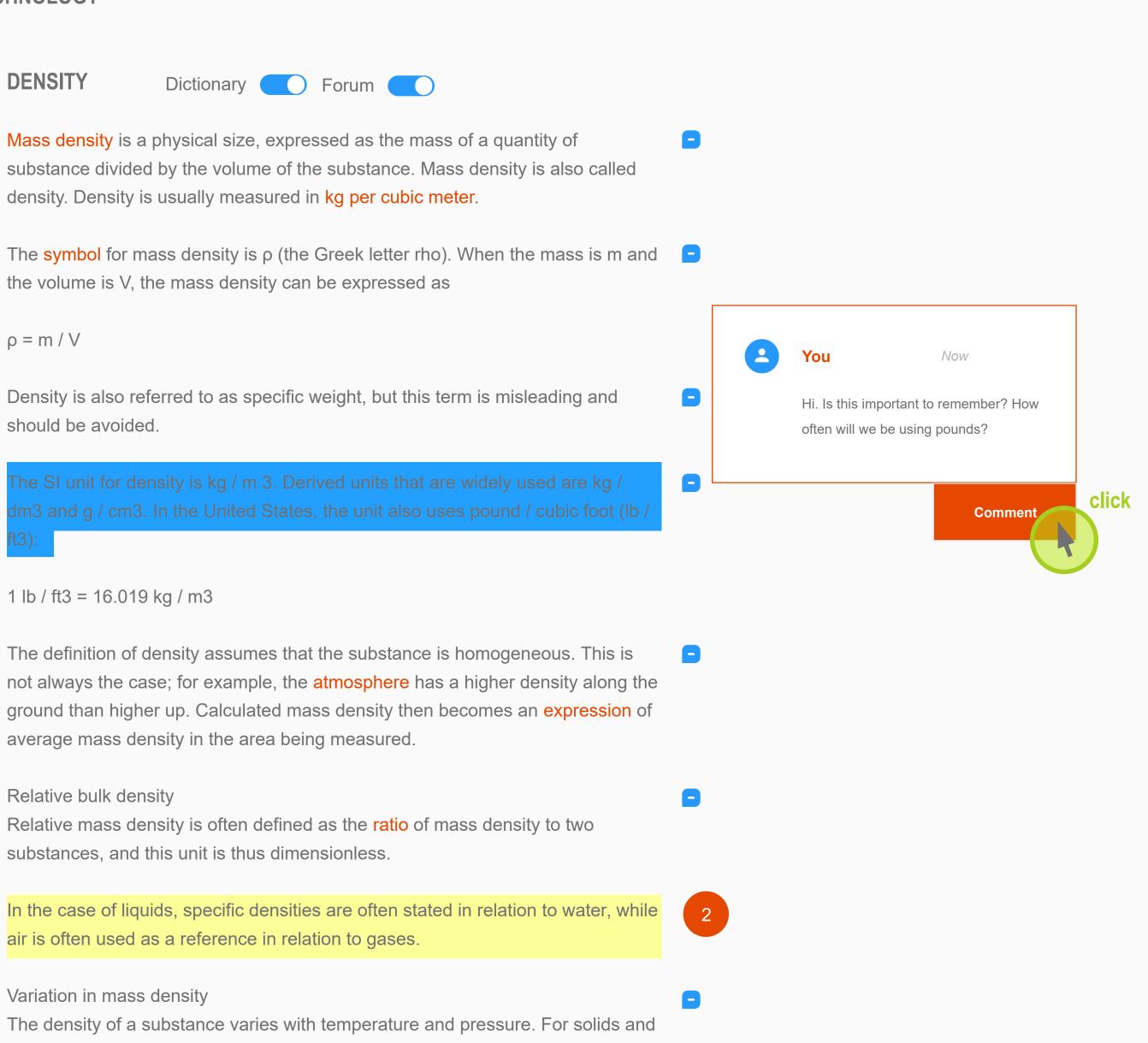
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