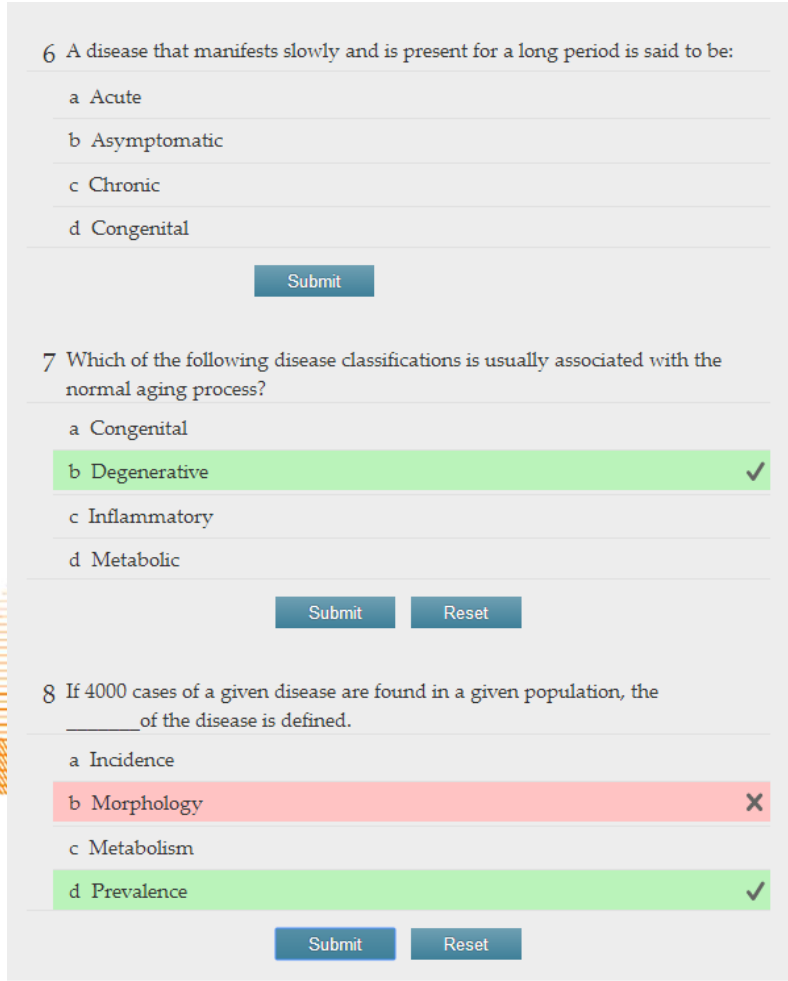
Professional, Scholarly and Enterprise Publishing: Moving Beyond the PDF

How publishers and companies embrace the latest generation ebook format (epub3) to improve mobility, accessibility and interactivity.



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About Elsevier

Elsevier is a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals:

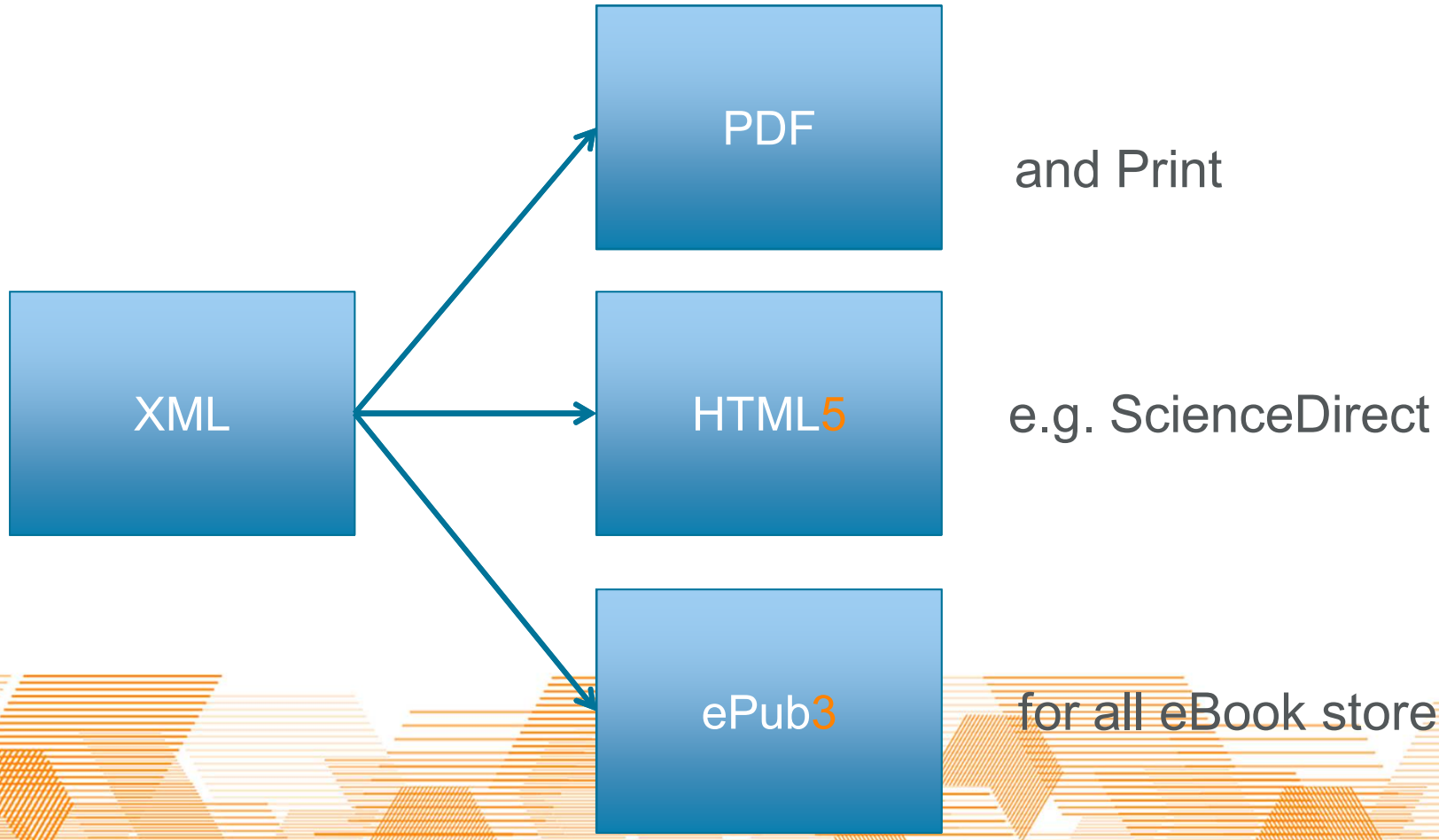
- digital solutions: e.g. ScienceDirect, Scopus, ClinicalKey,
- publishes nearly 2,200 journals, including The Lancet and Cell, and over 25,000 book titles.

For the last 3 years, we have published all our book titles in epub and mobi alongside pdf.

15% of our revenue is eBook sales as sold on stores like Amazon, B&N, Kobo etc.

Our end-to-end content workflow is XML

Multiplatform + Standardization



We only use standards and make use of one content source i.e. XML

From ePub2 to ePub3

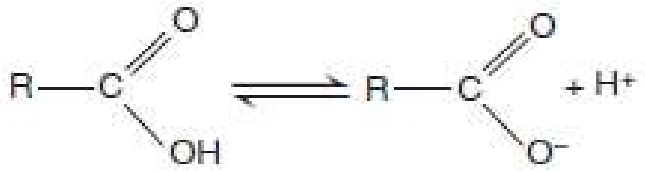
Since March this year, Elsevier moved over to the ePub3 format (from epub2) for all front list titles.
Now we can cater for some basic needs:

- Better navigation, accessibility and mathml support *(this first step is ePub3 Basic)*

And some more advanced needs (ePub3 Enhanced):

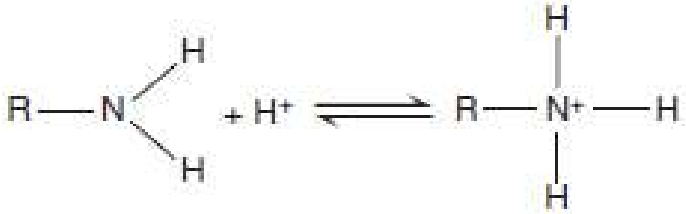
- Interactive elements like video, quizzes, tables

carboxyl group, which is the distinguishing feature of the organic acids:



Carboxylic acid (protonated form) | Carboxylate anion (deprotonated form)

The protonation-deprotonation reaction is reversible; therefore
Brønsted
Amino
ecules. I
ammonium salt is the conjugate acid:



Amine (deprotonated form) | Ammonium salt (protonated form)

Carboxyl groups, phosphate esters, and **phosphodiesters** ar
Th
at
in
most important basic groups. They are mainly protonated and positively charged at pH 7.

IONIZABLE GROUPS ARE CHARACTERIZED BY THEIR pK VALUES

The equilibrium of a protonation-deprotonation reac-

This equation is called the **Henderson-Hasselbalch equation,** and *the pK value is defined as the negative logarithm of the dissociation constant.* The pK value is a property of an ionizable group. If a molecule has more than one ionizable group, then it has more than one pK value.

In the Henderson-Hasselbalch equation, pK is a constant, whereas [R—COOH]/[R—COO⁻] changes with the pH. When the pH value equals the pK value, log [R—COOH]/[R—COO⁻] must equal zero. Therefore [R—COOH]/[R—COO⁻] must equal one: *The pK* *ich the ionizable* es below their pK izable groups are mainly protonated. At pH values above their pK (i.e., low [H⁺] or high alkalinity), ionizable groups are mainly deprotonated (*Table 1.4*)

We have complex titles!

In layout, navigation and many elements like figures, tables and now also interactivities.

CLINICAL EXAMPLE 1.1: Acidosis

Blood and extracellular fluids have to provide a constant environment for our cells. Physiological levels of inorganic ions have to be maintained, and maintenance of a constant extracellular pH of 7.3 to 7.4 is required. Deviations from the normal pH by as little as 0.5 pH units can be fatal. An abnormally high pH of blood and ly
es
ed
by metabolic derangements leading to excessive formation of acidic products from nonacidic substrates. For example,

Glucose → Lactic acid
Triglyceride (fat) → β-Hydroxybutyric acid

Some toxins are converted into acids in the human body, causing acidosis. For example,

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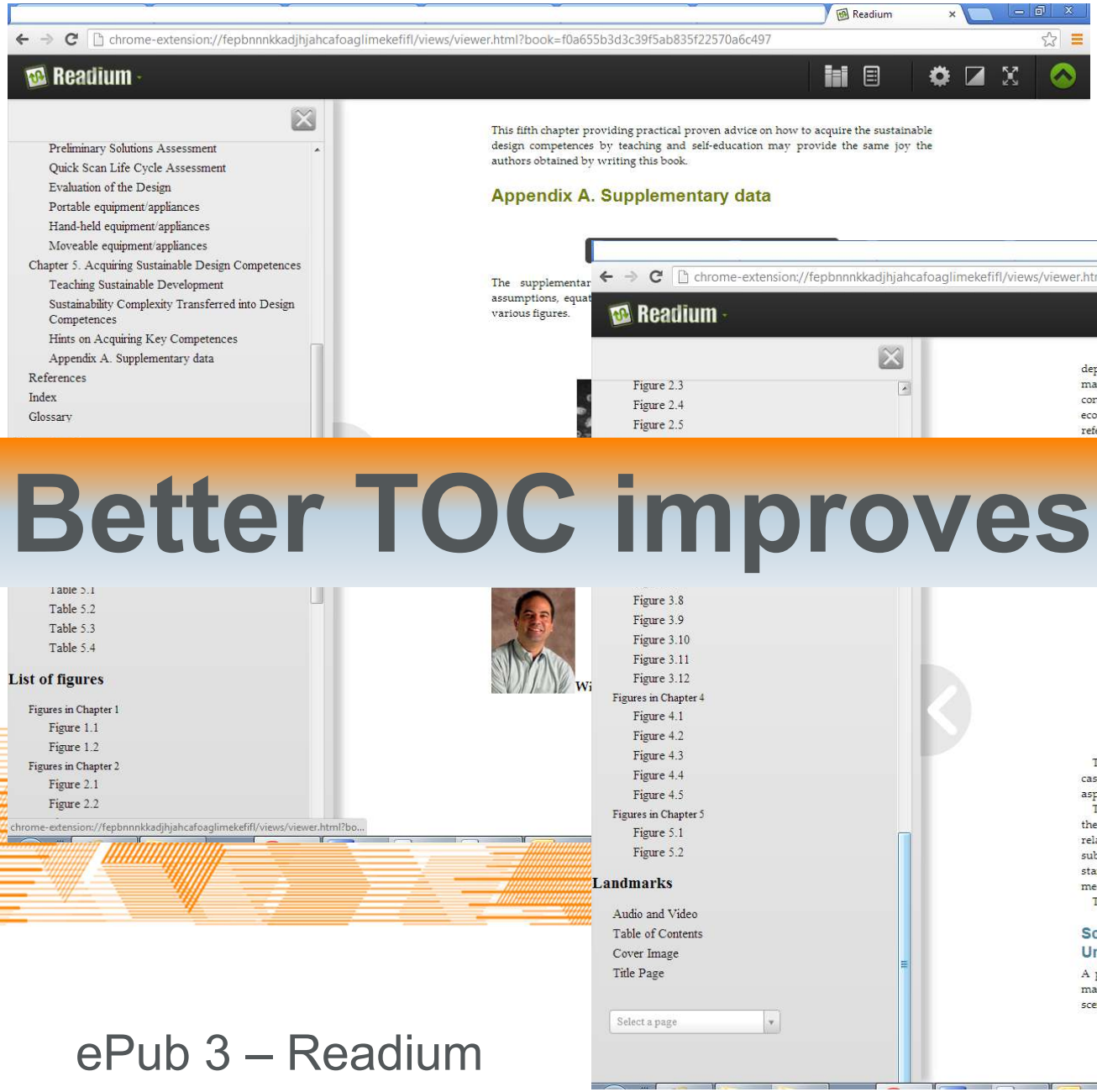

Better TOC improves navigation

ePub 3 – Readium

Reference citations

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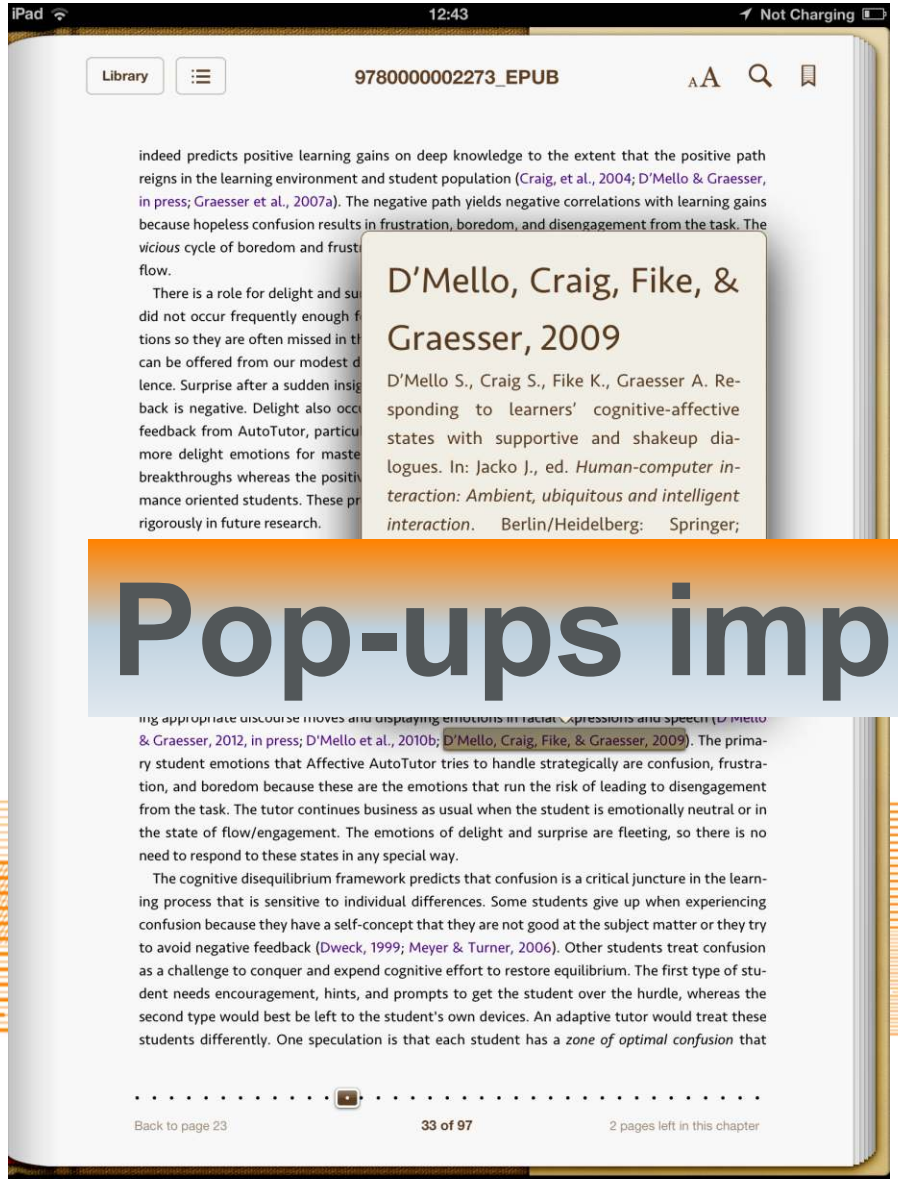

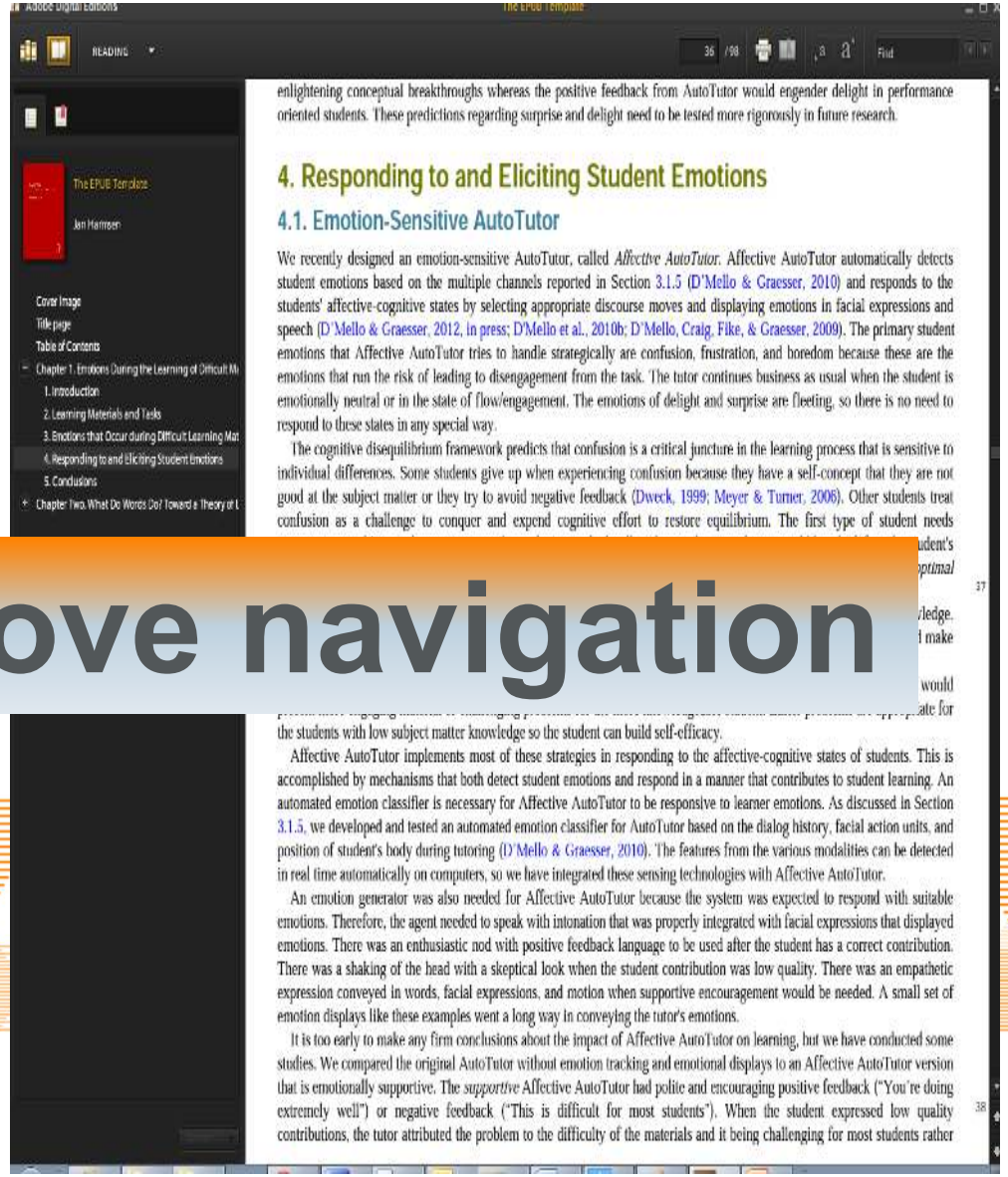

Pop-ups improve navigation

ePub 3 – iBooks on iPad

ePub 2 – ADE

Interactive Table

BIOGEOCHEMISTRY

ELSEVIER

Table 3.6

Tropospheric Ozone Budget

Reset Table | Show/Hide Columns

Search:

Source or sink	Pre-industrial	Present	Human impact
Stratospheric injection	+696	+696	0
Tropospheric production (i.e., dirty atmosphere reactions)	+199	+686	+487
Tropospheric sink (i.e., clean atmosphere reactions)	−435	−558	−123
Dry deposition	−459	−825	−366

Showing 1 to 4 of 4 entries

Note: All valu

Source: From

Better table navigation

Quiz / assessment

Submit

6 A disease that manifests slowly and is present for a long period is said to be:

a Acute
b Asymptomatic
c Chronic
d Congenital

Submit

7 Which of the following disease classifications is usually associated with the normal aging process?

a Congenital
b Degenerative ✓
c Inflammatory
d Metabolic

Submit Reset

8 If 4000 cases of a given disease are found in a given population, the _____of the disease is defined.

a Incidence
b Morphology ✗
c Metabolism
d Prevalence ✓

Submit Reset

9 The relative ease with which an organism can overcome normal bodily defenses refers to its:

a Infection
b Necrosis
c Pestilence
d Virulence

Submit

10 A neoplastic growth is evaluated to determine its degree of histologic differentiation. This is termed:

a Grading
b Metastasis
c Morphology
d Staging

Submit

11 Generalized increase in cell size refers to:

a Hypertrophy
b Atrophy
c Metaplasia
d Hyperplasia

Submit

12 Which of the following terms refers to abnormal changes of mature cells?

Thank you!

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