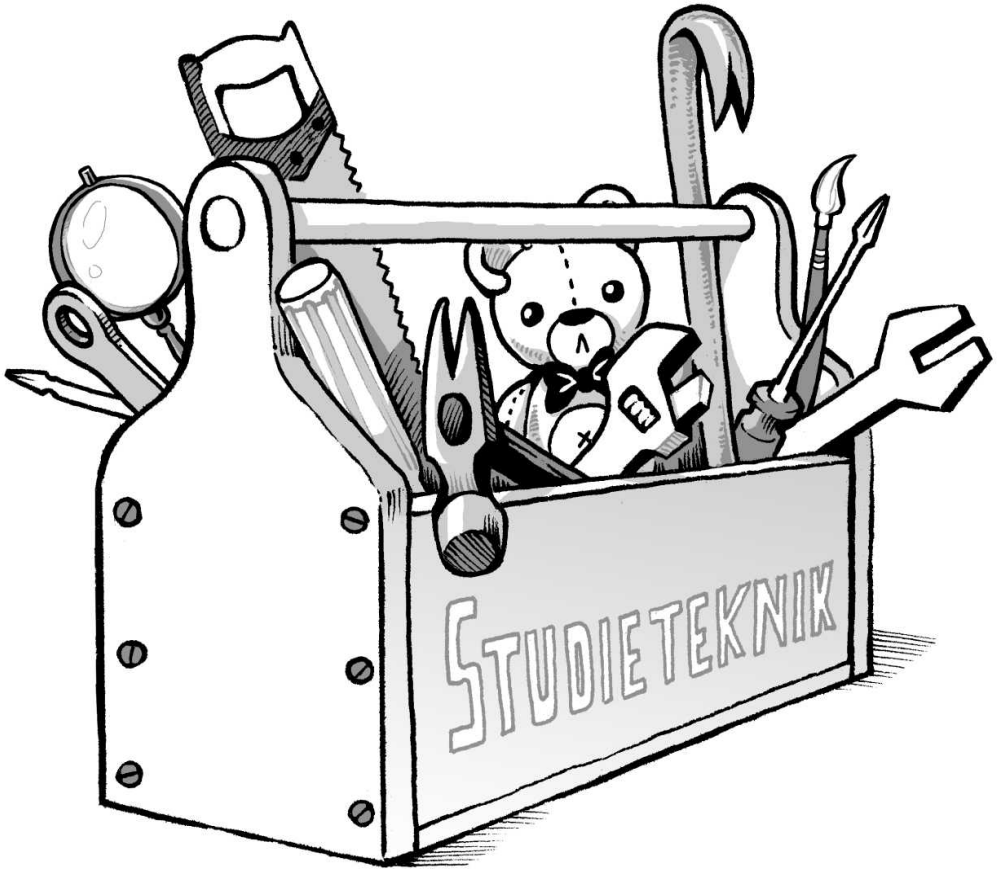
AM…
BCDEK…
FGJL…
HI…

Fyll i resten av alfabetet!

Plugga smartare

Studieteknik för LTH



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BrainGain Education AB

Civilingenjör och humanist

Chalmers & Göteborgs universitet

Föreläsare, digitalteknik & programmering

Utvecklare, embedded systems

Plugga smart och lär dig mer!

Plugga smartare.

Hjälp ditt barn att plugga smart

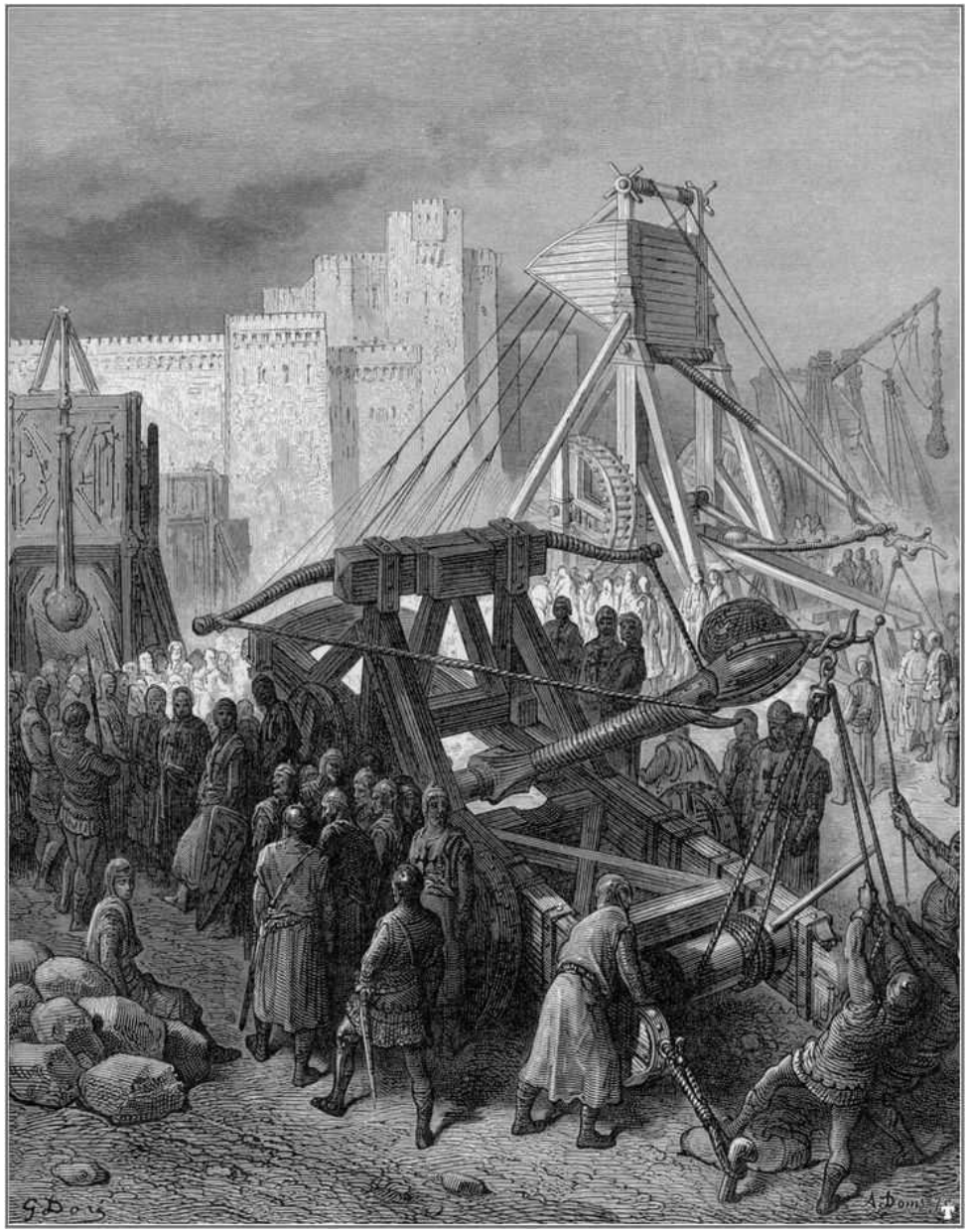
Chairman, Mensa International

Fru & 1 dotter

Finns där man köper böcker.

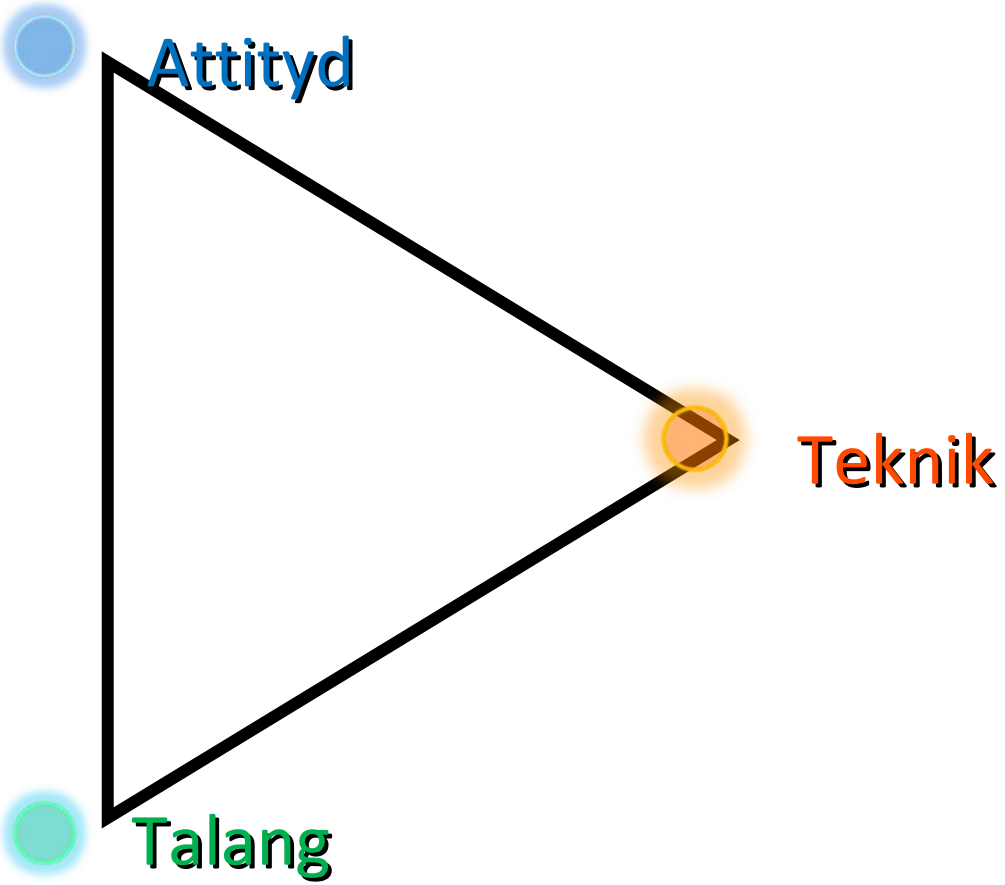
Finns där man köper böcker.

INGENJÖR
Engineer
Ingenium
Genie




KTH
VETENSKAP
OCH KONST

Att lyckas med studier



Rutiner > Motivation

Teknik > Talang

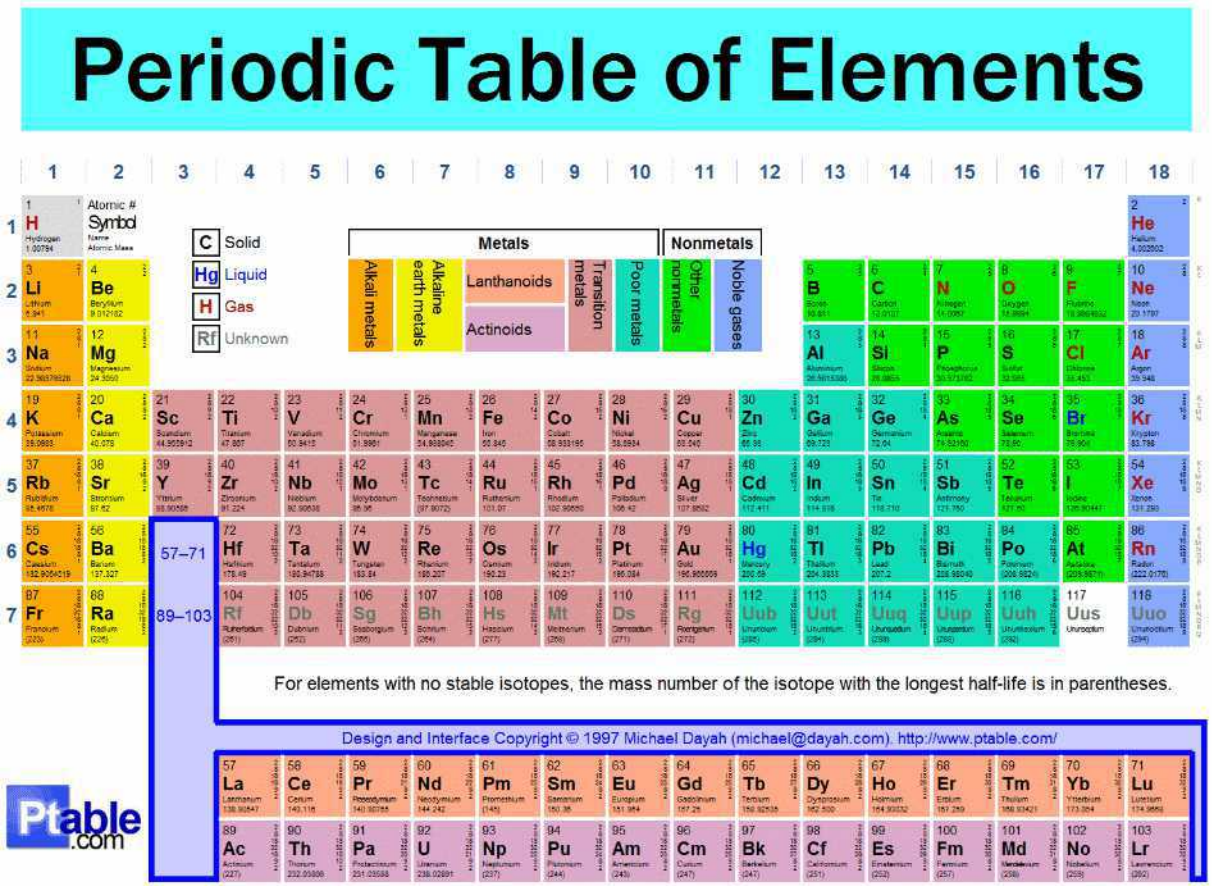
Verktyg > Råstyrka

Inlärningsstrategi

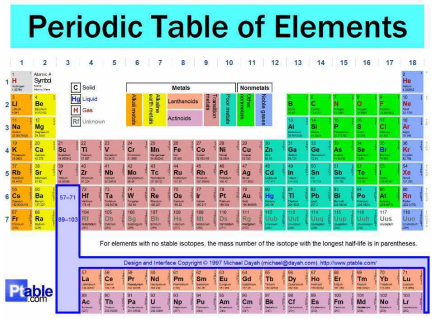
PROCRASTINATION

HARD WORK OFTEN PAYS OFF AFTER TIME,
BUT LAZINESS ALWAYS PAYS OFF NOW.

Kunskap som fakta



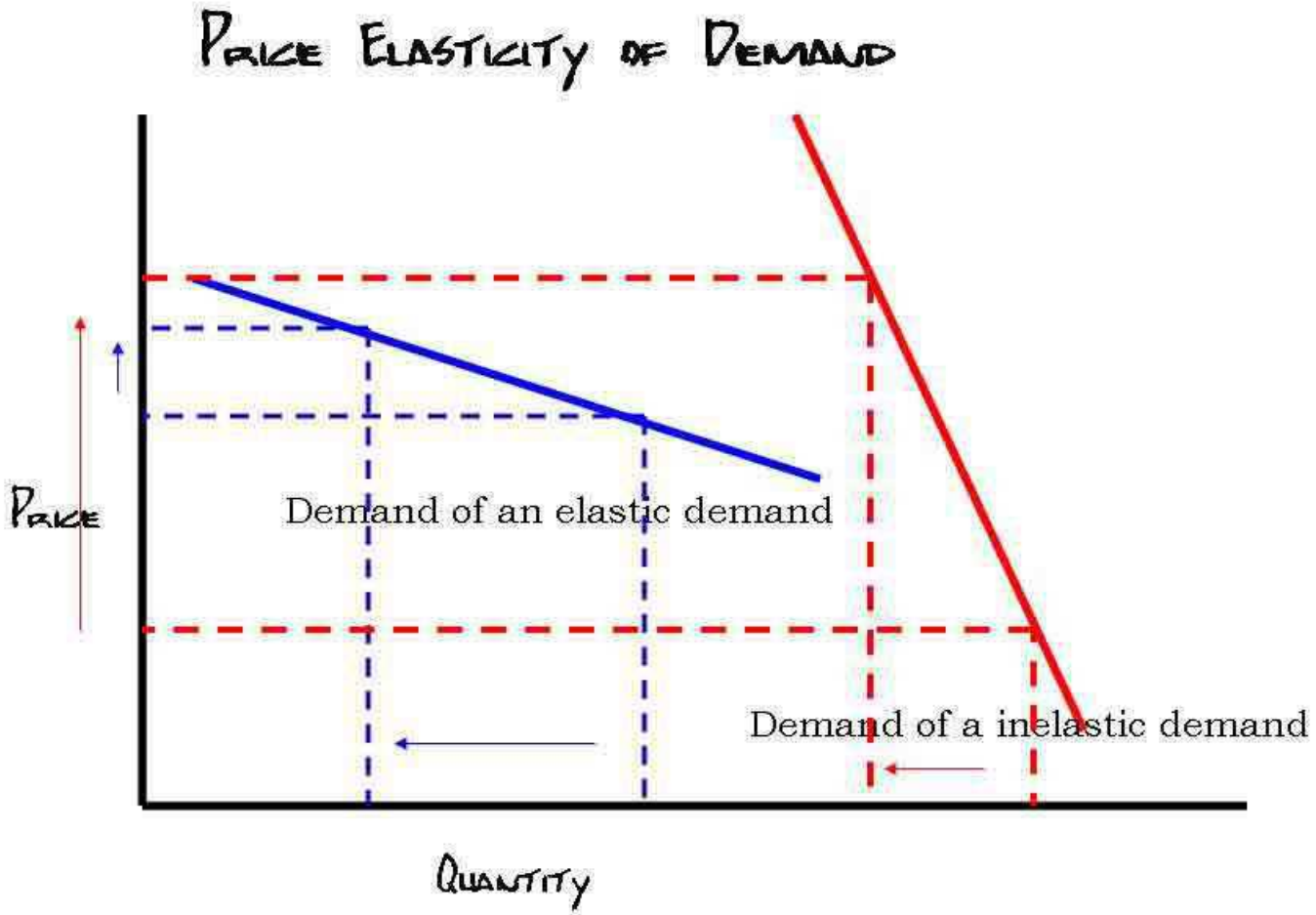
Kunskap som fakta



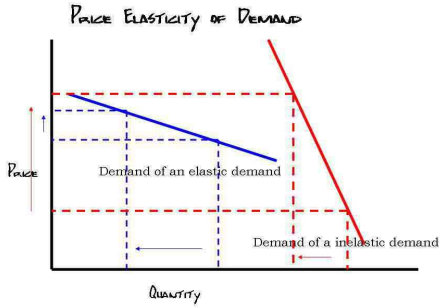
Tips: Minnestekniker

Hitta eller skapa en koppling till något du redan känner till. Tänk uttryckligen, i ord eller bilder, på denna koppling för att skapa ett nytt minne. Konkretisera och associera.

Kunskap som förståelse



Kunskap som förståelse

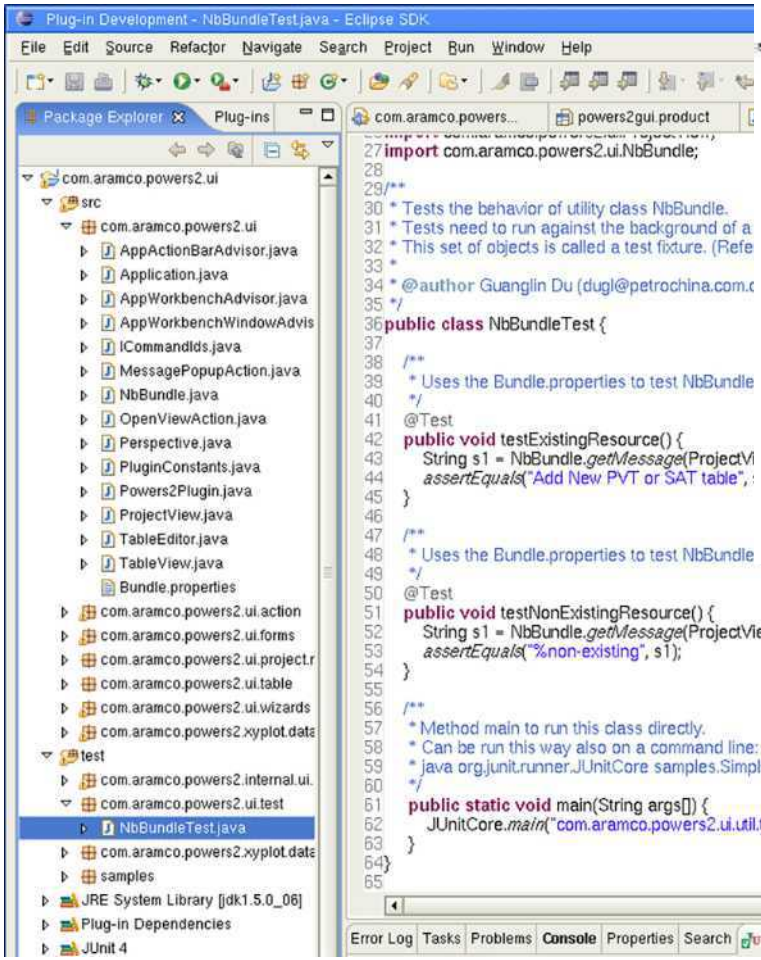


Tips: Förklara i egna ord

Läs, lyssna och fråga. Uttryck det du tycker dig förstå i egna ord, gärna för en annan person.

Abstrahera och exemplifiera.

Kunskap som färdighet



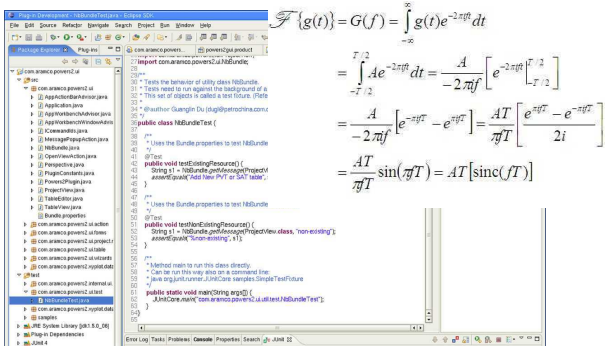
$$\mathcal{F}\{g(t)\} = G(f) = \int_{-\infty}^{\infty} g(t)e^{-2\pi ift}\,dt$$

$$= \int_{-T/2}^{T/2} Ae^{-2\pi ift}\,dt = \frac{A}{-2\pi if}\left[e^{-2\pi ift}\right]_{-T/2}^{T/2}$$

$$= \frac{A}{-2\pi if}\left[e^{-\pi ifT} - e^{\pi ifT}\right] = \frac{AT}{\pi fT}\left[\frac{e^{\pi ifT} - e^{-\pi ifT}}{2i}\right]$$

$$= \frac{AT}{\pi fT}\sin(\pi fT) = AT\left[\mathrm{sinc}(fT)\right]$$

Kunskap som färdighet



$$\mathcal{F}\{g(t)\} = G(f) = \int_{-\infty}^{\infty} g(t)e^{-2\pi ift}\,dt$$

$$= \int_{-T/2}^{T/2} Ae^{-2\pi ift}\,dt = \frac{A}{-2\pi if}\left[e^{-2\pi ift}\right]_{-T/2}^{T/2}$$

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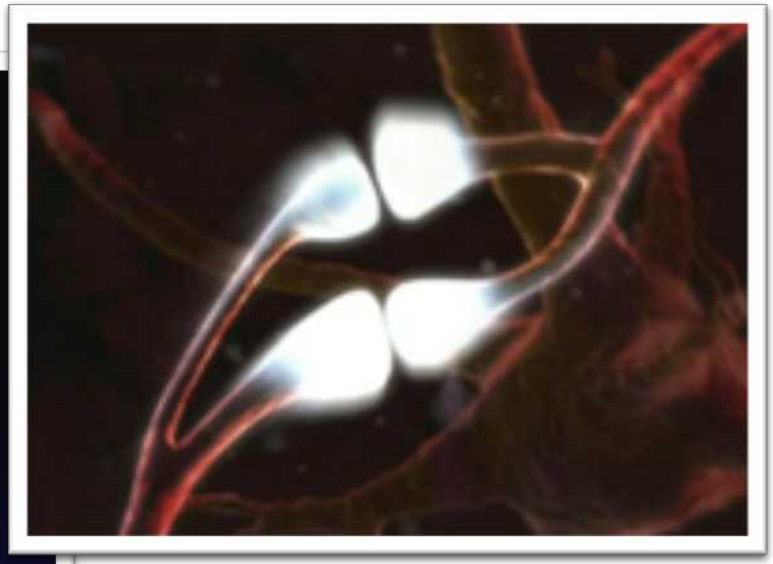
$$= \frac{AT}{\pi fT}\sin(\pi fT) = AT\left[\mathrm{sinc}(fT)\right]$$

Tips: Återskapa och experimentera

Sök färdiga exempel i litteraturen och från lärare. Återskapa dessa för att lära dig grunden. Gör sedan övningar med *lämplig svårighetsgrad* – den punkt där det *går* att lösa uppgiften, men inte utan ansträngning.

Lärandets biologi



Inlärningsstrategi

Före

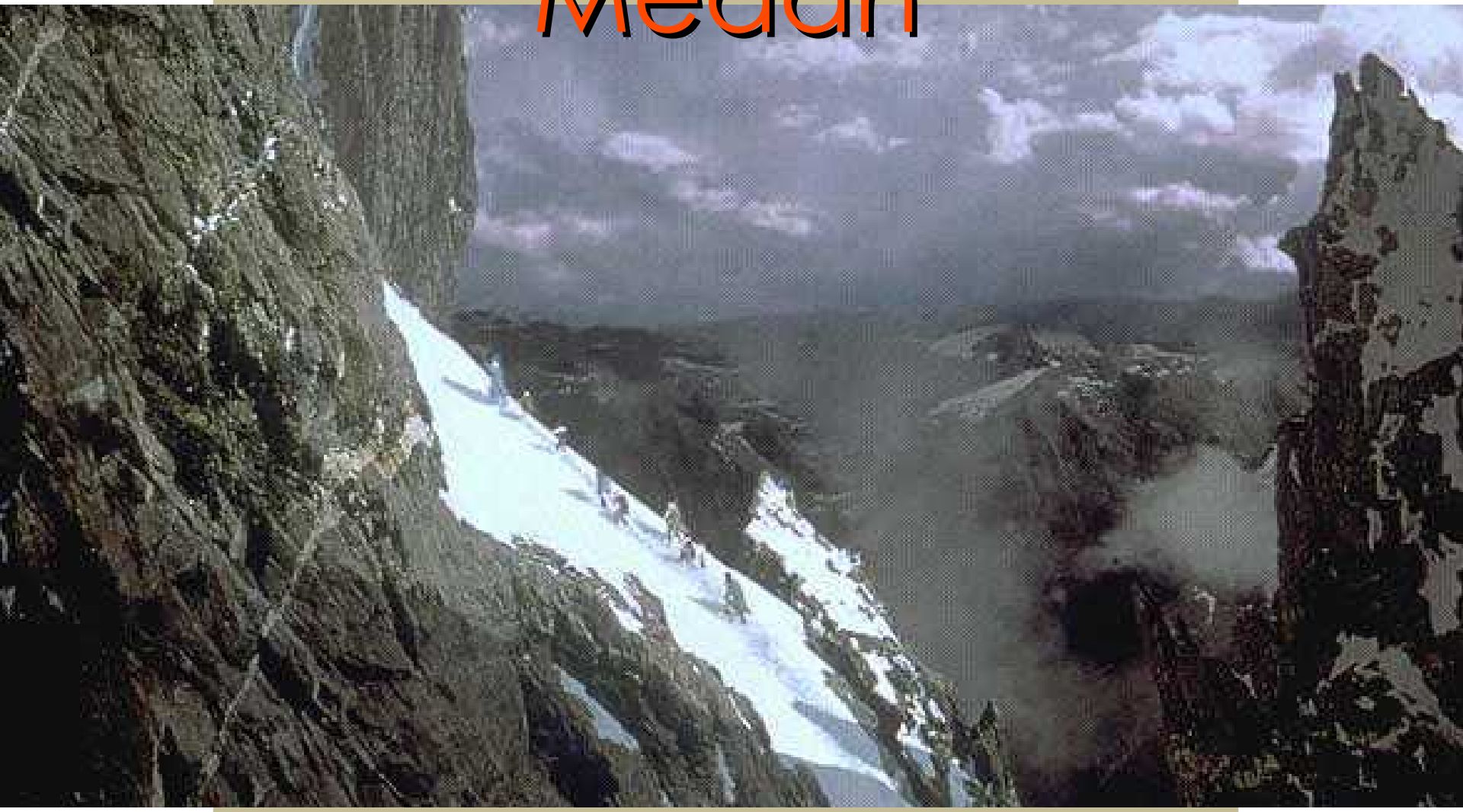
Före

Överblick
”Hur ser kursen ut?”

Framförhållning
”Vad kommer härnäst?”

Planering
”När gör jag vad?”

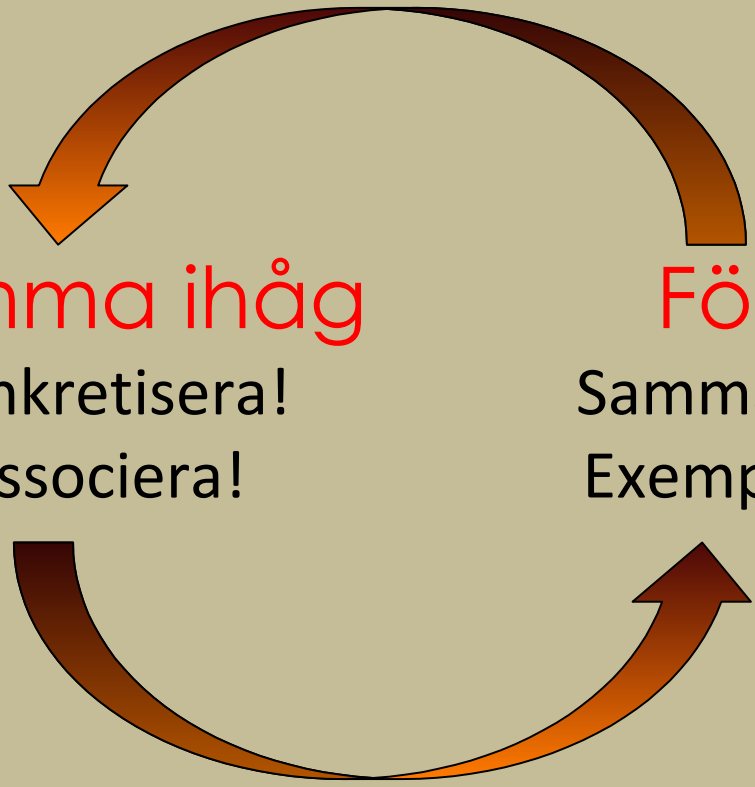
Medan



Medan

Studiepass

Många, korta och avgränsade



Komma ihåg

Konkretisera!

Associera!

Förstå

Sammanfatta!

Exemplifiera!

Efter

Efter

Repetera rätt

Förhör dig själv
Tiominutersregeln
Studiedagbok!

STUDIEDAGBOK + TRE GEM

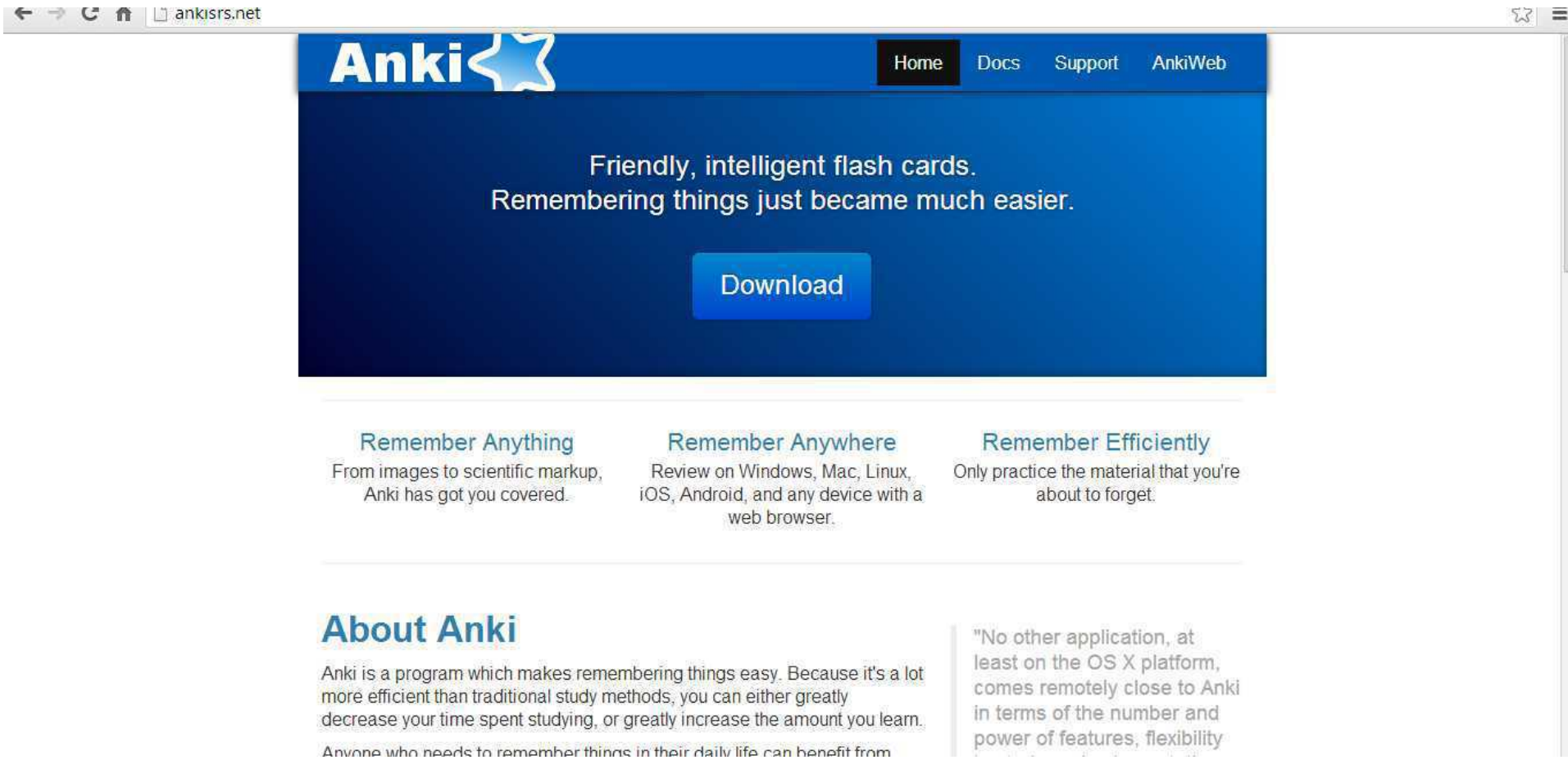
IGÅR

1 VECKA SEDAN

1 MÅNAD SEDAN

1. Vad var det viktigaste du lärde dig idag? Skriv ner det.
2. Slå upp varje sida med ett gem, och förhör dig själv.
3. Flytta fram varje gem en sida.

https://apps.ankiweb.net/



http://remnote.io

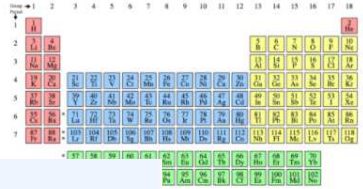
RemNote

All notes
Queue 1 120
Edit Later

DOCUMENTS
Research Papers
Reading List
Classes
Algorithms and Computa...
Lecture 1 - Big-O Notation
Lecture 2 - Sorting Algorithms
Biology
Lecture 1 - Biochemistry
Machine Learning

Lecture 1 - Biochemistry

- **Bonds**
  - **Covalent Chemical Bond** ↔ A Chemical Bond where a pair of Electrons are shared
    - *number of Electrons involved* → Generally 2, although sometime 1 or 3
  - **Ionic Chemical Bond** ↔ Chemical Bond formed when one Atom loses an Electron to another Atom, resulting in two Ions
  - **Periodic Table**



nts in the middle of the periodic table

me ↔ Their Valence Electrons are in the D-Orbital

→ Generally are useful for doing powerful things, but need to clea

289 FLASHCARDS

Forgetting Curve

- model of → Memory decay
- shows → exponential decay of memory after learning

⏰ Too soon	❌ Forgotten	😬 Recalled partially	😄 Recalled with effort	🔥 Immediately

Spaced Repetition

30 januari

31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

- **Ny portion + 10 min-regeln**
- **Igår**
- **För en vecka sen**
- **För en månad sen**

Spaced Repetition

31 januari

31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

- **Ny portion + 10 min-regeln**
- **Igår**
- **För en vecka sen**
- **För en månad sen**

Spaced Repetition

1 februari

31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

- **Ny portion + 10 min-regeln**
- **Igår**
- **För en vecka sen**
- **För en månad sen**

Spaced Repetition

2 februari

31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

- **Ny portion + 10 min-regeln**
- **Igår**
- **För en vecka sen**
- **För en månad sen**

Spaced Repetition

3 februari

31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

- **Ny portion + 10 min-regeln**
- **Igår**
- **För en vecka sen**
- **För en månad sen**

Så här läser du kurslitteraturen

1. Innehållsförteckningen, inledningar osv – spekulera!

2. ”Avväpna” boken – bläddra igenom den tills den känns bekant!

3. Djupläs. Korta sessioner: läs, sammanfatta, paus, repetera. Fortsätt till nästa avsnitt.

Contents

Lippincott Illustrated Reviews: Biochemistry
-Författare: Denise Ferrier

Amino Acids

1

I. OVERVIEW

Proteins are the most abundant and functionally diverse molecules in living systems. Virtually every life process depends on this class of macromolecules. For example, enzymes and polypeptide hormones direct and regulate metabolism in the body, whereas contractile proteins in muscle permit movement. In bone, the protein collagen forms a framework for the deposition of calcium phosphate crystals, acting like the steel cables in reinforced concrete. In the bloodstream, proteins, such as hemoglobin and albumin, transport molecules essential to life, whereas immunoglobulins fight infectious bacteria and viruses. In short, proteins display an incredible diversity of functions, yet all share the common structural feature of being linear polymers of amino acids. This chapter describes the properties of amino acids. Chapter 2 explores how these simple building blocks are joined to form proteins that have unique three-dimensional structures, making them capable of performing specific biologic functions.

II. STRUCTURE

Although >300 different amino acids have been described in nature, only 20 are commonly found as constituents of mammalian proteins. [Note: These standard amino acids are the only amino acids that are encoded by DNA, the genetic material in the cell (see p. 411). Nonstandard amino acids are produced by chemical modification of standard amino acids (see p. 45).] Each amino acid has a carboxyl group, a primary amino group (except for proline, which has a secondary amino group), and a distinctive side chain (R group) bonded to the α-carbon atom. At physiologic pH (~7.4), the carboxyl group is dissociated, forming the negatively charged carboxylate ion ($-COO^-$), and the amino group is protonated ($-NH_3^+$) (Fig. 1.1A). In proteins, almost all of these carboxyl and amino groups are combined through peptide linkage and, in general, are not available for chemical reaction except for hydrogen bond formation (Fig. 1.1B). Thus, it is the nature of

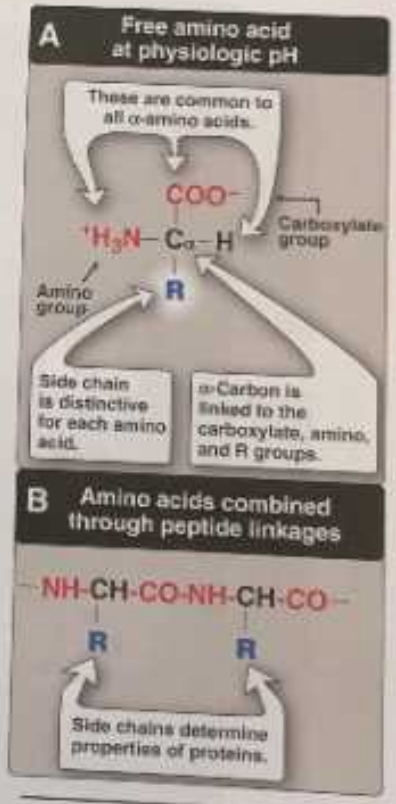


Figure 1.1
A, B. Structural features of amino acids.

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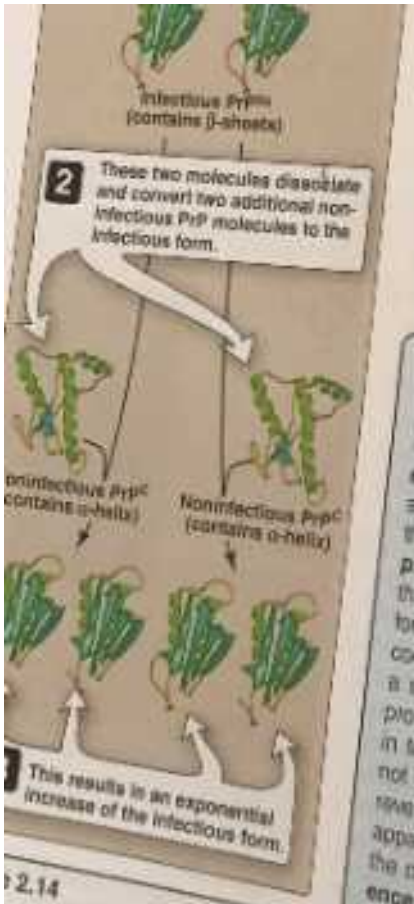
-Författare: Denise Ferrier



2.14

posed mechanism for ation of infectious prions. PrP rotein; PrP^C = prion protein PrP^{Sc} = prion protein scrapie.

in noninfectious PrP^C are replaced by β-sheets in the infectious (Fig. 2.14). This conformational difference is presumably what co relative resistance to proteolytic degradation of infectious prions permits them to be distinguished from the normal PrP^C in infec tissue. The infective agent is, thus, an altered version of a nor protein, which acts as a template for converting the normal pro to the pathogenic conformation. The TSE are invariably fatal, and treatment is currently available that can alter this outcome.

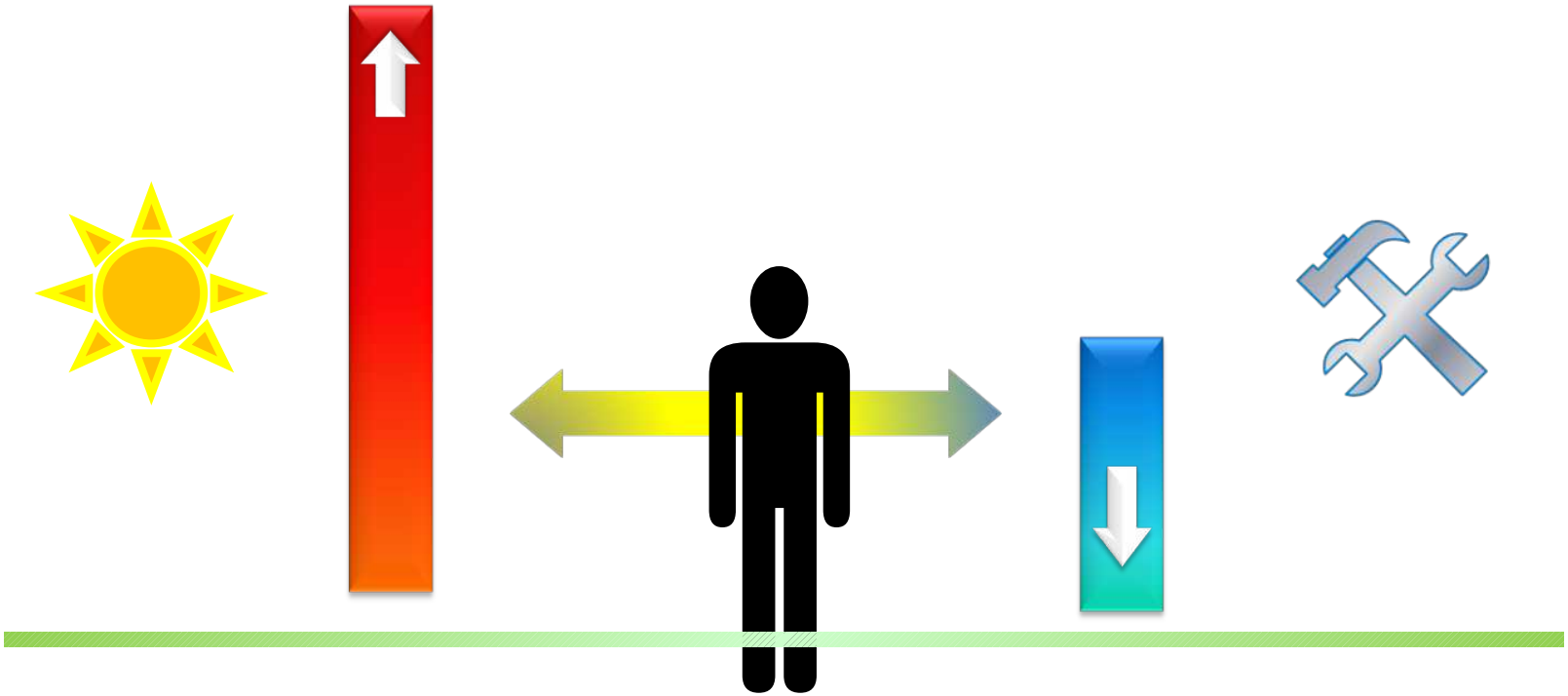
VII. CHAPTER SUMMARY

Central to understanding protein structure is the concept of the native **conformation** (Fig. 2.15), which is the functional, fully folded protein structure (for example, an active enzyme or structural protein). The unique three-dimensional structure of the native conformation is determined by its **primary structure**, that is, its amino acid sequence. Interactions between the amino acid side chains guide the folding of the polypeptide chain to form **secondary**, **tertiary**, and (sometimes) **quaternary** structures, which cooperate in stabilizing the native conformation of the protein. In addition, a specialized group of proteins named **chaperones** is required for the proper folding of many species of proteins. **Protein denaturation** results in the unfolding and disorganization of the protein's structure, which is not accompanied by hydrolysis of peptide bonds. Denaturation may be reversible or, more commonly, irreversible. Disease can occur when an apparently normal protein assumes a conformation that is cytotoxic, as is the case of **Alzheimer disease (AD)** and the **transmissible spongiform encephalopathies (TSE)**, including **Creutzfeldt-Jakob disease**. In AD, normal proteins, after abnormal chemical processing, take on a unique conformational state that leads to the formation of neurotoxic **amyloid β peptide (Aβ)** assemblies consisting of β-pleated sheets. In TSE, the infective agent is an altered version of a normal **prion protein** that acts as a template for converting normal protein to the pathogenic conformation.

Lippincott Illustrated Reviews: Biochemistry
-Författare: Denise Ferrier

PROKRASTINERING …

Trösklar



Intellektuellt

”Vad ska jag göra?”
”Hur då?”
Plan
Riktning

Praktiskt

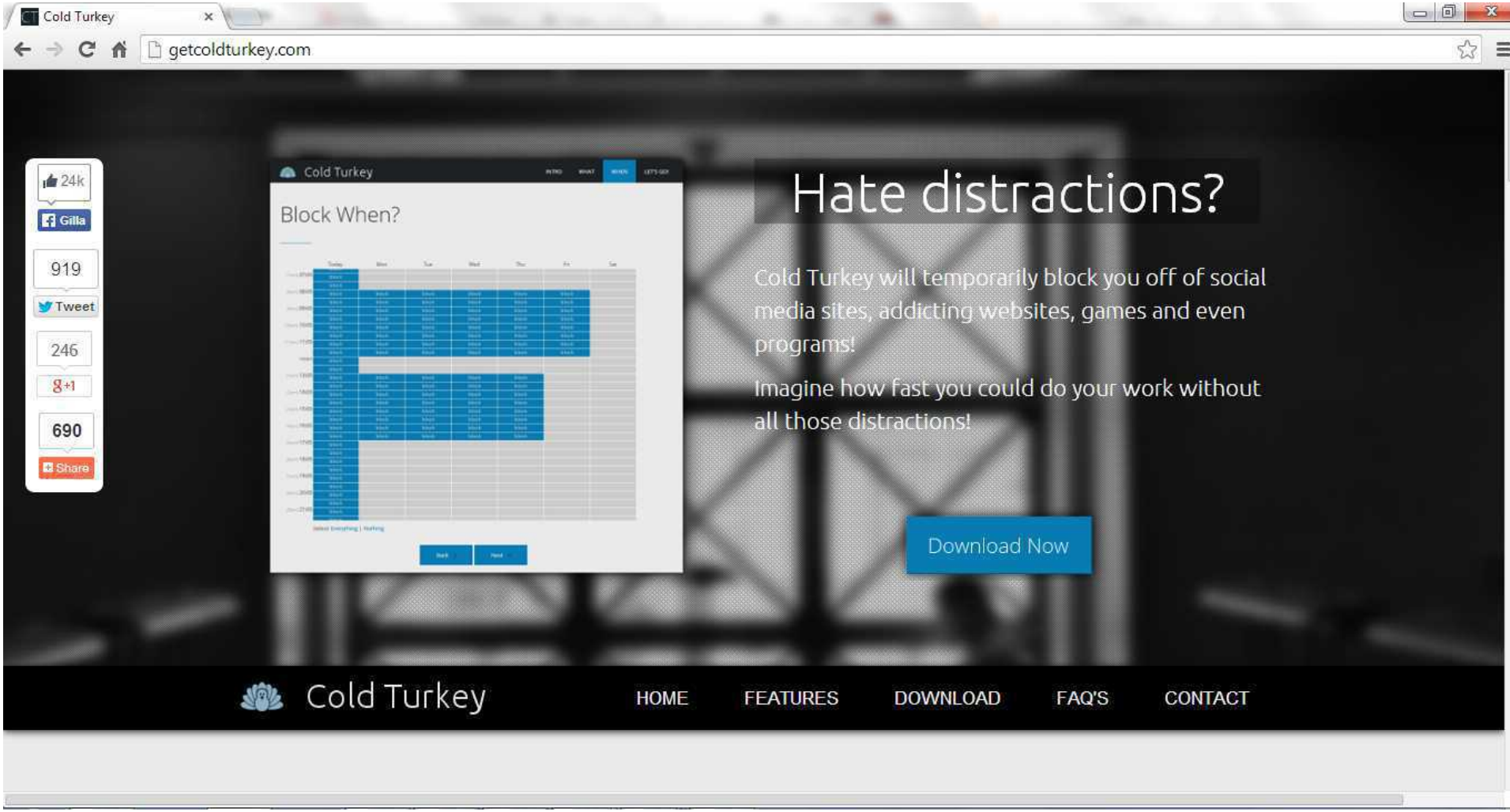
”Har jag vad jag behöver?”
”Var ska jag sitta?”
”Orkar jag?”
Vanor
Initiativ

Emotionellt

”Varför?”
”Hur får jag lust?”
Attityd
Motivation
Drömmar

	Sänk tröskeln för att starta	Höj tröskeln för att prokrastinera
Intellektuellt	Planera. Småbitar.	Träna fokus
Emotionellt	Belöningar. Gör det kul.	”Vad är meningen?” Studiekamrater.
Fysiskt	Plats. Ork. Verktyg.	Ta bort distraktioner.

http://getcoldturkey.com



När du kör fast:
Gör det som är *möjligt* att göra.

Ta det lugnt.

Det här kommer gå bra.