

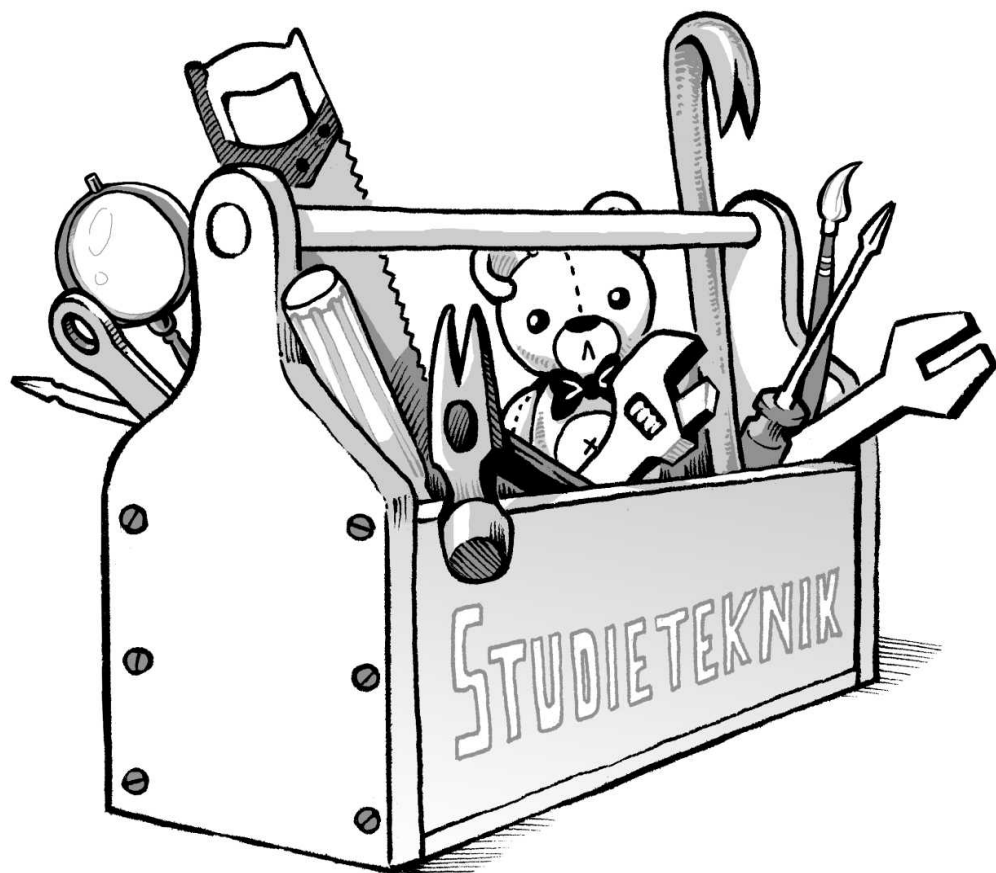
AM...
BCDEK...
FGJL...
HI...

Fyll i resten av alfabetet!

Plugga smartare

Studieteknik för LTH

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Björn Liljeqvist

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

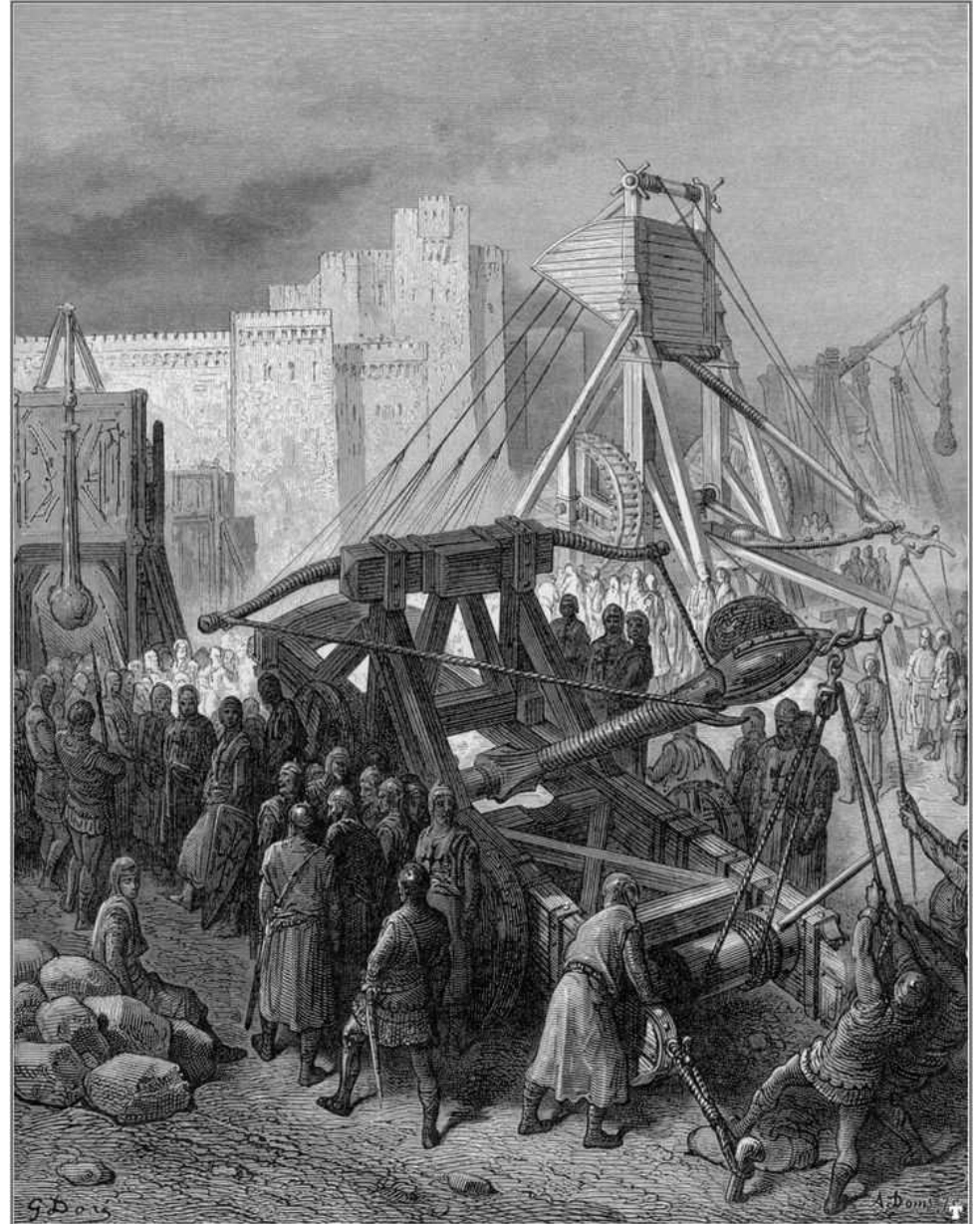
Finns där man köper böcker.



Finns där man köper böcker.

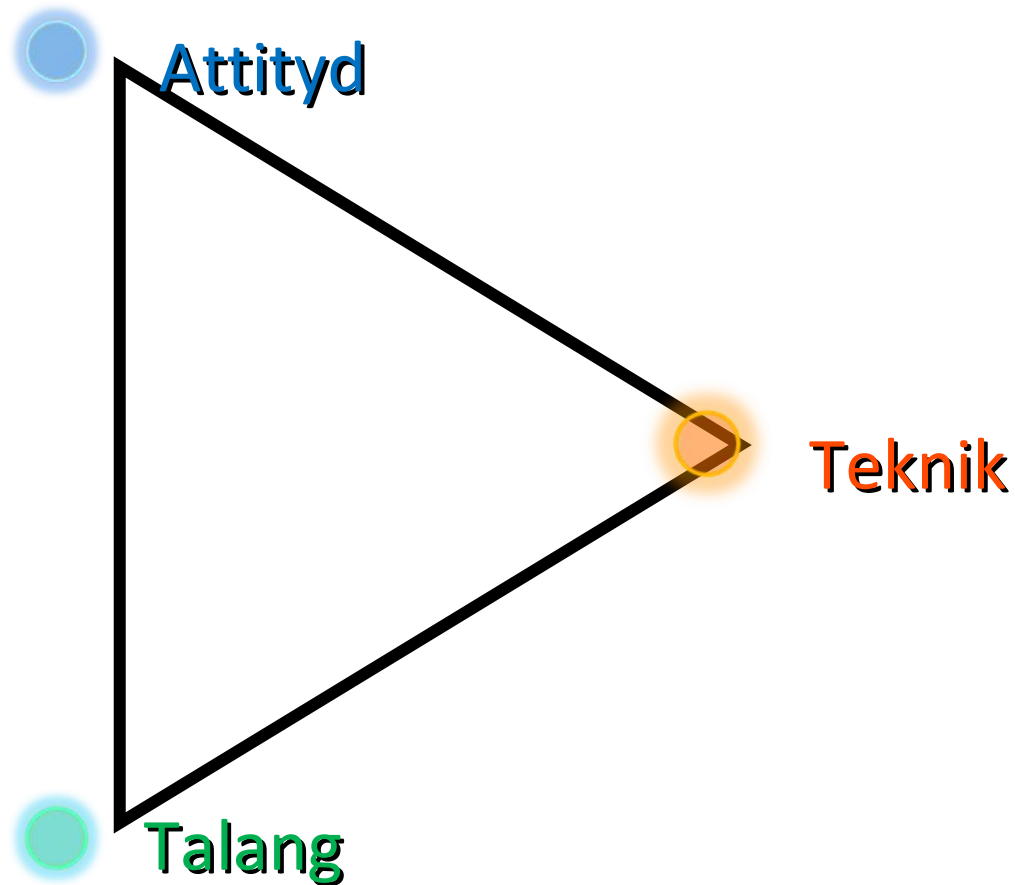


INGENJÖR
Engineer
Ingenium
Genie





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

Periodic Table of Elements

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																																																																						
1	H Hydrogen 1.00794	<table border="1"> <tr> <td>C Solid</td> <td colspan="10">Metals</td> <td colspan="7">Nonmetals</td> </tr> <tr> <td>Hg Liquid</td> <td>Ak Alkali metals</td> <td>Alm Alkaline earth metals</td> <td>Lan Lanthanoids</td> <td>Act Actinoids</td> <td>Tr Transition metals</td> <td>Pm Poor metals</td> <td>Om Other nonmetals</td> <td>Ng Noble gases</td> <td colspan="7"></td> </tr> <tr> <td>H Gas</td> <td colspan="17"></td> </tr> <tr> <td>Rf Unknown</td> <td colspan="17"></td> </tr> </table>																	C Solid	Metals										Nonmetals							Hg Liquid	Ak Alkali metals	Alm Alkaline earth metals	Lan Lanthanoids	Act Actinoids	Tr Transition metals	Pm Poor metals	Om Other nonmetals	Ng Noble gases								H Gas																		Rf Unknown																		2
C Solid	Metals										Nonmetals																																																																														
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3	Li Lithium 6.941	4	Be Beryllium 9.012182	5	B Boron 10.811	6	C Carbon 12.011	7	N Nitrogen 14.0064	8	O Oxygen 15.9994	9	F Fluorine 18.9984032	10	Ne Neon 20.1797																																																																										
11	Na Sodium 22.98976928	12	Mg Magnesium 24.3050	13	Al Aluminum 26.9815386	14	Si Silicon 28.0855	15	P Phosphorus 30.973762	16	S Sulfur 32.06	17	Cl Chlorine 35.453	18	Ar Argon 39.948																																																																										
19	K Potassium 39.0983	20	Ca Calcium 40.078	21	Sc Scandium 44.955912	22	Ti Titanium 47.88	23	V Vanadium 50.9415	24	Cr Chromium 51.9961	25	Mn Manganese 54.938045	26	Fe Iron 55.845	27	Co Cobalt 58.933195	28	Ni Nickel 58.6934	29	Cu Copper 63.546	30	Zn Zinc 65.38	31	Ga Gallium 69.723	32	Ge Germanium 72.64	33	As Arsenic 74.9216	34	Se Selenium 78.96	35	Br Bromine 79.904	36	Kr Krypton 83.798																																																						
37	Rb Rubidium 85.4678	38	Sr Strontium 87.62	39	Y Yttrium 88.90584	40	Zr Zirconium 91.224	41	Nb Niobium 92.90638	42	Mo Molybdenum 95.94	43	Tc Technetium (97.9062)	44	Ru Ruthenium 101.07	45	Rh Rhodium 102.90550	46	Pd Palladium 106.42	47	Ag Silver 107.8682	48	Cd Cadmium 112.411	49	In Indium 114.818	50	Sn Tin 118.710	51	Sb Antimony 121.757	52	Te Tellurium 127.60	53	I Iodine 126.90545	54	Xe Xenon 131.29																																																						
55	Cs Cesium 132.90545196	56	Ba Barium 137.327	57-71	Lanthanoids	72	Hf Hafnium 178.49	73	Ta Tantalum 180.94788	74	W Tungsten 183.84	75	Re Rhenium 186.207	76	Os Osmium 190.23	77	Ir Iridium 192.222	78	Pt Platinum 195.084	79	Au Gold 196.966569	80	Hg Mercury 200.59	81	Tl Thallium 204.3833	82	Pb Lead 207.2	83	Bi Bismuth 208.9804	84	Po Polonium (209)	85	At Astatine (210)	86	Rn Radon (222.0175)																																																						
87	Fr Francium (223)	88	Ra Radium (226)	89-103	Actinoids	104	Rf Rutherfordium (261)	105	Db Dubnium (262)	106	Sg Seaborgium (266)	107	Bh Bohrium (264)	108	Hs Hassium (277)	109	Mt Meitnerium (268)	110	Ds Darmstadtium (271)	111	Rg Roentgenium (272)	112	Uub Ununbium (285)	113	Uut Ununtrium (284)	114	Uuq Ununquadium (289)	115	Uup Ununpentium (288)	116	Uuh Ununhexium (288)	117	Uus Ununseptium (289)	118	Uuo Ununoctium (294)																																																						

For elements with no stable isotopes, the mass number of the isotope with the longest half-life is in parentheses.

Design and Interface Copyright © 1997 Michael Dayah (michael@dayah.com) <http://www.ptable.com/>



57	La Lanthanum 138.9047	58	Ce Cerium 140.118	59	Pr Praseodymium 140.90764	60	Nd Neodymium 144.242	61	Pm Promethium (145)	62	Sm Samarium 150.36	63	Eu Europium 151.964	64	Gd Gadolinium 157.25	65	Tb Terbium 158.92535	66	Dy Dysprosium 162.500	67	Ho Holmium 164.93032	68	Er Erbium 167.259	69	Tm Thulium 168.93421	70	Yb Ytterbium 173.054	71	Lu Lutetium 174.967
89	Ac Actinium (227)	90	Th Thorium 232.03806	91	Pa Protactinium 231.036889	92	U Uranium 238.02891	93	Np Neptunium (237)	94	Pu Plutonium (244)	95	Am Americium (243)	96	Cm Curium (247)	97	Bk Berkelium (247)	98	Cf Californium (251)	99	Es Einsteinium (252)	100	Fm Fermium (257)	101	Md Mendelevium (258)	102	No Nobelium (259)	103	Lr Lawrencium (260)

Kunskap som fakta

Periodic Table of Elements

For elements with no stable isotopes, the mass number of the isotope with the longest half-life is in parentheses.

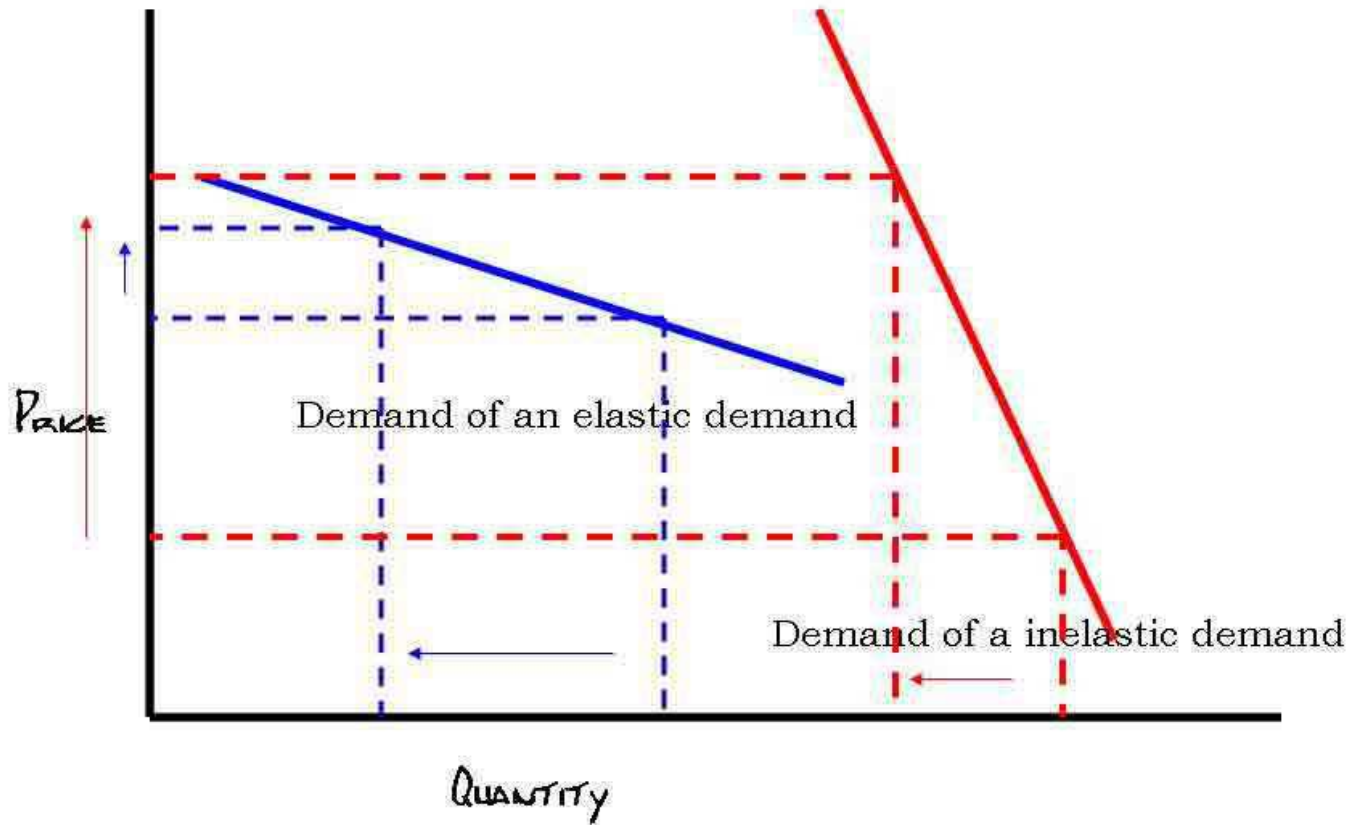
Design and Interface Copyright © 1997 Michael Davitt (michael.davitt@epac.com) http://www.zeble.com/

Tips: Minnestekniker

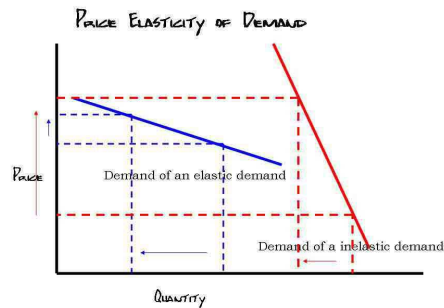
Hitta eller skapa en koppling till något du redan känner till. Tänk uttryckligen, i ord eller bilder, på denna koppling för att skapa ett nytt minne. Konkretisera och associera.

Kunskap som förståelse

PRICE ELASTICITY OF DEMAND



Kunskap som förståelse

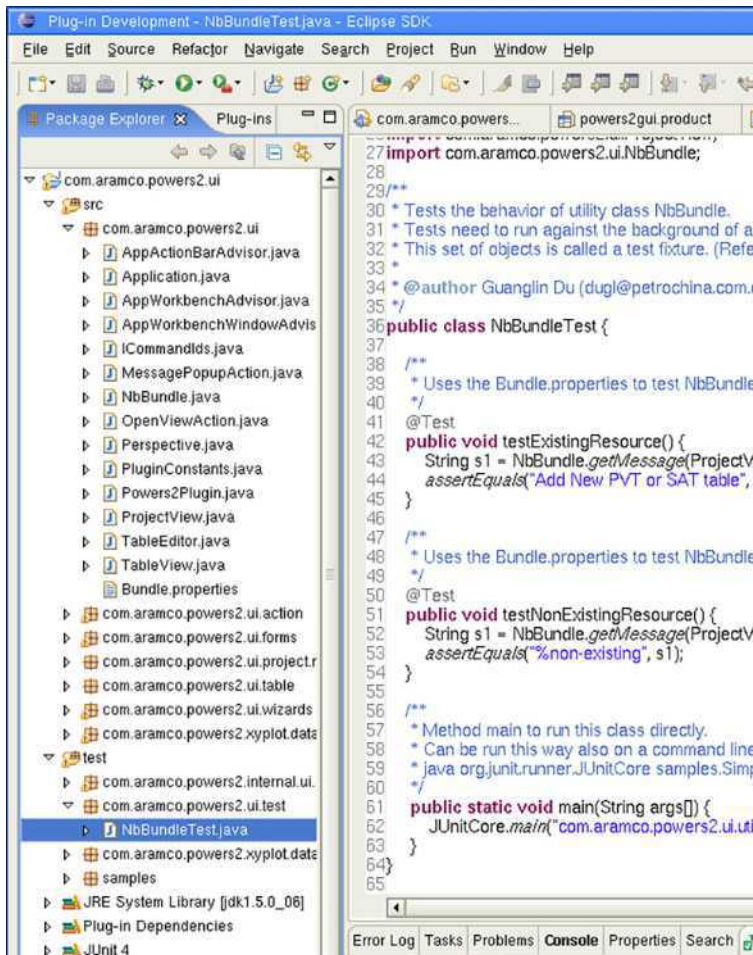


Tips: Förklara i egna ord

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

Abstrahera och exemplifiera.

Kunskap som färdighet

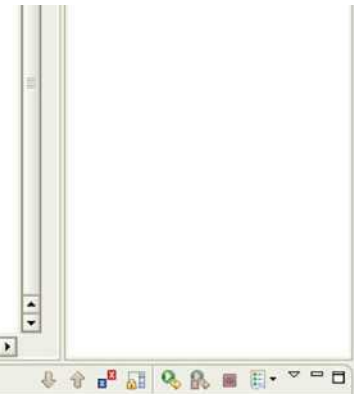


$$\mathcal{F}\{g(t)\} = G(f) = \int_{-\infty}^{\infty} g(t)e^{-2\pi ift} dt$$

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

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

$$= \frac{AT}{\pi fT} \sin(\pi fT) = AT [\text{sinc}(fT)]$$



Kunskap som färdighet

The screenshot shows a Java IDE with the following code:

```

import com.artima.powershell.HelloWorld;

/**
 * Tests the behavior of utility class HelloWorld.
 * Tests need to run against the background of a
 * "This set of objects is visible in the future."
 */
@author Guanglin Du (du@petrolia.com)
public class HelloWorldTest {

    /**
     * Uses the Bundle properties to test HelloWorld.
     */
    @Test
    public void testUsingResource() {
        String s1 = HelloWorld.getResourceProjectView.class.getName();
        assertEquals("Test New PV in JUnit", s1, " ");
    }

    /**
     * Uses the Bundle properties to test HelloWorld.
     */
    @Test
    public void testUsingResource() {
        String s1 = HelloWorld.getResourceProjectView.class.getName();
        assertEquals("Test using string", s1, " ");
    }

    /**
     * Method used to run this class directly.
     */
    public static void main(String args[]) {
        HelloWorldTest test = new HelloWorldTest();
        test.testUsingResource();
    }
}

```

Overlaid on the code are the following mathematical equations:

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

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

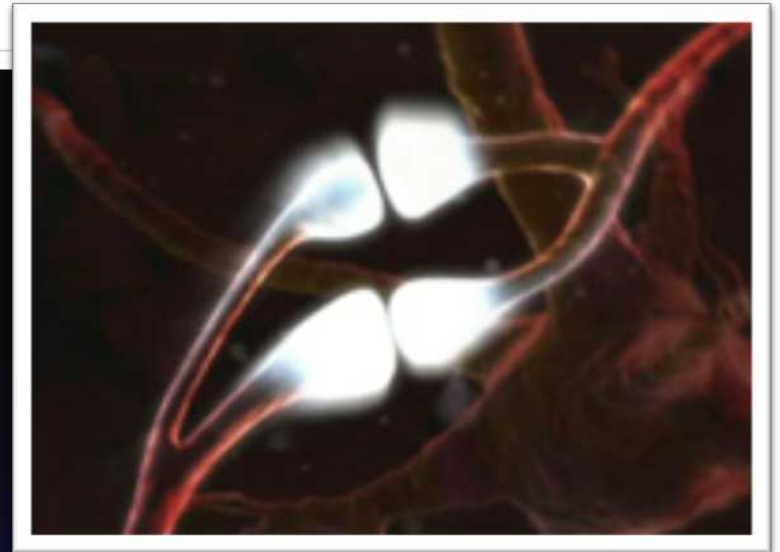
$$= \frac{A}{-2\pi f} \left[e^{-\pi fT} - e^{\pi fT} \right] = \frac{AT}{\pi f} \left[\frac{e^{\pi fT} - e^{-\pi fT}}{2i} \right]$$

$$= \frac{AT}{\pi f} \sin(\pi fT) = AT [\text{sinc}(fT)]$$

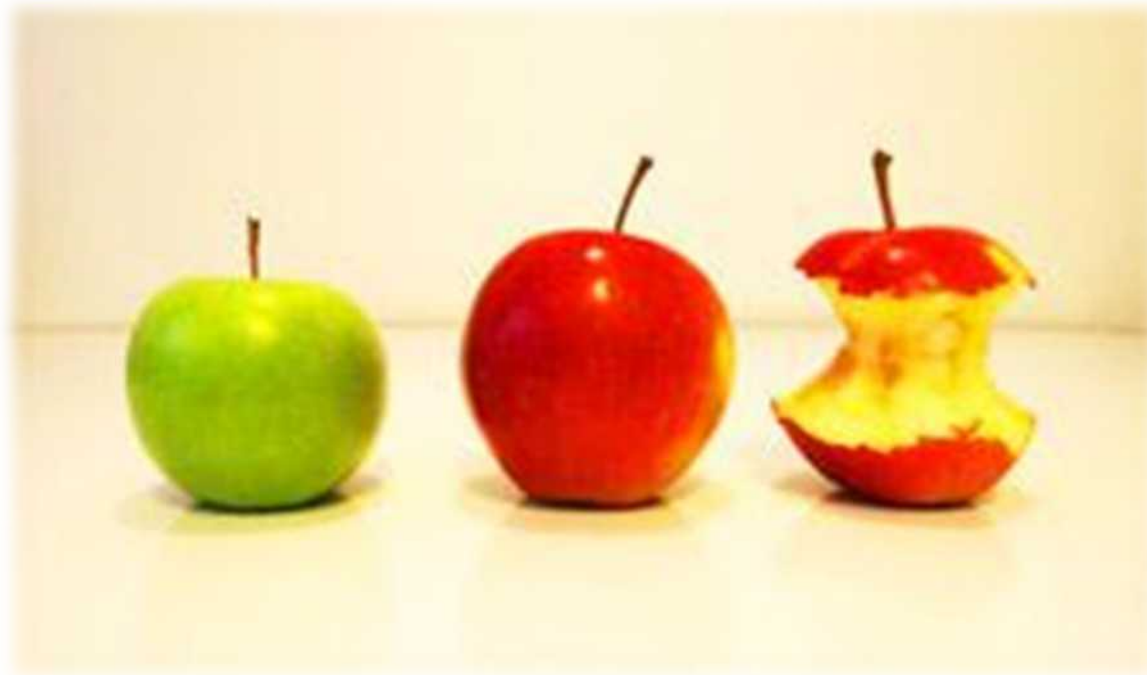
Tips: Återskapa och experimentera

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

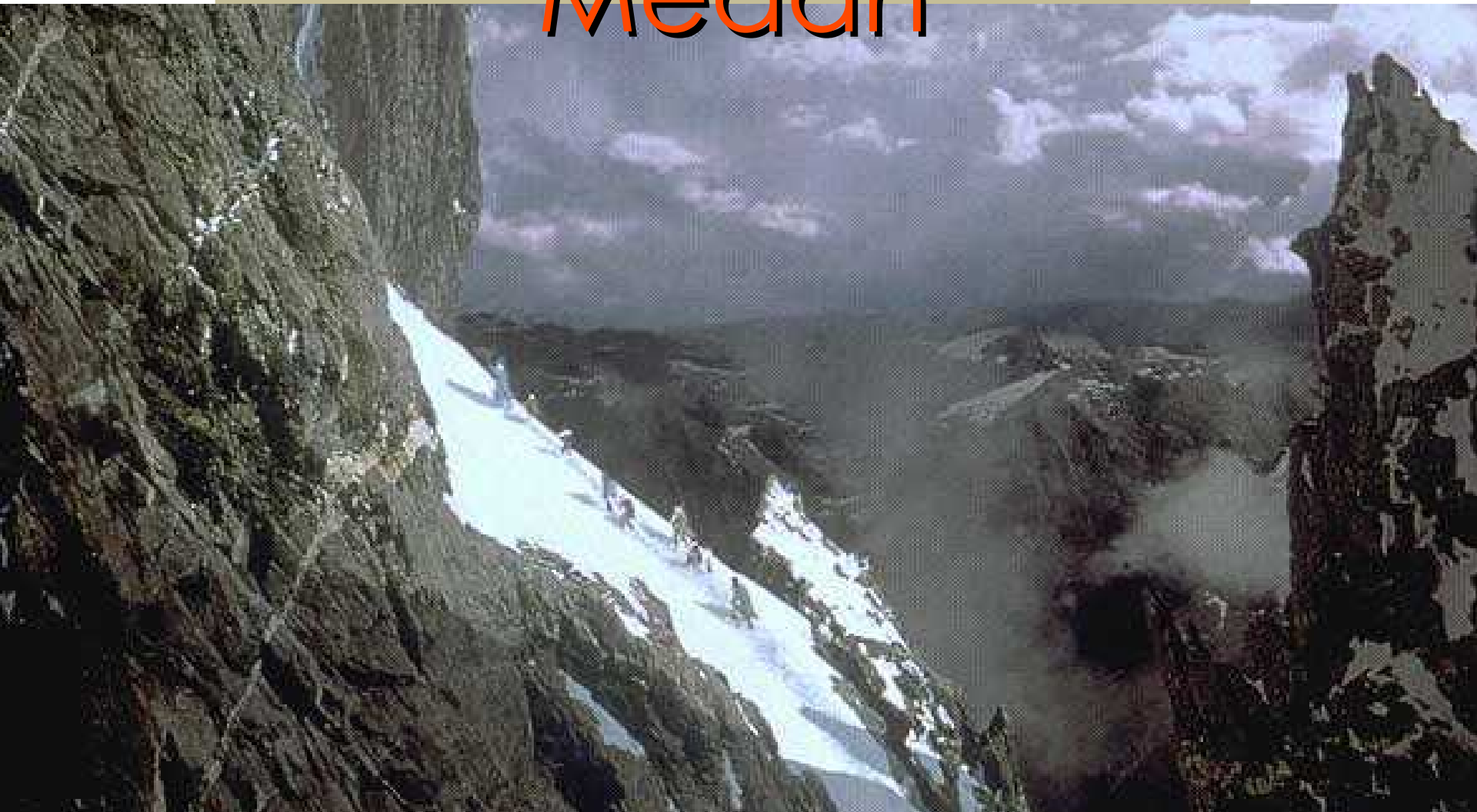
"Vad kommer
härnäst?"

Planering

"När gör jag vad?"



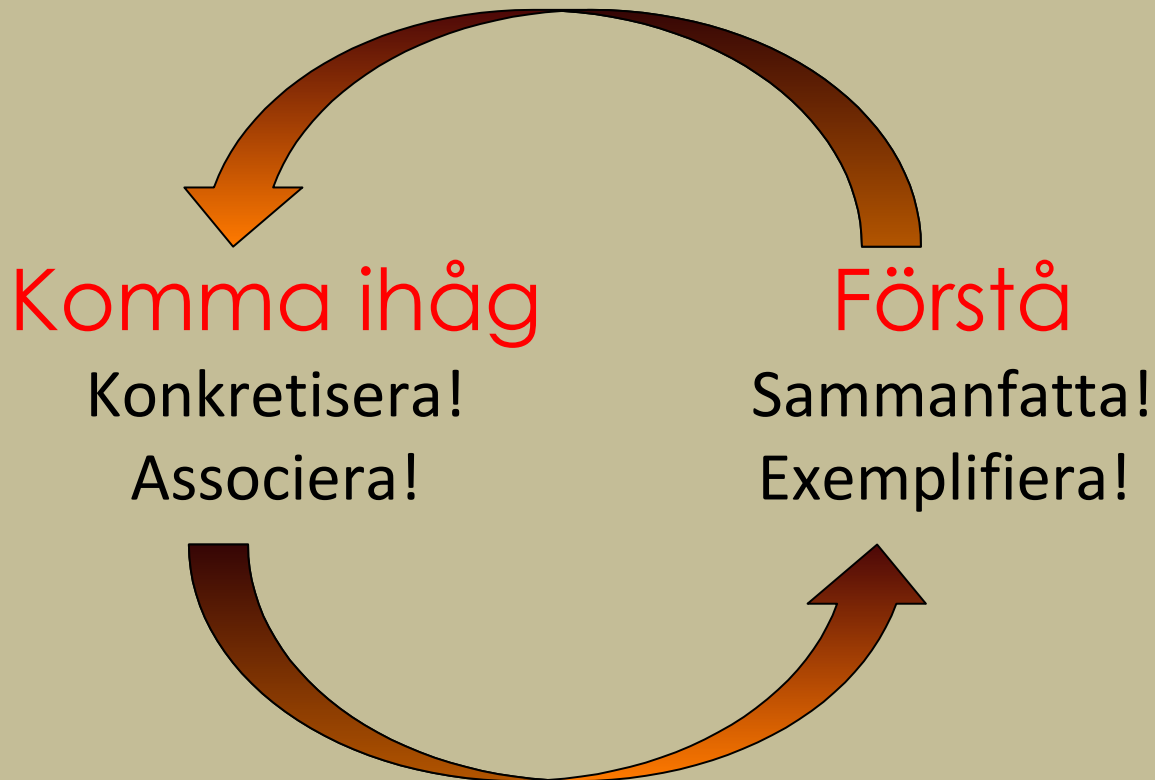
Medan



Medan

Studiepass

Många, korta och avgränsade



Efter



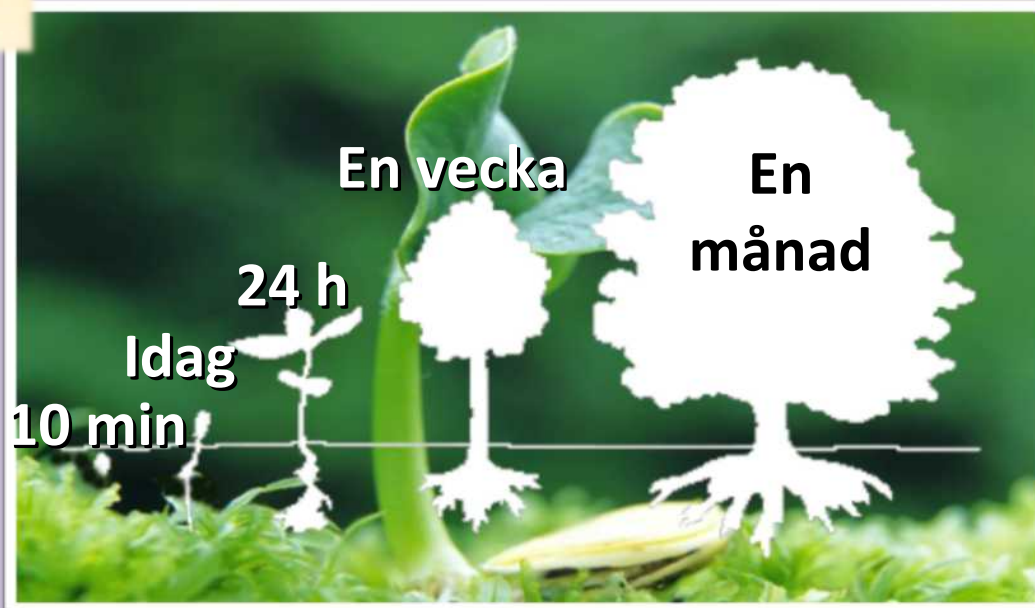
Tänka...

Berätta!

Skriva.



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/



Home Docs Support AnkiWeb

Friendly, intelligent flash cards.
Remembering things just became much easier.

[Download](#)

Remember Anything

From images to scientific markup, Anki has got you covered.

Remember Anywhere

Review on Windows, Mac, Linux, iOS, Android, and any device with a web browser.

Remember Efficiently

Only practice the material that you're about to forget.

About Anki

Anki is a program which makes remembering things easy. Because it's a lot more efficient than traditional study methods, you can either greatly decrease your time spent studying, or greatly increase the amount you learn. Anyone who needs to remember things in their daily life can benefit from

"No other application, at least on the OS X platform, comes remotely close to Anki in terms of the number and power of features, flexibility

http://remnote.io



SEARCH

- 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



elements in the middle of the periodic table

Transition Metals ↔ Their **Valence Electrons** are in the **D-Orbital**

→ Generally are useful for doing powerful things, but need to be cleaned up

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.



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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 ($-\text{COO}^-$), and the amino group is protonated ($-\text{NH}_3^+$) (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

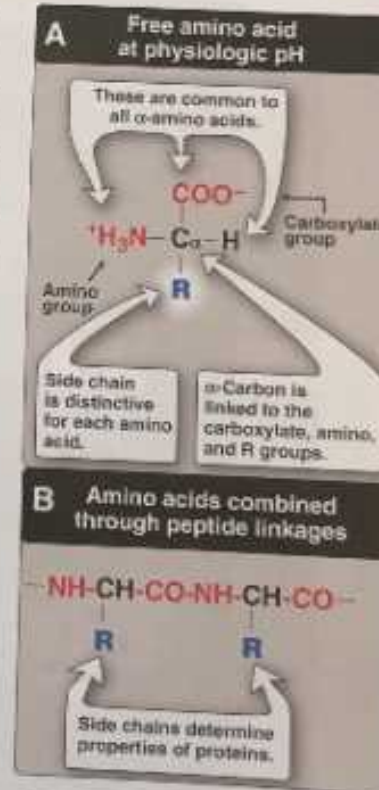
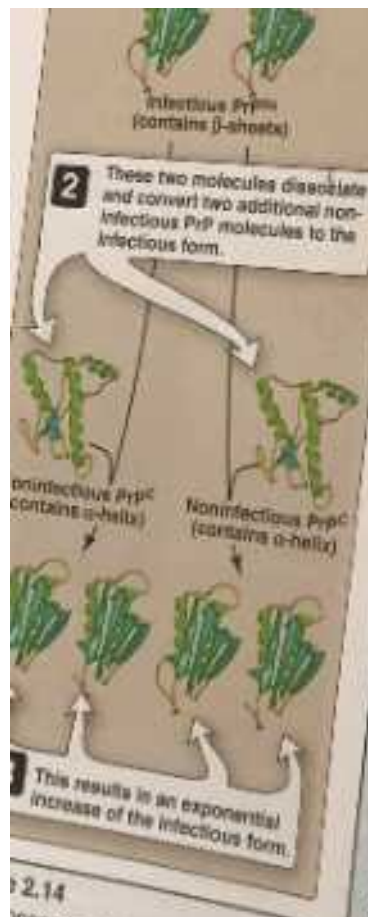


Figure 1.1
A, B. Structural features of amino acids.



2.14
Proposed mechanism for
conversion of infectious prions. PrP^{Sc}
= prion protein; PrP^C = prion protein
scrapie.

...research has demonstrated that a number of α -helices present in noninfectious PrP^C are replaced by β -sheets in the infectious form (Fig. 2.14). This conformational difference is presumably what confers relative resistance to proteolytic degradation of infectious prions, which permits them to be distinguished from the normal PrP^C in brain tissue. The infective agent is, thus, an altered version of a normal protein, which acts as a template for converting the normal protein to the pathogenic conformation. The TSE are invariably fatal, and no treatment is currently available that can alter this outcome.

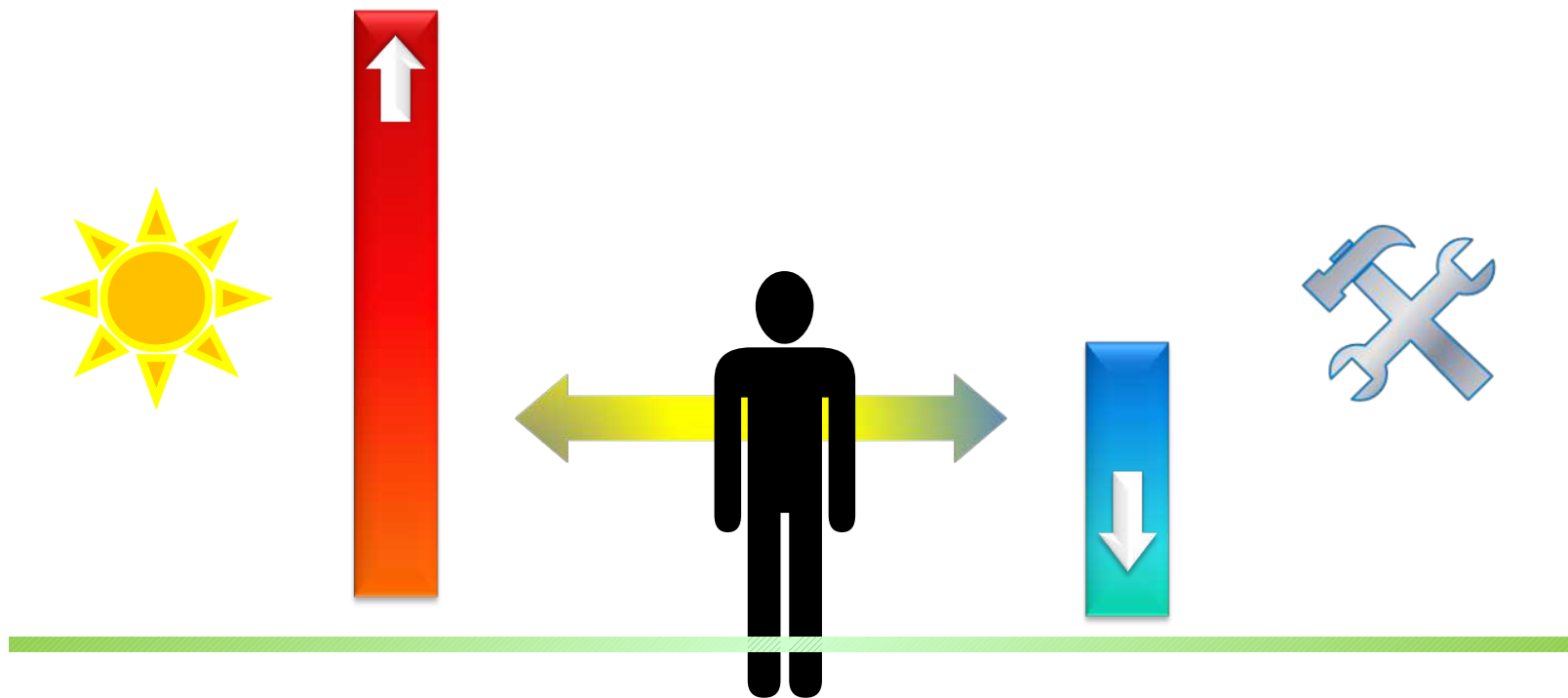
VII. CHAPTER SUMMARY

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 are not accompanied by hydrolysis of the 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 in 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 (A β) 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.

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

The screenshot shows a web browser window with the URL getcoldturkey.com. The page features a dark background with a grid pattern. On the left, there is a vertical sidebar with social media sharing options: Facebook (24k likes), Gilla, 919, Tweet, 246, +1, 690, and a Share button. The main content area is titled "Cold Turkey" and "Block When?". It displays a calendar interface with a grid of days. The days from Monday to Friday are highlighted in blue, indicating blocked periods. The text "Hate distractions?" is prominently displayed in a white box. Below it, the text reads: "Cold Turkey will temporarily block you off of social media sites, addicting websites, games and even programs! Imagine how fast you could do your work without all those distractions!". A blue button labeled "Download Now" is positioned to the right. At the bottom, a dark navigation bar contains the Cold Turkey logo and the links: HOME, FEATURES, DOWNLOAD, FAQ'S, and CONTACT.

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

Ta det lugnt.

Det här kommer gå bra.