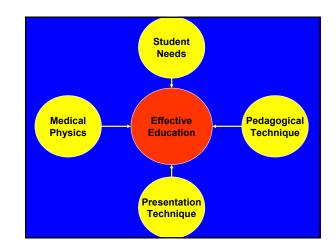
WEB Based Education Current & Future Resources

G. Donald Frey, Ph.D.

Department of Radiology Medical University of South Carolina Charleston, SC



Today's Session

- GD Frey
- Introduction and Educational Resources
- M Martin
 - The AAPM Virtual Library
- M Yester
 - On-line Continuing Education
- P Sprawls
 - Radiology Resident Education: Resources for Integrated Learning

Resources

- Pedagogical Resources
- Search Engines & Databases
- Organizational Resources

Pedagogical Resources

- Teaching
- Physics Teaching
- Presenting
- Graphical Materials

Teaching

- Students are used to modern pedagogical methods
- The traditional lecture has been shown to be less effective than other methods
- The medical physics teacher needs to integrate modern methods into educating students

150 Teaching Methods

Lecture by teacher (and what else can you do!) Class discussion conducted by teacher (and what else!) Recitation oral questions by teacher answered orally by students (then

what!) Discussion groups conducted by selected student chairpersons (yes, and

what else!) Lecture-demonstration by teacher (and then what 145 other techniques!) Lecture-demonstration by another instructor(s) from a special field (guest speaker) Presentation by a panel of instructors or students

Presentations by student panels from the class: class invited to participate Student reports by individuals Student-group reports by committees from the class Debate (informal) on current issues by students from class Class discussions conducted by a student or student committee



http://www.fctel.uncc.edu/services/resources.html



Physics Teaching

- Physics Teaching is a specialized skill
- Even though much of what is taught in medical physics is taught at the descriptive level physics teaching techniques are important



Resources for physics teachers

• Example – How to use java to write physics simulations

http://psrc.aapt.org/

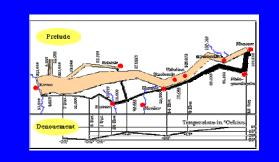


Resources for teachers

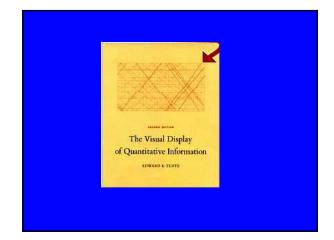
http://home.messiah.edu/~barrett/phy_ind.htm

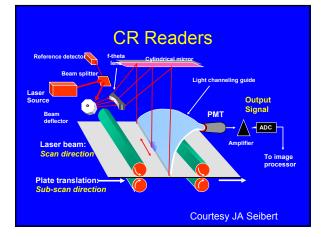
Graphical Techniques

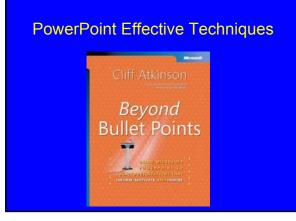
- Images are usually a more powerful way to present ideas than the words
- Students are "image oriented"
- Images help show relations that are difficult to present verbally



1869 chart by Minard







Medical Physics Materials

- Databases and Search Engines
- Organizations

Databases & Search Engines

- Entrez PubMed
- Lexus-Nexus Academic
- Google Scholar
- Google
- Aunt Minnie

Entrez PubMed

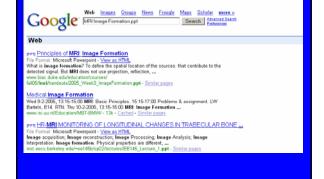
	Al Catabares	100.00	100	24 32	54/1	No. COMP.	
	Search across databases		_	100	100 100		
-	Welcome to the Erd						
	Pakmed: Lionedual Herature stations and statistic	. 0		Baska: attina books			
۲	Pakhand Contrak Irea, full louit journal articles	= X		pere unite Mandalas Schart	arse in Mar.		
	Mite Search: 1022 web and FTP also			DADA: crime Marchiller (share)	alon is downald		
	Nachandider suggering (Arabask (Cerdiank)	= P		allahan jara unamed skatere	of the surger seque	niés	
- 60	Professo requirem delabore		6	D. samerind proton damage.)	stations		
由	Conserver, which persons to purious			Bengins Amain For Str.	e tructure		
7	Meschare, Boye dimensional mecomological physicane			with meters and mapping if	du .		
	Taxanaky, organisms in Danibala	= 00		whet provident study data in			
-	STAP: pingle mulleotide provergingers	= (4		D Freibes marrowin and m	Analis' shindana	profiles	
X	Genet pro-verticed information	2 🖬		D Databets: or parimental and	1 17 1000 Date		
=	RomalaGene: subaryoto tomotogy groups	- 8		near thremasamer ortuge	atto disfusion		
8	FubClass Companiel unger and motorie channel studiers	= 2	-	Athens Budeney birations	spreads of charms	i substatura	
1	Public Room Bulkelance: Appointed sharrowd substance resurts:	-		telati pris supresson allas i		erroux costem	
3	Consense Property property of sensets.			aber requires specify respec	•		
-	basesals, detailed of provident about the journals indexed in Publish and		P	ette detailed information about	NOT's controlled	retuine	
	NCH Catalog catalog of Society, promote, and authorizants in the NUR						

PubMed

- The National Library of Medicine Publication Database (Medline)
- PubMed is the search engine







Principles of MRI: Image Formation

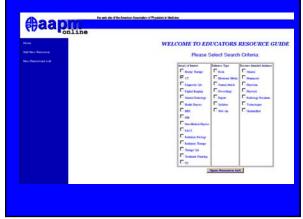
Allen W. Song Brain Imaging and Analysis Center Duke University







Organizations • AAPM • ACMP • ACR • RSNA • IAEA





The American Association of Physicists in Medicine		Home Placement Services Continuing Education PAQ Site Map Contact						
- W II	inks of Interest		SONT A A					
AAPH	AAPM Medical Physics Resource Page							
Medical Physicist	Please report broken links and suggest items for inclusion on this page to Nathan							
Membership	always welcome. The presence of an item on this page does not represent any							
Meetings								
Education								
Government Alfairs	Institutional Pages	Mailing Lists	Health Physics & Rad Safety					
Publications	Nuc Ned & PET	Radiology, NRI, & US	Radiation Oncology Data & Standards Search Engines AAPP1 HomePage					
Ads/Placement	Publications & Publishers	Newsgroups						
Corporate Alliliates	Nisc. & Eclectic	FAQ Pages						
Society of Physics Students	MedPhys Calendar	*MedPhys Organizations						
Links of Interest								
AAPM ADCL Program								
 Medical Physics Calendar 								
 Medical Physics & Related Organizations 								
Medical Physics								
Resource Page		 Physical Reference Data (NIST) 						
Free Medine Search Electronic Medical Physics	Calibration Services (NIST)							
Tomzing Residuards (NRCC)								
Radiological Physics Center	IEEE Standards (IEEE) Notice of Electrical Manufactures: Accessibles (MIMA)							
RadoGraphics	National Electrical Manufacturers Association (NEMA) Electron Scattering & Stopping Powers (NRCC)							
· Web-based positietry	X-ray Mass Coefficients (NIST)							
Training Tool - Stanford	 X-Ray Interactions w 	ith Matter (Lawrence Berkel	lav NL)					

