



UNIVERSITY
OF
JOHANNESBURG

THE USE OF THE LIBRARY IN TEACHING 1ST YEAR SCIENCE STUDENTS

Pavlinka Kovatcheva
UJ Sciences Librarian, APK
28 January 2011
Faculty of Science
First Year Academy Meeting

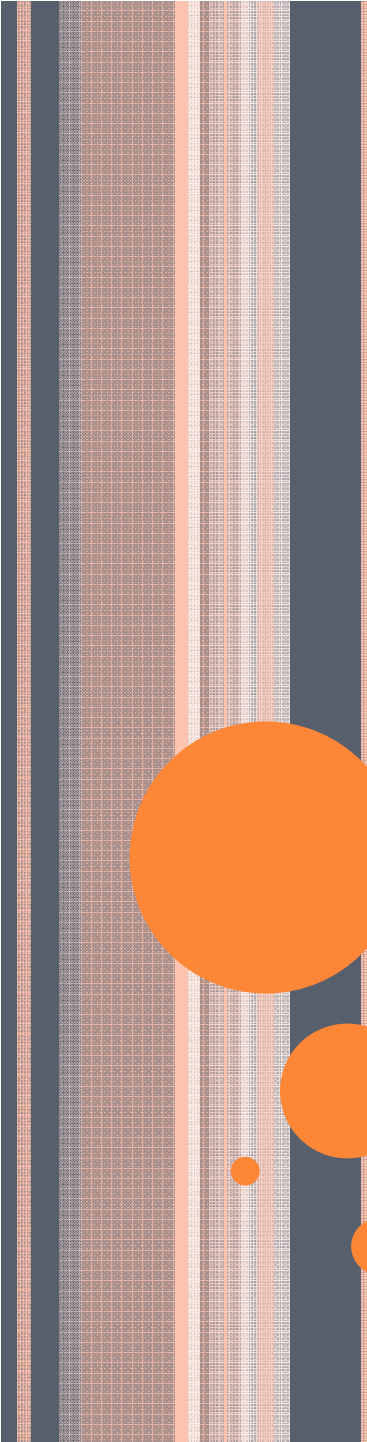
**WELCOME
2011
STUDENTS**

CONTENT



- Kick-start of Library use for 1st year students
- Sciences Subject trainings & Course Support
- Way Forward for 2011
- Make use of Social Networking tools to connect with students
- Library Support via EduLink
- What Resources will be more appropriate for 1st year students on EduLink
- Courses examples of Resources for EduLink
- Conclusion





**KICK-START OF LIBRARY
USE FOR 1ST YEAR SCIENCE
STUDENTS**

KICK-START OF USING THE LIBRARY: 1ST YEAR LIBRARY ORIENTATION & TOURS SCIENCE STUDENTS

1. Library tour

- On 19th and 20th of January 2011
- The students were divided in groups (30-40)
- We had > **450** Sciences students
- Hand-outs to students: Library information about Sciences resources, services & facilities
- Help with the tours, was provided from Faculty staff and 3 Info Librarians (Thanks!)



KICK-START OF USING THE LIBRARY: 1ST YEAR LIBRARY ORIENTATION & TOURS

2. Library Orientation

- Power Point presentation
- 30 min session before EduLink training
- Overview of the Library, Facilities and Services
- For all Faculties (outreach to students who will be doing Science subjects)
- Sciences on 25th January



KICK-START OF USING THE LIBRARY: TRAINING SESSIONS IN THE LIBRARY

Sign-up sessions (*library foyer*) involve learners registering to take classes (*in their own time*) on how to use the library and its resources. The sessions include training on:

- **UJ Library Catalogue** (*how to search for print books & journals*)
- **How to find information**
- **Full-text databases** (*searching for academic journal articles*)
- **Internet and evaluating information from the web**

The trainings are provided by the User Education Librarian on Wednesdays from Mid Feb 2011

Service to all Faculties





SCIENCES SUBJECT TRAINING & COURSES SUPPORT

Examples from previous years

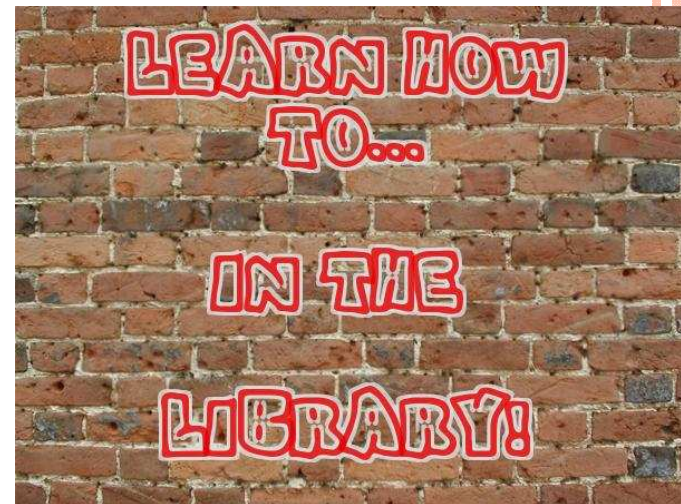
KICK-START OF USING THE LIBRARY: SCIENCES SUBJECT TRAINING SESSIONS

Organised with the assistance of Lecturers:

- Related to an assignment or research project
- Library training in groups
- Create web page support
- EduLink links

Examples :

- Geography 1st year Ext. (2007-2009)
- Geography 2A (Biogeography)(2010)
- Biochemistry 1st year (2010)
- Biochemistry 2A (every year)
- Chemistry 2B (every year)



GEOGRAPHY 1ST YEAR STUDENTS (EXT. DEGREE)

EXAMPLES (2007)

THE LIBRARY AND THE DEPARTMENT OF GEOGRAPHY: 2007 LIBRARY PROJECT



2007 ACADEMIC YEAR

The 2007 training courses for **Geography 1st Extended Degree students** were organised based on the revision of needs analysis and lessons learnt from 2006.

New strategy:

Now the use of the library was formalised. Students had to make use of the library to complete a practical assignment.

Library training sessions were organised during the 1st term.

The trainings took place during the practical/lecture time allocations.

Session 1	Library tour; Knowledge of different collections in the library; taking out books; Ethics of using the library; Subject orientation of the collections.
Session 2	Library website; How to use the library catalogue; Searching techniques; Referencing books.
Session 3	Using Google and evaluating Internet sources; Referencing Internet sources; Accessing online journals; Referencing.
Session 4	Locating print journals & newspapers in the library; How to read journals; Referencing.
Session 5	Accessing library databases; How to search the databases for journal articles; Steps in online searching; searching techniques.

The students were given copies of the presentations.

GEOGRAPHY 1ST YEAR STUDENTS (EXTENDED)

EXAMPLES: 2008

THE LIBRARY AND THE DEPARTMENT OF GEOGRAPHY: 2008 LIBRARY PROJECT: REFLECTION



The 2008 revision was based on needs analysis and lessons learnt from 2006-2007.

Lecturer notes (Tracey):

- Keep the library based assignment, but shorten it in terms of length.
- Allocate consultation times, when students could consult Pavlinka on how to use the library, rather than formal teaching periods – students still tended to bunk and there was a lot of these periods, which ate at Pavlinka's time

Librarian notes (Pavlinka):

- Consultation times were allocated for 3-4 weeks, in which students could come and get help. (15) students attended in two groups sessions and (10) individually.
- It took less time for preparation, as the training was more practical.



GEOGRAPHY 1ST YEAR STUDENTS (EXTENDED)

EXAMPLES: 2009 (CARTOGRAPHY)

<http://ujsciencelibrarian.pbworks.com/Geography-1-Extended-Library-Research-Project>

UJ Sciences Librarian Portal

VIEW EDIT

Geography 1 Extended Library Research Project

last edited by Pavlinka Kovatcheva 2 mos ago Page history



GEOGRAPHY 1 EXTENDED: Library Research Project

Due Date: 14 March 2009

The students need to come to the Library, Level 1, at the Roving desk (next to the Internet computers), ask for **Pavlinka Kovatcheva**,
Subject Librarian Sciences, pkovatcheva@uj.ac.za tel: 011 559 2621

Library trainings dates

18th February: 13.40 - 16.00h
19th February: 13.40 - 16.00h
25th February: 15.00 - 16.30h
26th February: 13.40 - 16.00h

P.S.: Students can come in a groups up to four people. Further appointments can be arranged if necessary.

In order to start with your assignment, you need to be able to find useful and relevant information. Developing an effective search strategy is an important part of this process. You need to think of what steps to take - from defining your keywords, to searching techniques, journals and books search, writing and referencing. Lets get you started:

Step 1. Define your TOPIC

Topic:
Conduct research (by using the library) into the use of **COLOUR**, **SHADING** and **PROPORTION IN MAPPING** in order to answer the following research questions:

1. The purpose of using **colour** and **shading** in maps
2. The **difference** between **colour** and **hatching/cross hatching**
3. Why a **map** should be in **proportion** or "balanced"

Step 2: Identify the main keywords or concepts

The coloured words above, are your main **KEYWORDS/ TERMS/ CONCEPTS**, which you will need to use while searching for **BOOKS** or **JOURNALS ARTICLES**.

colour, shading, map
colour, hatching
colour, "cross hatching"
map proportion
balanced map

You can use additional keywords to enhance your search strategy. Draw a list of synonyms or related terms.

Use **Reference works: Dictionaries** and **Encyclopedias** to find additional terms or the meanings of the those you already have.

Search these Electronic Dictionaries & Encyclopedias to **find how your keywords are defined (the meaning)**

[AccessScience](#)
[Oxford Reference Online](#)

- 13 training sessions in small groups (61 students)
- Created web page with instructions on how to search for information for specific Assignment



GEOGRAPHY 2A: BIOGEOGRAPHY COURSE

EXAMPLE: 2010

ASSIGNMENTS ON MELVILLE KOPPIES & SA BIOMES

Problems prior 2010:

- Too many walk-in students requesting help on the same topic

Solutions in 2010:

- Group training session at Lecture Hall (~80 students)
- Power Point Presentation with examples
- Presentation hands-out & Reference techniques example
- Created web page for this specific course
- Join in the tour at Melville Koppies with the students

Results:

- Positive feedback from students and lecturer
- Less walk-in students for help



<http://ujsciencelibrarian.pbworks.com/Biogeography>



facebook

Join the [Sciences Librarian Facebook Group](#)

BIOGEOGRAPHY 2A COURSE PORTAL

Welcome to the Support Portal for the Biogeography 2A Course.
Here you find information for your Assignments!

The following topics will be covered:

South African Biomes; Melville Koppies; GAIA principles, Biological Hot spots and endemnic reagions in SA



Useful TAGS (articles, websites, news) from

[ScienceLibrarian on Delicious](#)

[Biodiversity](#)

[Biome](#)

[Gara](#)

[GrasslandBiome](#)

[Hotspots](#)

[MelvilleKoppies](#)

[SavannaBiome](#)



MELVILLE KOPPIES EXCURSION, 20 March 2010.

I have joint the Biogeography group for a field trip. Amazing view. It was very hot that day, but nothing to compare to the experience of mother nature.

Pavlinka Kovatcheva

BIOCHEMISTRY 1B: PRACTICAL

EXAMPLE: JULY 2010

How to find information for your Scientific Report

- Discuss & organise training with the lecturer
- On “*Finding information for Scientific Report*”
- Power Point training with 2 groups at CLab
- Instructions on the Biochemistry Subject Portal

Article Structure

The Dynamics of Intraurban Quantile House Price Indexes

N. Edward Coulson and
(Paper presented March 2006, in July 2006, November 2006)

abstract/summary

Summary. Estimating price indexes for different quantiles shows how prices vary for homes that are in different stages of the filtering process. The paper describes a filtering model and its implication for the dynamic interaction of housing prices at these various stages. A time-series analysis of quantile price indexes for three municipalities near Chicago supports the predictions of the filtering model.

1. Introduction

Despite an enormous literature on price index construction and a host of studies comparing appreciation rates across urban areas, few studies have estimated house price indexes for different locations within an urban area. Prominent exceptions include Hsieh and Wallace (1991) and Case and Mayer (1996), who estimate house price indexes for the San Francisco Bay and Boston areas respectively. Other studies, such as Fomby (1991), Smith and Tesaruk (1991), Mayer (1993) and Case and Shiller (1994) find that appreciation rates vary depending on a home's place in the sales price distribution. Attempts to explain differences in house price appreciation within urban areas are less common (the prominent exception is the study by Smith and Mayer (1996), who argue that appreciation rates depend on a spatially fixed amenity and location characteristics that vary across submarkets within urban areas. They find that house prices rise rapidly in high-income municipalities that had a high proportion of manufacturing employment or middle-aged residents in 1980, and prices grew more rapidly in towns close to Boston. Similarly, McMullen (2003) found that house prices within the City of Chicago rose more rapidly during the 1990s in locations close to the city centre and in census tracts that in 1990 had high proportions of residents who were African American and had completed college. McMullen (2003) also found that appreciation rates were related to the characteristics of the housing stock: appreciation rates were higher in census tracts with a high proportion of vacant housing in 1990, with a housing stock of more recent construction, and with a higher proportion of owner-occupied housing.

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dynamic interaction. We find that the theory has fairly strong implications for the causal relationships between the variables, both in levels and in first differences. The theory also implies that the variables are cointegrated, and that the cointegration rank is two. Section 6 concludes.

2. Quantile Hedonic Price Indexes

Examples of the hedonic approach to price index construction include Kief and Zabel (1997), Mark and Goldberg (1984), Palmquist (1980) and Thijsboom (1989). The hedonic approach is typified by the following equation:

$$\ln p_{it} = \alpha + \beta X_{it} + \lambda_1 D_{1,t} + \dots + \lambda_k D_{k,t} + u_{it} \quad (1)$$

where p_{it} is the natural logarithm of the price of home i at time t ; X_{it} is a vector of housing characteristics such as square footage and age; u_{it} is the error term; and $D_{k,t}$ is a dummy variable for the k th quantile. The hedonic approach is typically used to estimate the price index for a particular quantile of the housing stock. We find that the theory has fairly strong implications for the causal relationships between the variables, both in levels and in first differences. The theory also implies that the variables are cointegrated, and that the cointegration rank is two. Section 6 concludes.

specialized vocabulary

bibliography

References

ALBRECHT, J., BOWLAND, A. and YAGCIKAR, S. (2003) Is there a glass ceiling in Sweden? *Journal of Labor Economics*, 21, pp. 145–177.

BARRETT, G. W., JR. and CHEN, H.-L. (2001) Post-folio style, return-based attribution using quantile regression. *Empirical Economics*, 26, pp. 293–303.

BERENDEK, M. (1991) Changes in the US wage structure 1962–1987: application of quantile regression. *Economia*, 62, pp. 407–458.

BERENDEK, M. (1998a) The dynamics of changes in the female wage distribution in the USA: a quantile regression approach. *Journal of Applied Econometrics*, 13, pp. 1–30.

BERENDEK, M. (1998b) Recent job losses in quantile regression models: a practical guideline for empirical research. *Journal of Human Resources*, 33, pp. 89–126.

BERENDEK, M. (2001) Quantile regression with sample selection: estimating women's return to education in the US. *Empirical Economics*, 26, pp. 87–113.

BRUNNER, S. (1999) Likelihood based inference in cointegrated vector autoregressive models. New York: Cambridge University Press.

KEL, K. A. and ZABEL, J. E. (1997) Evaluating the usefulness of the American housing survey for creating housing price indexes. *Journal of Real Estate Finance and Economics*, 14, pp. 189–202.

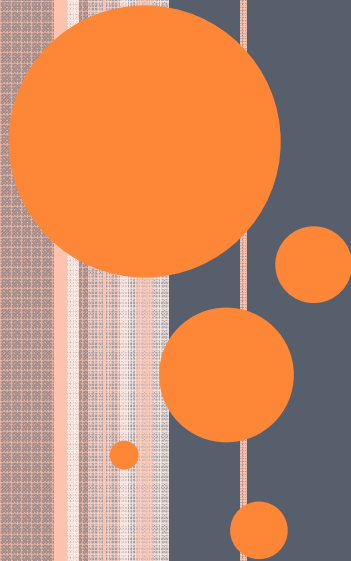
KOENIGER, R. (2005) *Quantile Regression*. New York: Cambridge University Press.

KOENIGER, R. and BASHLEY, G. W., JR. (1978) Regression quantiles. *Econometrica*, 46, pp. 33–50.

KOENIGER, R. and HALLOCK, K. F. (2001) Quantile regression. *Journal of Economic Perspectives*, 15, pp. 143–156.

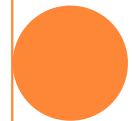
LEVIS, J. (2001) For whom the reduction count: a quantile regression analysis of class size and peer effects on scholastic achievement. *Empirical Economics*, 26, pp. 221–246.

WAY FORWARD FOR 2011



WAY FORWARD IN 2011

- How to **connect** with 1st year students?
- What library **support** do they need?
- What **resources** will be most appropriate?
- How can we achieve **participation and collaboration** from students
- **Collaboration** between the library and the academics
- How we can **measure** the impact of the library on students performance?





MAKE USE OF SOCIAL NETWORKING TOOLS TO CONNECT WITH STUDENTS

Link all Social tools on EduLink

FACEBOOK: MEET STUDENTS IN THEIR SPACE

The image shows a screenshot of a Facebook page for 'UJ Sciences Librarian Hot Alert'. The page features a blue header with the Facebook logo and a search bar. The main content area includes a large orange banner that reads 'WELCOME 2011 STUDENTS'. Below the banner, there are navigation tabs for 'Wall', 'Info', 'Photos', and 'Discussions'. A share bar offers options for 'Post', 'Photo', 'Link', and 'Video'. A text input field prompts the user to 'Write something...'. The page also displays a list of posts, including one by Pavlinka Kovatcheva about library training and another about a 1st year Sciences Library Orientation. On the left side, there is an 'Information' section with 'About: UJ Sciences Librarian News', a '4 People Like This' section with profile pictures of Pavlinka Kovatcheva, Vivian Moore, and Salome Potgieter, and a 'Photos' section showing '1 of 3 albums' and a photo of the orientation event.

facebook Search

UJ Sciences Librarian Hot Alert

Welcome to the new 2011 academic year.

Wall Info Photos Discussions

Share: Post Photo Link Video

Write something...

UJ Sciences Librarian Hot Alert + Others Just UJ Sciences Librarian Hot Alert Just Others

Information

About:
UJ Sciences Librarian News

4 People Like This

Pavlinka Kovatcheva Vivian Moore Salome Potgieter

Photos

1 of 3 albums See All

1st year Sciences Library Orientation
Created on Monday

Pavlinka Kovatcheva Chemistry & Biochemistry Honours Library training, 26 Jan 2011, 9.00-12.00h at the New training room on Level 1.
Tuesday at 10:46pm · Like · Comment

UJ Sciences Librarian Hot Alert

1st year Sciences Library Orientation
5 new photos:
Monday at 9:49pm · Like · Comment · Share

UJ Sciences Librarian Hot Alert Welcome to the new 2011 academic year.
Monday at 8:56pm · Like · Comment

<http://www.facebook.com/pages/UJ-Sciences-Librarian-Hot-Alert/131460826920515>

TWITTER:

TWEET RELEVANT CONTENT AND BUILD DISCUSSION FORUM

The image is a screenshot of the Twitter homepage. At the top, there is a navigation bar with the Twitter logo, a search bar, and links for Home, Profile, Messages, and Who To Follow. Below the navigation bar, there is a text input field for posting a tweet, with the placeholder text "What's happening?" and a link to the user's profile: <http://www.twitter.com/ujlibscience>. Below the input field, there are tabs for "Timeline", "@Mentions", "Retweets", "Searches", and "Lists". The main content area shows three tweets:

- PhysicsBooks** (New Physics Books): "Energy and The Environment: Scientific and Technological Principles (Mit-Pappalardo Series i... - by James A. Fay et al. <http://amzn.to/gLCCLH>" (1 minute ago)
- AIP_Publishing** (AIP Publishing): "Recurrence-based detection of the hyperchaos-chaos transition in an electronic circuit <http://bit.ly/hLbGnb> #AIP_CHAOS #nonlinear..." (3 minutes ago)
- Greenpeaceafric** (Greenpeace Africa): "Acid Mine Drainage in JHB. Ok, we all know it's a problem. But what is it exactly? Answers: <http://bit.ly/ezxoJo>" (3 minutes ago)

The right sidebar contains several sections:

- Your Tweets 760**: A tweet from **astronom** posted 32 minutes ago with the date <http://ow.ly/3LtvZ>.
- Following 126**: A row of profile picture icons for users being followed.
- Favorites 30**: A tweet from **aarontay** with the text "When an imploring librarian is not enough" and the link <http://bit.ly/hZZDQ9>.
- Trends**: "Worldwide change" is the current trend. Below it is a "Promoted" section for **Lexus** and a list of trending hashtags: #whatsthematterwithyou, #improudtosay, #15days, and Carmen Sandiego.

DELICIOUS: SOCIAL BOOKMARKING

TAG USEFUL ARTICLES OR WEBSITES & LINK TO EDULINK

delicious from YAHOO! Home Bookmarks People Tags



Pavlinka Kovatcheva's Top Tags

Bookmarks | Network | Tags | Subscriptions | Inbox

<http://delicious.com/tags/sciencelibrarian>

You can also [rename tags](#), [delete tags](#) and [manage tag bundles](#).

sciencelibrarian Type a tag Tags 216

Showing top 200 tags (view all)

Display options ▼

- ... @twitter 3.0 academic AcademicLibrary Africa animals **Astronomy** astronomy.com Astrophysics Bacteria beams Biochemical Biodiversity biofuels **Biology** Biome Biotechnology Bird **blog** book BookReviews Botany bring calculus Cancer catalogues Chemistry **ClimateChange** CO2 collaboration collisions Comet ComputerGrid ComputerScience ComputersSecurity Conference CopenhagenSummit Database dictionary DNA E-books Earth Earthquakes EarthScience Ecology Ecosystem education encyclopedia Energy Engineering Environment EnvironmentalRiskAssessment Europe Evolution Facebook first flickr Food Forest Gaia Games genes Geography Geology GIS **GlobalWarming** google GoogleScholar GoogleWave GPS GrasslandBiome GreenBuilding GreenEnergy GreenhouseEffect Guides H-index Hotspots Hubble HumanPhysiology humor IM impact_factor InformationLiteracy **Internet** JournalArticle journals Kindle KyotoProtocol I Laser LHC **librarian** **library2.0** Literacy Map Marketing Mars mashable mashup mathematics MelvilleKoppies microbiology MilkyWay Mineralogy MobileLibrary Moon NaturalDisasters newbooks Newsletters NuclearPhysics Ocean OnlineBooks OpenAccess OpenSource Parasites participation ParticlePhysics People PHILOSOPHY photos PhysicalChemistry **Physics** pkovatcheva@uj.ac.za Plagiarism Planets Plants Podcast PopulationGrowth PowerPlants presentations programming publishing Rank reference RenewableEnergy Reports Reptile **Research** rss satelites **Science** Science2.0 Searchengines SecondLife SedimentaryRocks SemanticWeb sharing Skype SocialBookmarking SocialMedia **SocialNetworking** SocialSoftware Soil SoilErosion SouthAfrica Space Species Sport **statistics** Students subjectguides Summit Sun tagging tags Teaching Technology technorati the tools Tropics Tuberculosis tutorial TwitPic **twitter** UJPhysicsArticles upresentations Universe University Values Video videos virtual Virus Velocitas **web2.0** Web2.0 webdesign websites wetlands wiki WebDevelopmentBase00 youtube zoology

BLOGS: USE BLOGS FOR COLLABORATIVE PROJECTS & CURRENT INFORMATION.

<http://ujscienceslibrarynews.wordpress.com/author/ujscienceslibrarynews/>

Databases Open Access (OA) Publishers Search Engines & Science Web Resources Trial Databases UJ Sciences Librarian home

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UJ Open Access Week 18-24 Oct 2010

October 13, 2010 — Pavlinka Kovatcheva



Open Access Week 18 – 24 October 2010

University of Johannesburg Library acknowledges the OA week with a number of events

Visit the [Sciences Librarian Open Access](#) portal to learn more about OA and to access journals

19 October 2010 workshop [Programme](#)



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LIBRARY SUPPORT VIA EDULINK

CREATE PRESENCE WHERE YOUR
USERS ARE

Link together available library
services, resources, social tools,
information literacy instructions, etc.
through EduLink

LIBRARY PRESENCE @ EDULINK (1)

The most important resources & services the Librarians can provide are:

- **Guidelines to complete a research assignment or write a report on a topic.** (Self-paced tutorial, information literacy quiz, or a subject related course to improve information finding, research and writing skills).
- **Reference sources such as encyclopaedias, dictionaries or handbooks.**
- **Theses and dissertations of other students.**
- **Databases with full-text, citations or abstracts**
- **Subject specific journals & articles**
- **Quality Internet resources.**
- **Plagiarism, referencing and citation style guide(s).**
- **Guidelines on evaluating Internet information.**
- **Library resources.**
- **Videos, Twitter, Facebook, Blogs, Delicious & chat**



LIBRARY PRESENCE @ EDULINK (2)

- **Previous exam papers.**
- **What to do if you need help?**
- **Electronic Course Reserves.** (This would include materials placed on Reserve in the library by the lecturer).
- **Newspapers, national and international news sources.**
- **Email alerting services to inform you of current information available on your research topic.**
- **Access to other university library catalogues.**
- **Access to online help when searching specific databases.**
- **Tools to help you manage your research process.**
(Online research and report writing tool to help you gather, manage and store information, and generate citations and bibliographies in a required referencing style).
- **Contact details of subject librarian.**
- **Subject Portals links**
- **General information, e.g. library hours, loan rules, days closed, etc.**



WHAT RESOURCES WILL BE MOST APPROPRIATE FOR 1ST YEAR STUDENTS (ON EDULINK)

<http://ujscielibrarian.pbworks.com/>

Links to:



- Subject Librarian Portals & social tools
- Individual online books or chapters of books
- Journals of interest or specific articles
- Online Dictionaries and Encyclopedias
- Educational videos on relevant topics
- Information Literacy tools (Searching Online; Reference techniques; Plagiarism, How to...?)
- Web links to information (Google Scholar; How staff is made; etc.)

<http://ujsciencelibrarian.pbwiki.com/Chemistry>

CHEMISTRY SUBJECT PORTAL

Welcome to the Research Support Portal for Chemistry users!

The Resources for this subject have been selected by **Pavlinka Kovatcheva**, Subject Librarian at APK Campus, Level 1, Tel:

 011 559-2621 , e-mail: pkovatcheva@uj.ac.za

Need information? Contact your Academic Librarian Today!

You Tube

[Video!](#)

[Journal of Chemical Education](#) now available on [ACS Database!](#)

Library Training Chemistry & Biochemistry Honours students, Library Training room, 26 Jan 2011, 9.00 - 12.00h

[LibraryTraining Presentation](#) & [RefWorks](#)

NEW Classification for BOOKS @ UJ Kingsway Library: [500 Natural Sciences & Mathematics](#)

Quick Links to Databases for Chemistry users!

 **SciFinder® ...Part of the process™**

 **ACS Publications**
High quality High Impact

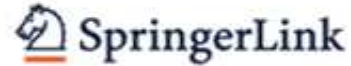
RSC Publishing

 ScienceDirect

Try the new
SpringerLink
Beta

 **WILEY**  **ONLINE LIBRARY**

Quick Links to TOP Resources for Mathematical Sciences



[ProQuest Theses & Dissertations Full text](#)



Quick Links to Online Full Text Books & Encyclopedias

Access to all Full-text Online Books available in the library



GAIN, RETAIN AND SHARE KNOWLEDGE

DATABASES

DEWEY CLASSIFICATION SYSTEM OF BOOKS

http://bpeck.com/references/DDC/ddc_mine500.htm

- 580 Botanical sciences
- 581 Botany
 - 581.1 Physiology of plants
 - 581.2 Pathology of plants
 - 581.3 Development and maturation of plants
 - 581.4 Anatomy and morphology
 - 581.5 Ecology
 - 581.6 Economic botany
 - 581.8 Tissue, cellular, molecular botany
 - 581.9 Geographic treatment of plants
- 582 Seed-bearing plants
 - 582.1 Nontaxonomic groupings
- 583 Dicotyledons
- 584 Monocotyledons
- 585 Gymnosperms (Naked-seed plants)
- 586 Seedless plants
- 587 Pteridophyta (Vascular seedless plants)
- 588 Bryophytes
- 589 Thallophytes & prokaryotes
 - 589.1 Lichens
 - 589.2 Fungi
 - 589.3 Algae
 - 589.4 Specific types of algae
 - 589.9 Prokaryotes; Bacteria

- 590 Zoological sciences
- 591 Zoology
 - 591.1 Physiology of animals
 - 591.2 Pathology of animals
 - 591.3 Development and maturation of animals
 - 591.4 Anatomy and morphology of animals
 - 591.5 Ecology of animals
 - 591.4 Anatomy and morphology
 - 591.5 Ecology
 - 591.6 Economic biology
 - 591.8 Tissue, cellular, molecular zoology
 - 591.9 Geographic treatment of animals
- 592 Invertebrates
- 593 Protozoa, Echinodermata, related phyla
 - 593.1 Protozoa
 - 593.4 Parazoa Sponges
 - 593.6 Anthozoa
 - 593.7 Hydrozoa and Scyphozoa
 - 593.8 Comb jellies
 - 593.9 Echinodermata
- 594 Mollusks & related phyla
- 595 Other invertebrates
 - 595.1 Worms and related animals
 - 595.3 Crustaceans and chelicerates
 - 595.4 Arachnids
 - 595.6 Progoneata
 - 595.7 Insects
- 596 Vertebrates

ONLINE POSTER: WRITING A RESEARCH REPORT

SIMILAR POSTERS CAN BE CREATED TO MEET STUDENTS NEEDS

<http://ujscencelibrary.glogster.com/writing-a-research-report/>

Writing a research Report Next Glog >
by [UJScienceLib](#) Last updated 7 months ago

Writing a Research Report

Writing your research report? Don't know how to get started?
Click [HERE](#) for further instructions!

Library Catalogue

A-to-Z Journals

Guidelines for writing the Literature Review

ENGAGED IN RESEARCH

- Literature Review
- Planning your research
- Writing Scientifically (field reports, etc)
- Presenting Professionally

Need Help? Just Ask

The poster features a light-colored background with a lined paper texture. It includes a yellow sticky note at the top with the title, a red banner with a question and a link, a pink sticky note with a list of research topics, and a white paper with a paperclip and the text 'Guidelines for writing the Literature Review'. There are also decorative elements like a chain with a black ball, a yellow pencil, and red ink splatters.

How To Read...

Before you read, you need the right equipment....

A Scientific Dictionary:

- Look up terms you don't know.
- Try www.AccessScience.com, for an online dictionary.



HOW to READ a SCIENTIFIC PAPER



Anatomy of a Scientific Paper

Are All Apples Red?

by

Ida Cortland

Abstract:

We examined several apples' color. Although most are red, some are not.

Introduction:

An age-old question is: are all apples red? MacIntosh (1993) thought so. G. Smith (1999) begs to differ. We hope to resolve this issue once and for all.

Methods:

We went to the local grocery store and bought one of every apple they had. We took them home and looked at them.

Results:

We found four red apples, one green apple, and two yellow apples.

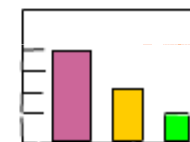


Figure 1

Discussion:

Since we found one yellow apple and two green apples, it must be true that all apples are not red. We concur with G. Smith's findings.

References:

- MacIntosh (1993) *Journal of Fruit Science*. 4(3): 121-135.
Smith, G. (1999) *Apple Technology Today*. 7(3):4-8.

Why?

**Does your professor just want to ruin your life?
Or is there a good reason to read the literature?**



How?

Anatomy

Record the author's name
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and date visited.



YouTube

0:00 / 7:25

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Copying a direct quotation into your paper, placing quotation marks around it, and crediting the source.

My Essay
by Maiko

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Blah blah blah blah (Foucault 3). blah blah
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h blah blah blah bla
blah blah blah .

ah blah blah blah blah
lah blah blah blah blah
blah blah blah blah
blah blah blah .

Works Cited:
Foucault, Michel.
*Madness and
Civilization*. New
York: Random
House, 1965.



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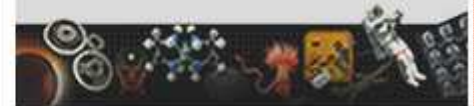
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- 2010 Haiti earthquake
- Sustainable development in steel construction
- Transportation's role in sustainability
- Nobel Prizes for 2010



[N](#) NEWS

IMAGE OF THE WEEK



B BIOGRAPHIES

We have **more than 2000** biographies of well-known scientists.

I IMAGE GALLERIES

Explore scientific phenomena through pictures.

[Mammals During the Mesozoic](#)

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- Topical Study Guides**
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Topical Study Guides

Our Study Guides provide a program of study and reference. The topics covered are linked to all relevant encyclopedia articles, videos, news, and more.

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logical

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 - Mathematical Sciences 1
 - Life & Environmental Sciences 1

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INTERACTIVE TUTORIAL

Research It Right!

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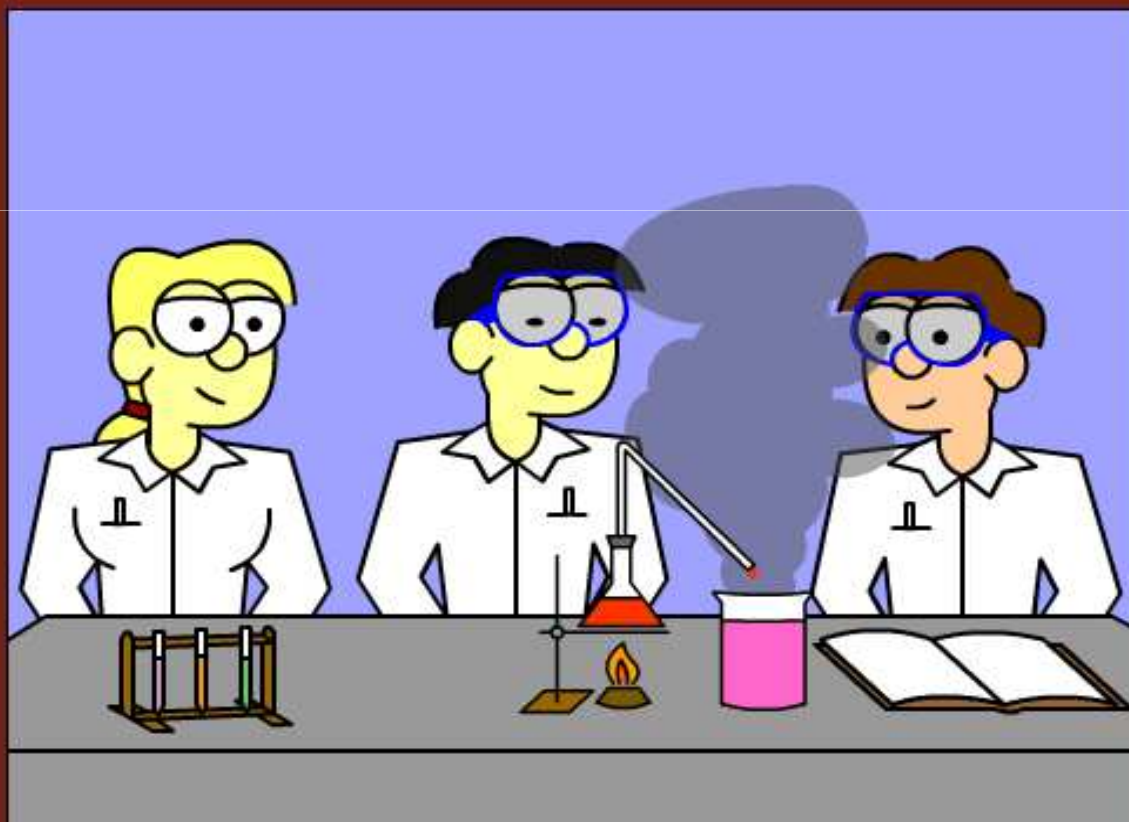


Why should I bother with this tutorial?

Glad you asked.

When you hear the word 'research' you might think of work that is done in a lab or out in the field. Research also includes the process of gathering, analyzing and communicating information.

Knowing the basics of the research process can help you succeed at university!



<http://library.acadiau.ca/tutorials/research/>

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VIDEOS: [HTTP://WWW.PERIODICVIDEOS.COM/](http://www.periodicvideos.com/)

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Chemistry

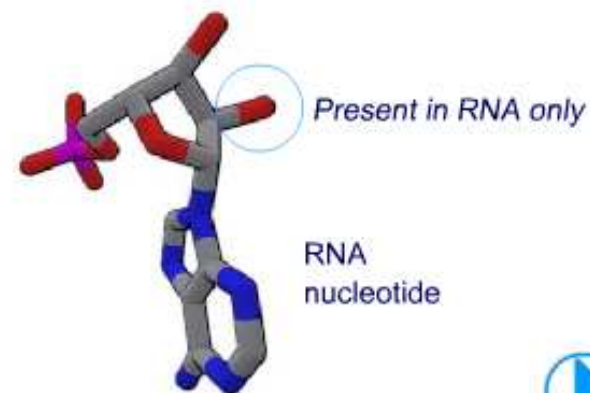
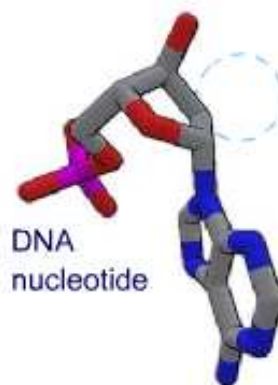
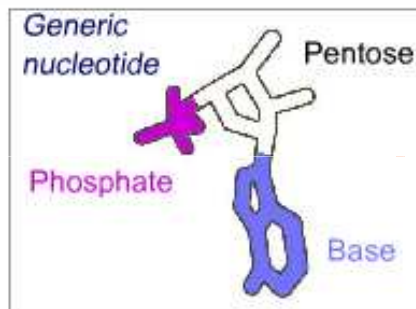
- **Analytical Chemistry**
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 - The genetic code
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 - Enzyme active sites
 - Enzyme classification
- **Polymer Chemistry**
 - News Video: Greener Plastics

ANIMATION: RNA and DNA structure compared

RNA and DNA structure compared

ACCESS Science

The differences between DNA and RNA nucleotides are subtle—the RNA nucleotide has an additional oxygen atom attached to the pentose component, and one of the four base components has a slightly different chemical structure.



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DICTIONARIES ONLINE

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Combined Chemical Dictionary

Search

Structure Matching:

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AND	Chemical Name		<input type="text"/> [browse...] [clear]
AND	Molecular Formula		<input type="text"/> [browse...] [clear]
AND	Molecular Formula by Element	= <input type="text" value="C"/>	<input type="text"/> [clear]
AND	CAS Registry Nos.		<input type="text"/> [browse...] [clear]
AND	All Text		<input type="text"/> [browse...] [clear]
AND	Melting Point	= <input type="text"/>	<input type="text"/> [browse...] [clear]
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Introduction
CRC Press
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Simple search | Structure search | Advanced search

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What is ChemSpider?

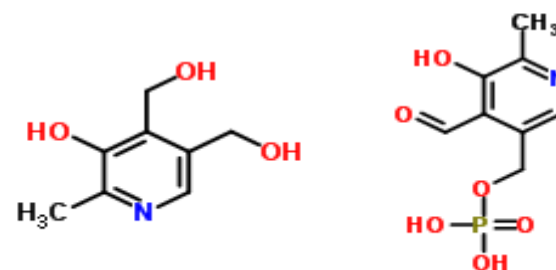
ChemSpider links together compound information across the web, providing **free text and structure search access of millions of chemical structures**.

With an abundance of additional property information, tools to upload, curate and use the data, and integration to a multitude of other online services, ChemSpider is the **richest single source of structure-based chemistry information**.

ChemSpider is owned by the RSC and provided as a free resource to the community.

Food for thought - B Vitamins

Many people are conscious of their diet and nutrients and minerals. So much so that they supplement. But have you ever stopped to think about the structure of these essential molecules? Here are the structures of the B vitamins (from http://en.wikipedia.org/wiki/Vitamin_B).



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VIDEOS AND ANIMATIONS (ACCESSSCIENCE)

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Astronomy, Space & Science

Astronomy - General

- Comet
- Earth orbit - seasons
- Eclipse
- Phases of the Moon
- Telescope aberration

Astrophysics

- Kepler's first law
- Kepler's second law
- Kepler's third law
- Telescope aberration

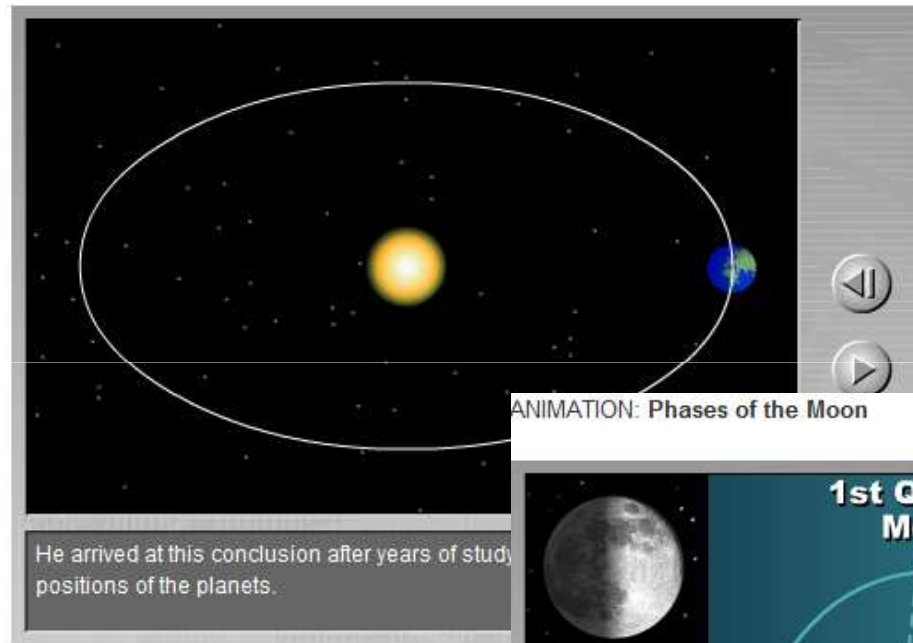
Celestial Mechanics

- Kepler's first law
- Kepler's second law
- Kepler's third law

Solar System, Sun & Planets

- Comet
- Earth orbit - seasons
- Eclipse
- Phases of the Moon

ANIMATION: Kepler's first law



ANIMATION: Phases of the Moon



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- [-] Reverberation
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[-] Atomic & Molecular Physics

- [-] Harmonic motion-damping

[-] Classical Mechanics

- [-] Collision (physics)
- [-] Conservation of energy
- [-] Conservation of momentum
- [-] Gravity
- [-] Harmonic motion-damping
- [-] Work

[-] Electricity & Magnetism

- [-] Harmonic motion-damping

[-] Electromagnetic Radiation

- [-] Reflection/refraction
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- [-] Laminar flow

[-] Lasers

- [-] Laser

[-] Nuclear Physics

- [-] Chain reaction

[-] Optics

- [-] News Video: Better (Rewriteable) Holograms
- [-] Laser
- [-] Reflection/refraction
- [-] The Eye: Structure and Function

[-] Physics - General

- [-] Cotransport
- [-] Doppler shift
- [-] Harmonic motion-damping
- [-] Reflection/refraction

[-] Relativity

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[-] Theoretical Physics

- [-] Collision (physics)
- [-] Conservation of momentum
- [-] Fractal

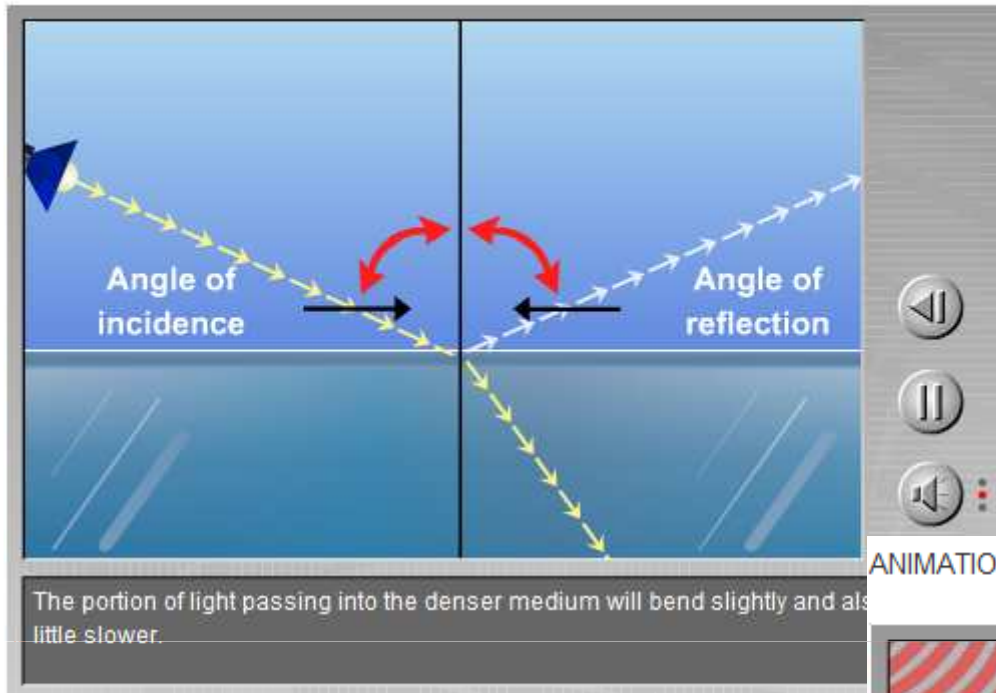
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- [-] Piston engine

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ANIMATION: Reflection/refraction

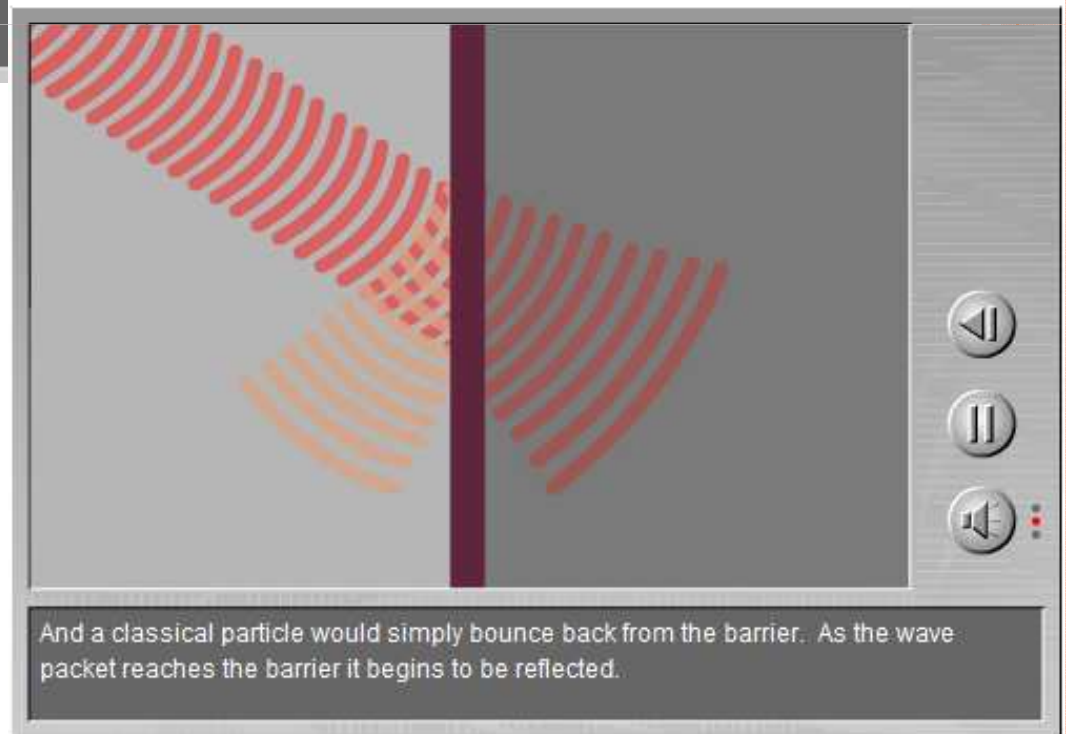


The portion of light passing into the denser medium will bend slightly and also travel a little slower.

EDULINK SUPPORT: PHYSICS 1 VIDEOS AND DICTIONARY



ANIMATION: Quantum mechanics



And a classical particle would simply bounce back from the barrier. As the wave packet reaches the barrier it begins to be reflected.



A Dictionary of Physics

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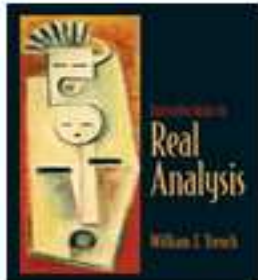
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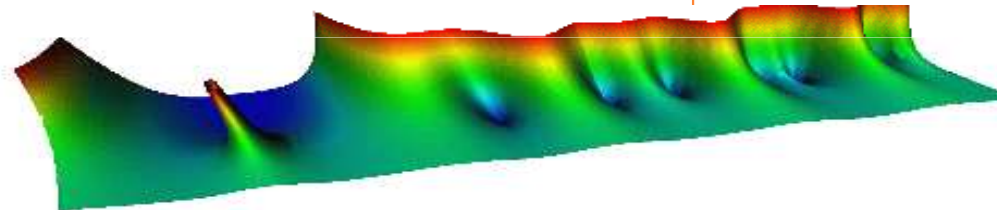
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Free Online Books:



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NIST Digital Library of Mathematical Functions *companion to the [NIST Handbook of Mathematical Functions](#)*

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- [More news](#)

Preface
Mathematical Introduction
1 Algebraic and Analytic Methods
2 Asymptotic Approximations
3 Numerical Methods
4 Elementary Functions
5 Gamma Function

19 Elliptic Integrals
20 Theta Functions
21 Multidimensional Theta Functions
22 Jacobian Elliptic Functions
23 Weierstrass Elliptic and Modular Functions
24 Bernoulli and Euler Polynomials

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Answers from our experts to important scientific questions.

Submit a question Our editors will select questions from those submitted and post their answers here.

Display:

Mathematics:

Algebra and number theory

- Where did algebra originate?
- What is group theory and what is it used for?



Analysis (calculus)

- What is group theory and what is it used for?

Geometry

- What is the history and definition of tessellations?
- How did ancient Romans contribute to mathematics?
- In a circle, two chords are drawn perpendicular to each other to form four segments. Show the sum of the areas of the four segments equals the area of the given circle.

Essay Topics

To help you learn about a specific subject, our editors suggest the following research and essay topics. For each topic we have provided a list of articles to start you on your research.

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Mathematics

Geometry is a very wide-ranging branch of mathematics and encompasses a number of disciplines. What are the special characteristics that distinguish the various branches of geometry, and what unites them? (Beginner)

- Algebraic geometry
- Analytic geometry
- Differential geometry
- Euclidean geometry
- Geometry
- Noneuclidean geometry
- Plane geometry
- Projective geometry
- Riemannian geometry

IMAGES



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Figure 1. Parabola in affine 2-space, A^2 . While it would seem that lines in A^2 can meet the parabola in 0, 1, or 2 points, with the...

From Encyclopedia article 'Algebraic geometry'



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Figure 2. Projective completion of the parabola of Fig. 1, consisting of lines through the origin lying on the homogeneous conic $X^2 - YZ = 0$...

From Encyclopedia article 'Algebraic geometry'



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Figure 3. Riemann surfaces of low genus. (a) Genus 0. (b) Genus 1. (c) Genus 2.

From Encyclopedia article 'Algebraic geometry'

What are the two basic types of noneuclidean geometries? How do their assumptions differ from those of euclidean geometry, and what consequences follow for the spaces they describe? How can these geometries be further generalized? (Intermediate)

- Euclidean geometry
- Geometry
- Noneuclidean geometry
- Riemannian geometry

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Useful Articles and news reviews

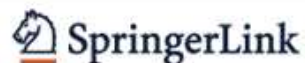
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IN CONCLUSION

The support for 1st year students will be in the form of:

- Library orientation and tours (*January*)
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- Subject Librarian support (*throughout the year*)
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 - Help with assignments (*via EduLink & Web content*)
 - Science Librarian Portal and links to support content and resources
 - EduLink support and communication
- Collaboration between the library and academics
 - Continuous assessments of impact



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