The Control of oogenesis in *Nereis (Neanthes) virens*: Interactions of environmental and endogenous mechanisms.

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July 2012

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Can I have a word please? – strategies to enhance understanding of subject specific language for non-traditional students

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July 2012

Supported by Durham University and HEA UKCISA grants.

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Hi Simon,

Sorry to bother you over the holidays but.....
I think I am being a bit thick but i just do not understand the use or meaning of The Avogadro Constant. Is this only applicable to carbon 12? why is it carbon-12 and not another element? Is this a formula i should use to find the weighted mass of other atoms? Could i not just use the formula Mole=Grams/RAM to find the weighted mass of an atom or molecule instead?

"What sort of chemical is a paradox?"



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What vocabulary to teach?

Nation (2001) divides vocabulary into three main groups:

• **High frequency words** – covering about 80% of most texts.

• **Academic vocabulary** – words which are reasonably frequent in academic writing and comprise roughly 8%-10% of words in academic texts (Coxhead, 2000). Also known as **sub-technical vocabulary** (Anderson, 1980; Yang, 1986) or **semi-technical vocabulary** (Farrell, 1990), these words are relatively uncommon in non-academic texts.

• **Technical vocabulary** – differs by subject area and covers up to 5% of texts.

(Hyland and Tse, 2007)

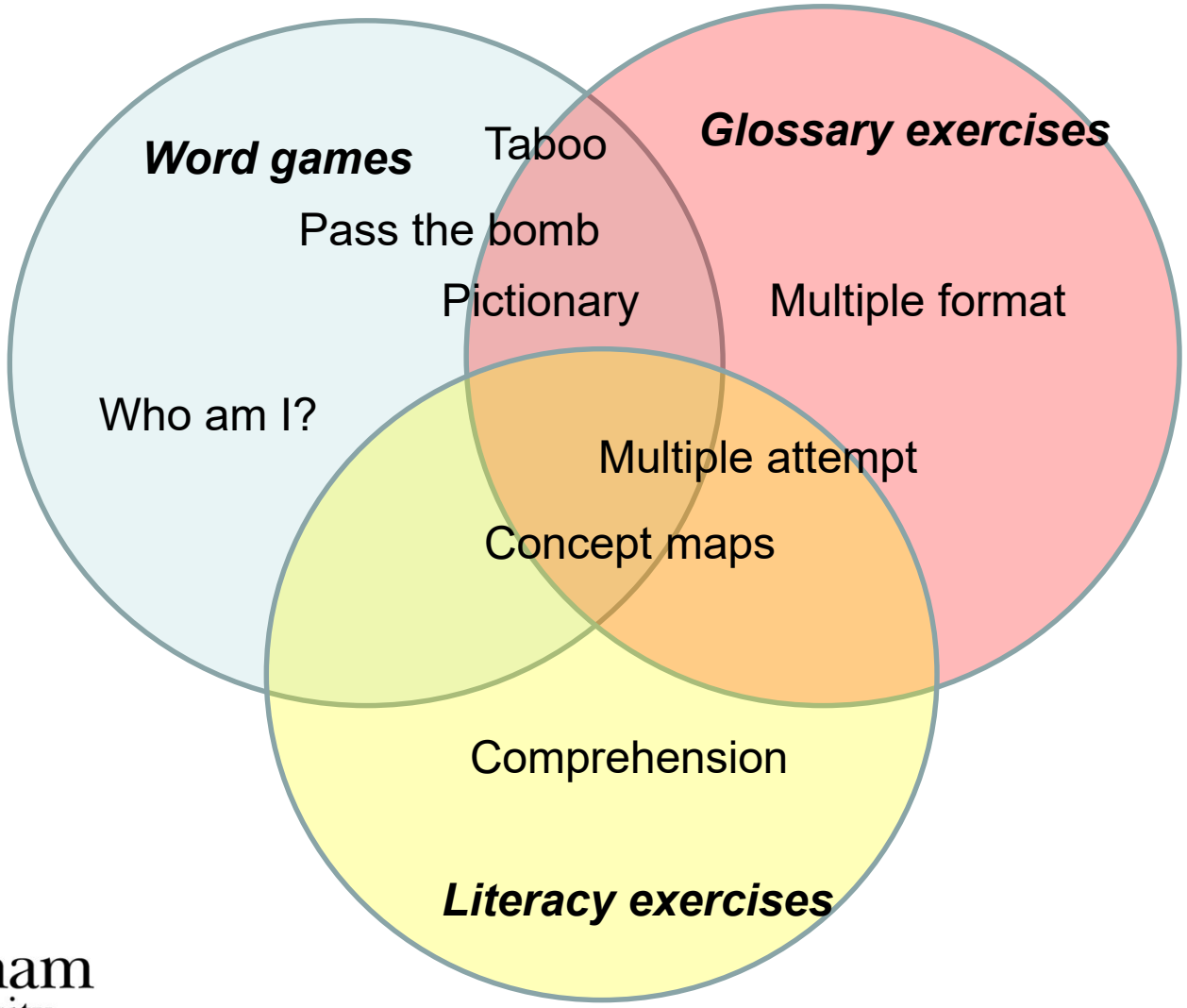
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Questions about vocabulary

- What is a word?
- How do you learn it?
- What does it mean to know a word?

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Teaching Strategies



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Questionnaire responses

59 Responses

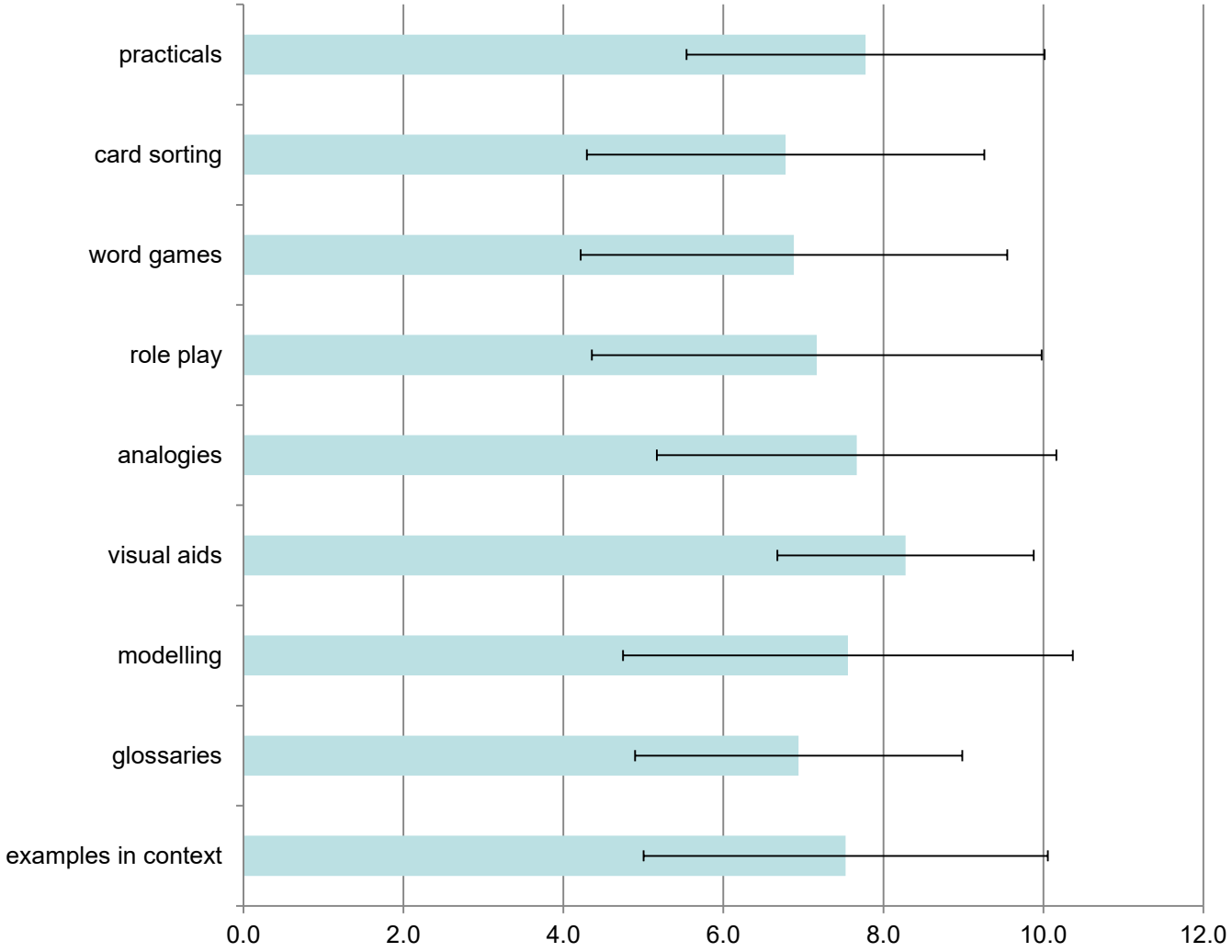
When I ask the lecturer I can feel embarrassed. When I still don't understand so I try to look it up

Glossaries, because you can sit down and have a session of learning them

Visualisation and modelling – I find it easier to understand and learn when I can physically see or make what I am trying to understand

Analogies – every day experience so it tends to stick in my brain easily

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Premise of the E-glossary

A focussed subject specific resource.

Appropriate level of explanation.

Student contributions and scavenging content.

A variety of explanations.

Explanations in different languages.

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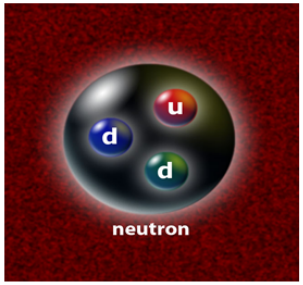
Neutron

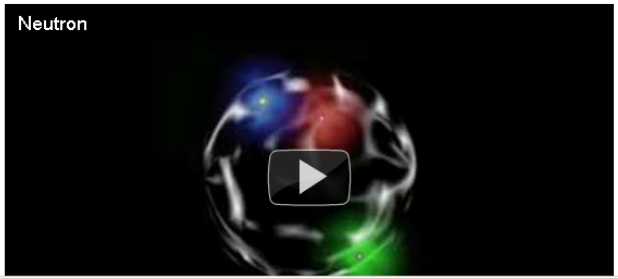
Mon, 07/04/2011 - 13:53 — crazyman

A neutron is a sub-atomic particle (meaning it is smaller than an atom). The nucleus of an atom is composed of protons and neutrons which are circled by electrons. A neutron is almost the same size as a proton, but unlike protons which have a positive charge, neutrons do not have any electrical charge.

Neutrons can exist outside of an atomic nucleus, which is a type of particle radiation called neutron radiation.

Neutrons are composed of even smaller sub-atomic particles know as quarks. A neutron has two down quarks and one up quark. A down quark has an electrical charge of -1/3 and an up quark has an electrical charge of +2/3 giving the neutron a neutral electrical charge.





Unknown Zone (Mixed) 100%

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Comments

HTTP://WWW.YOUTUBE.COM/WATCH?

mvrd55 - 02/05/2012 - 17:59



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A GOOD WAY TO UNDERSTAND WHAT

mvrd55 - 02/05/2012 - 14:55

A good way to understand what is happening is to use a 'thought experiment' imagine a football pitch with 22 players each one dribbling a ball around the pitch with their heads down (at random).

Some players dribble faster than others and some dribble slower but there is an average speed that most player go at.

Some players will collide and some will lose control of the ball (collisions with energy greater than the activation energy) and some will not (collisions with energy lower than the activation energy).

But because there is a lot of space these collisions are infrequent.

Now add 22 more players and the chances of a collision become more frequent again some losing control and some not, but because the total frequency of collisions has increased so will the collisions involving a loss of control (a chemical reaction).

As you can see if you add another 22 players these collisions will increase and so on.

The FOCUS project

- A corpus of Durham student writings produced by UG/PG students in various STEM subjects.
- Developing concordancing activities based on these corpora to allow students to discover more about target vocab in context.
- HEA grant to explore existing online concordancing programmes.
- Durham University enhancing student learning experience award.

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Development of a range of learning activities to explore the usage of language in academic writing.

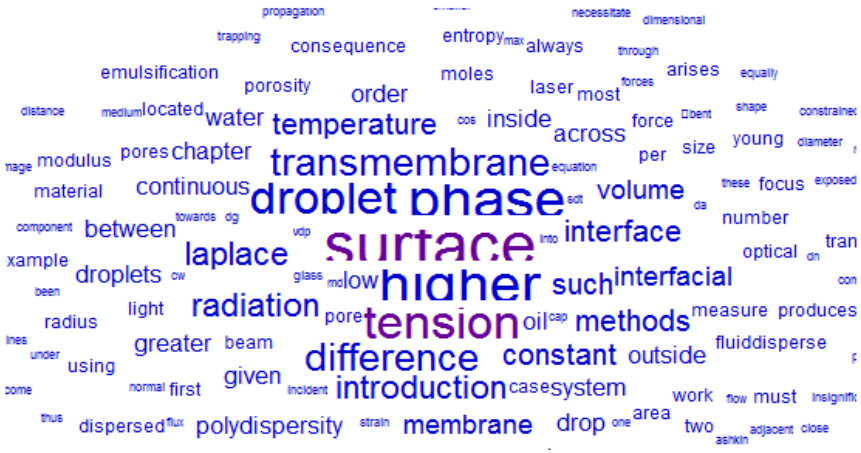
What does the word “pressure” mean?

How does a chemist use the word pressure?

Does this differ to its use by a geologist?

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se to be dispersed from the continuous phase. **Pressure** is applied to the phase to be dispersed such
d to increased polydispersity. Transmembrane **pressure** is defined as TM d c ?P ? P ? P (1.17) [47]
l is stressed under a given strain. Laplace **pressure** is given by 2 P r ? ? ? (1.9) where ?P
duction 3 1.4 Radiation Pressure Radiation **pressure** is the force exerted on a surface exposed to
propagation of the incident light. Radiation **pressure** is the result of these unbalanced forces at w
light. An alternative approach to radiation **pressure** is to consider a field of polarized light in
luid phases. Chapter 1: Introduction 10 3. **Pressure** methods, such as the Maximum Bubble Pressure
flow through the membrane, the transmembrane **pressure** must be greater than the sum of the average
amic quantity which, at constant temperature, **pressure,**number of moles and surface area can be def
h can be induced, for example, by varying the **pressure** of a Chapter 1: Introduction 29 given numb
cal trap do not deform because the radiation **pressure** of a CW laser is insignificant compared to th
various methods by which the temperature and **pressure** of a simulation can be constrained to constan
tuations. These additions can ensure that the **pressure** of the system is also constrained, generatin
droplet formed is controlled by the relative **pressure** or flow rates of the oil and water. Higher wa
e pressure inside is always greater than the **pressure** outside the droplet. A low Laplace pressure c
perse phase flux [47]) Higher transmembrane **pressure** produces higher polydispersity. [43, 45, 47
2 ?R ?l ?T Introduction 3 1.4 Radiation **Pressure** Radiation pressure is the force exerted on a
on. Image from [38b]. Introduction 31 The **pressure** required for emulsification depends on the po
rfacial tension (i.e. a high maximum surface **pressure** since p max =g 0 -g max , where 0 g is the in
Pressure methods, such as the Maximum Bubble **Pressure** technique, measure the pressure difference a
ler pores necessitate a higher transmembrane **pressure** to overcome higher capillary pressure. [39]
re diameter. Typical values of transmembrane **pressure** using 0.2, 0.5 and 0.8 □m pore size membranes
apping Ashkin first observed laser radiation **pressure** using polystyrene latex spheres in a glass ce
qually to the two-dimensional case, replacing **pressure** with surface pressure (?), and volume with t
the Young?s modulus of solids or the Laplace **pressure** within a micron-sized droplet. The Young?s mo



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Acknowledgements

Our thanks to the HEA/UKCISA and Durham University for financial support and the Foundation Centre, Durham University for enabling us to pursue this project.

We would be interested to hear from colleagues in other centres that would like to explore the use of concordancing with their students.

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