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Development of online land-based learning resources for FE/HE students and industry stakeholders

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Introduction

- There is a potential gap in the understanding of prospective HE students regarding the key skill requirements for degrees in the land-based sector.
- The requirements of the project were to develop a series of online tools that would:
  - Encourage students to undertake land-based degrees
  - Account for the unmet needs of the labour markets
  - Develop practical, mathematical and research skills
  - Create tools that complement industry stakeholder requirements.
- When developing the tools, factors such as use by dyslexics were taken into account.

Progress South Central

- The project was undertaken in collaboration with Progress South Central Lifelong Learning Network.
- PSC seeks primarily to:
  - address those barriers to progression from vocational Further Education into and within Higher Education that might be removed by a better understanding of the needs of learners and employers.
  - support institutions to design and deliver provision which meets the needs of both learners and employers.

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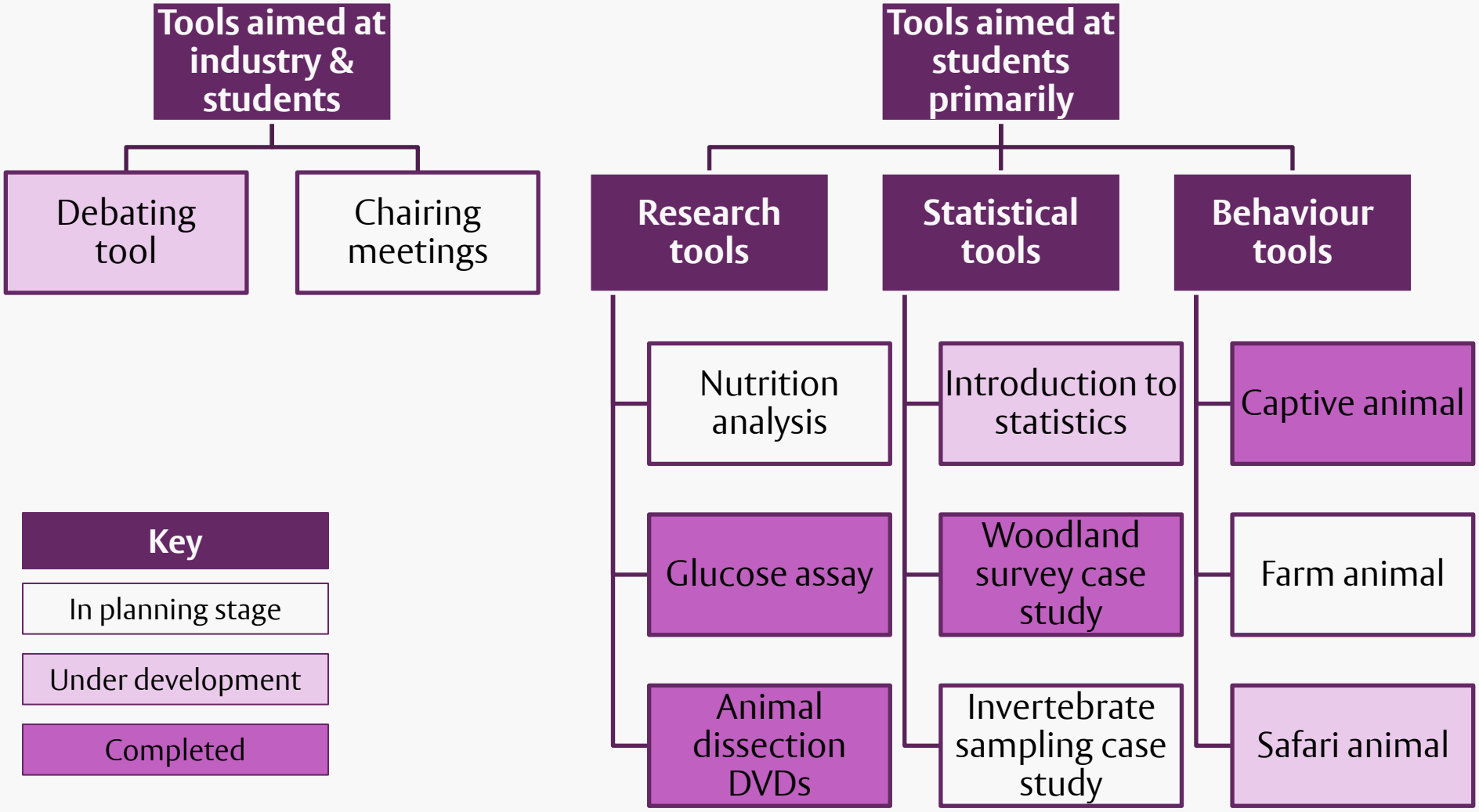
Roadmap of Tools Under Development



Tools Aimed at Industry and Students

- These tools are designed to be useable by all stakeholders and develop skills that are useful when dealing with meetings and discussions
- Debating Tool
  - This tool will take the form of a presentation interspersed with a scripted video that lays out the correct structure and process of a structured debate

- Chairing Meeting Tool
  - This tool again in the form of a presentation with a scripted video provides guidance for chairing and running efficient meetings.

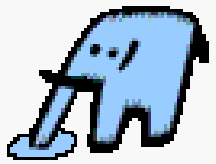
Tools aimed primarily at students

- The tools aimed at students provide guidance as to some of the basic requirements at HE level:
- Research Tools
  - These cover aspects such as experimental design, risk assessment and spreadsheet use while also through instructional DVD show laboratory demonstrations that may not be practical in all institutions.

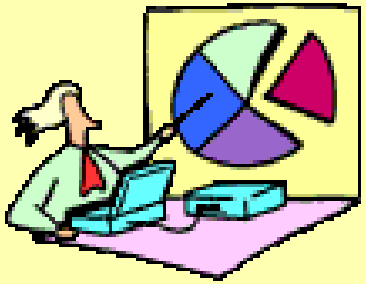
- Statistical Tools
  - The general introduction to statistics tool is designed to both give an overview of the key statistical methods but also a tutorial on the correct interpretation of statistics. This tool is supported by key land-based case studies which demonstrate different statistical methods.

Tools aimed primarily at students

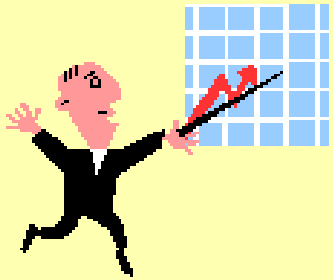
- <u>Behavioural Tools</u>
  - These will show a set of complementary video-based tutorials that demonstrate basic animal behaviour observation studies but also a case study of the comparison between captive, farm and safari animals.
- While these tools are under active development, the project is at a stage where key sector stakeholders are being canvassed to identify other areas for development.
- The following slides will show some example pages from the tools developed so far.



Descriptive Statistics

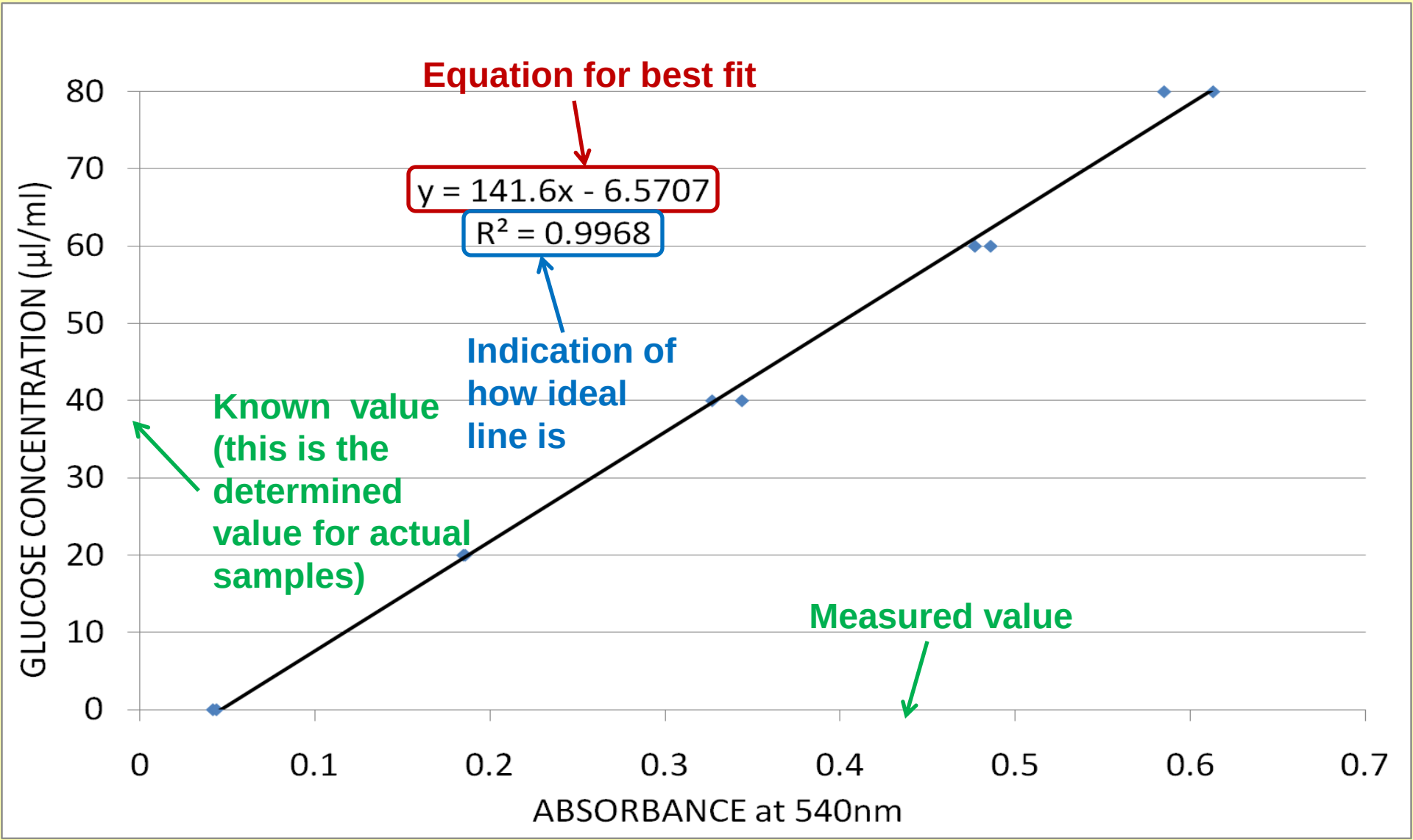


- Numerically, descriptive statistics are mainly concerned with the frequency distribution and measures of location such as:
  - the mean
  - the median
  - the mode

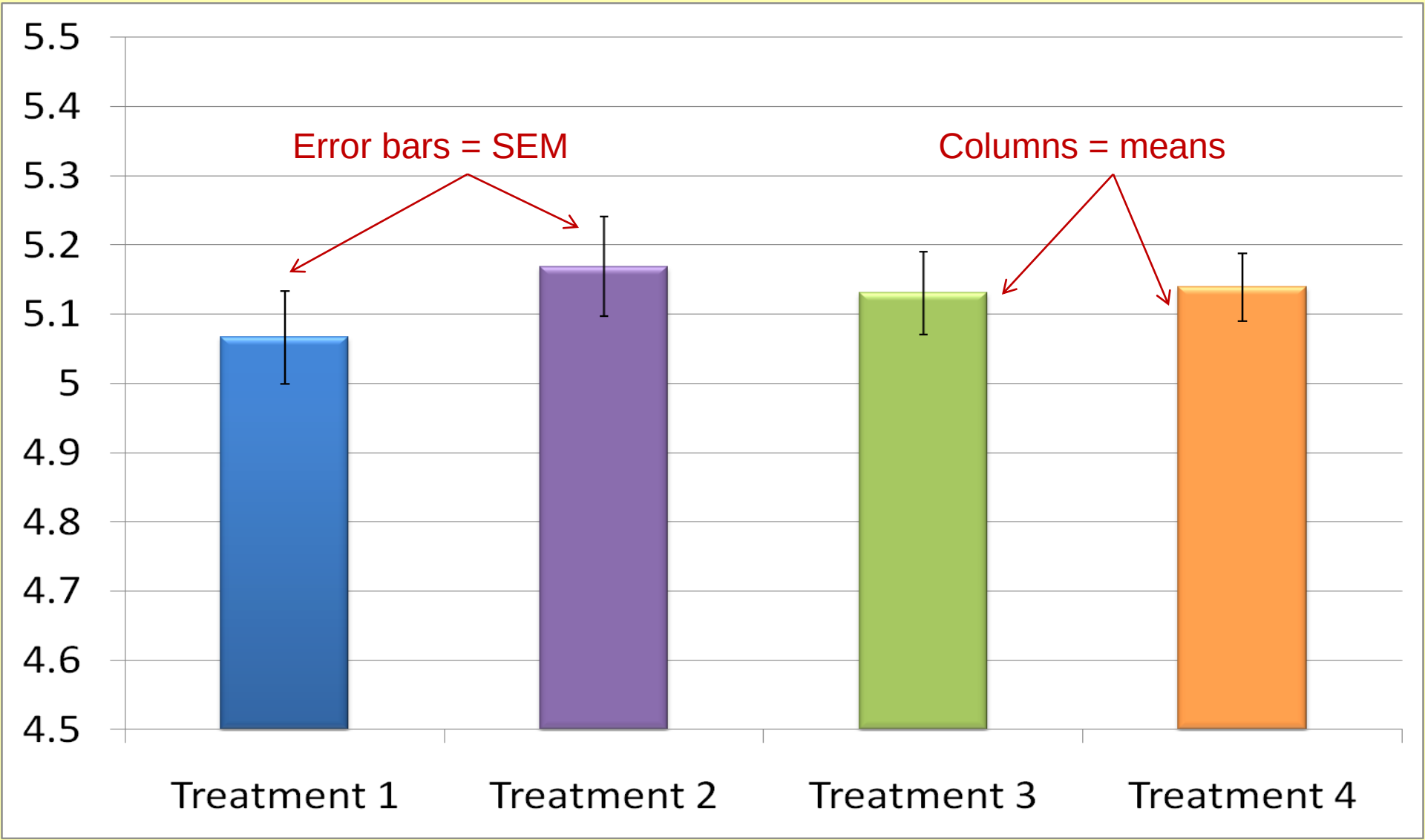


- Descriptive statistics also look at the dispersion (spread) of results using measures such as:
  - the range & interquartile range
  - variance
  - standard deviation

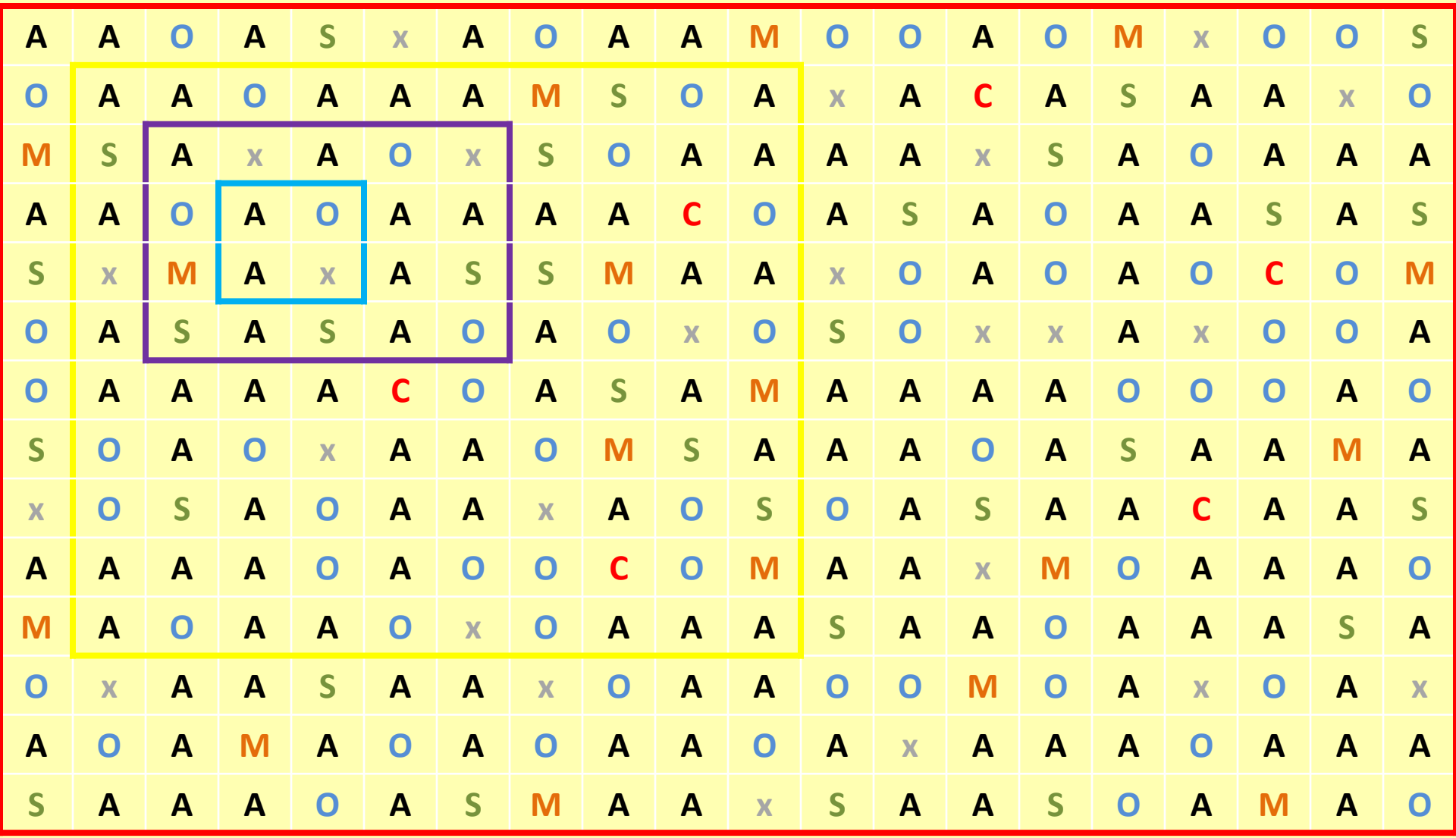
Standard Curve



Mean and SEM


5.5
5.4
5.3
5.2
5.1
5
4.9
4.8
4.7
4.6
4.5
Error bars = SEM
Columns = means
Treatment 1
Treatment 2
Treatment 3
Treatment 4

Simple Cluster Sample



The Heart

- **The heart is a big pump that circulates the blood around the body.**
- If you lived to 66 years old it would beat 2.5 billion times.
- In adults, the heart pumps 8000 gallons of blood every day.

AREA HEALTH AND SAFETY RISK ASSESSMENT FORM

Assessment Reference No.		**Area or activity assessed:**	
Assessment date			
Persons who may be affected by the activity (i.e. are at risk)			

SECTION 1: Identify Hazards - *Consider the activity or work area and identify if any of the hazards listed below are significant (tick the boxes that apply).*

1.	Fall of person (from work at height)		6.	Lighting levels		11.	Use of portable tools / equipment		16.	Vehicles / driving at work		21.	Hazardous fumes, chemicals, dust		26.	Occupational stress	
2.	Fall of objects		7.	Heating & ventilation		12.	Fixed machinery or lifting equipment		17.	Outdoor work / extreme weather		22.	Hazardous biological agent		27.	Violence to staff / verbal assault	
3.	Slips, Trips & Housekeeping		8.	Layout , storage, space, obstructions		13.	Pressure vessels		18.	Fieldtrips / field work		23.	Confined space / asphyxiation risk		28.	Work with animals	
4.	Manual handling operations		9.	Welfare facilities		14.	Noise or Vibration		19.	Radiation sources		24.	Condition of Buildings & glazing		29.	Lone working / work out of hours	
5.	Display screen equipment		10	Electrical Equipment		15.	Fire hazards & flammable material		20.	Work with lasers		25.	Food preparation		30.	Other(s) - specify	

SECTION 2: Risk Controls - *For each hazard identified in Section 1, complete Section 2.*

Hazard No.	Hazard Description	Existing controls to reduce risk	Risk Level (tick one)			Further action needed to reduce risks *(provide timescales and initials of person responsible)*
			High	Med	Low	
		•				
		•				
		•				
		•				
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		•				
		•				

Name of Assessor(s)		**SIGNED**		Number of continuation sheets used:	
Review date					

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Access to Resources

- The ultimate aim of the project is to provide the tools as a free online resource.
- The tools will be made available to anyone wishing to use them but promoted primarily among the land-based education and industry sectors.
- Hosting of the resources will be on a site similar to the Engage In Research interactive resource for bioscience students developed by the University of Reading (http://www.engageinresearch.ac.uk/)

ENGAGE in research

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Conclusion

- The ongoing project at the University of Reading will provide a long-term free resource for prospective students and key industry stakeholders.
- The resource is such that additional tools can be added at any time in the future as further needs are identified.
- It is hoped that this project provides a good model for the provision of complementary learning resources that can be translated across other subject areas with specific case studies adapted to specific requirements.

Funding

- This project has been co-funded by :
  - Progress South Central
  - The University of Reading through its University Teaching Fellowship Scheme.