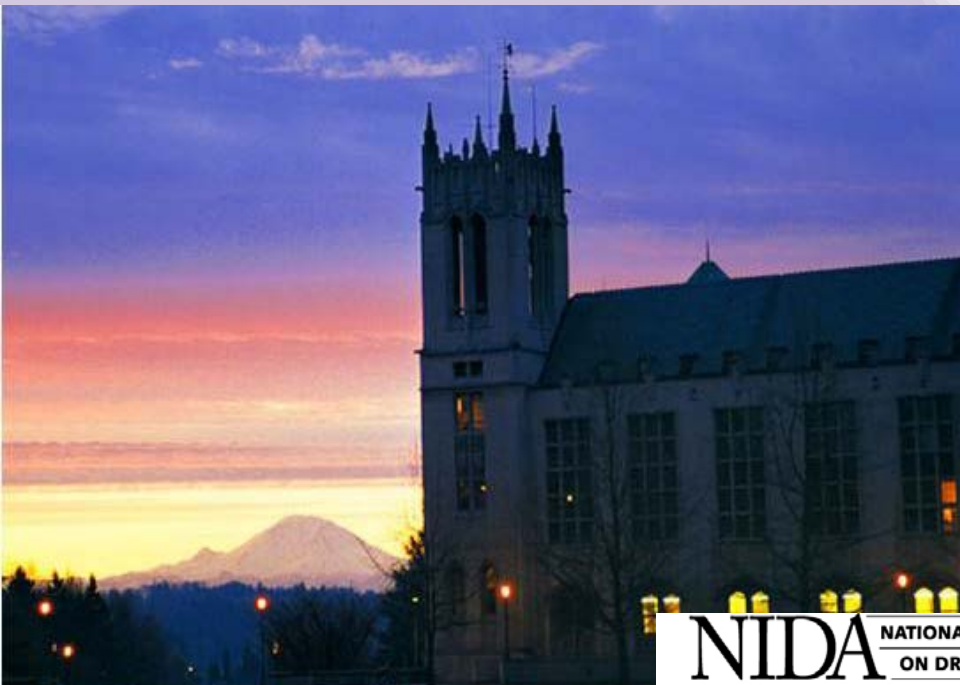


# Using a Coded Test Bank to Enhance University-High School Rigor

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# Using a Coded Test Bank to Enhance University-High School Rigor

## Outline of our Session

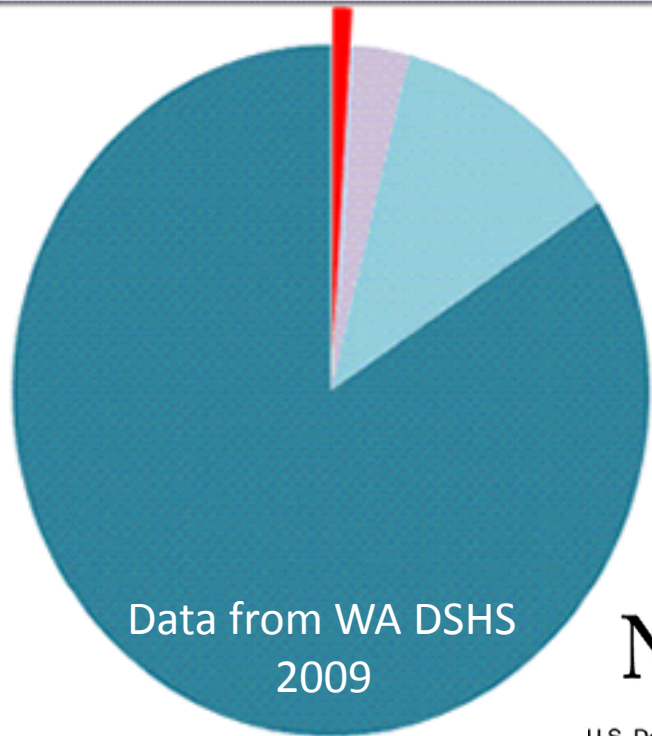
Our class  
Our alliance  
Depth of Knowledge for  
keeping rigor  
Practice coding questions  
Conclusions and questions



Photo: Martin-Morris

# Biology 100: Neuropharmacology (Neuroscience and Addiction)

## Drug Education but SCIENCE



As a Hook  
Enhance Rigor for Non-Majors  
Offered on campus  
& through UW in the High  
School

# University Rigor in High School Teachers' Hands

Busy teachers WANT to do the right thing!

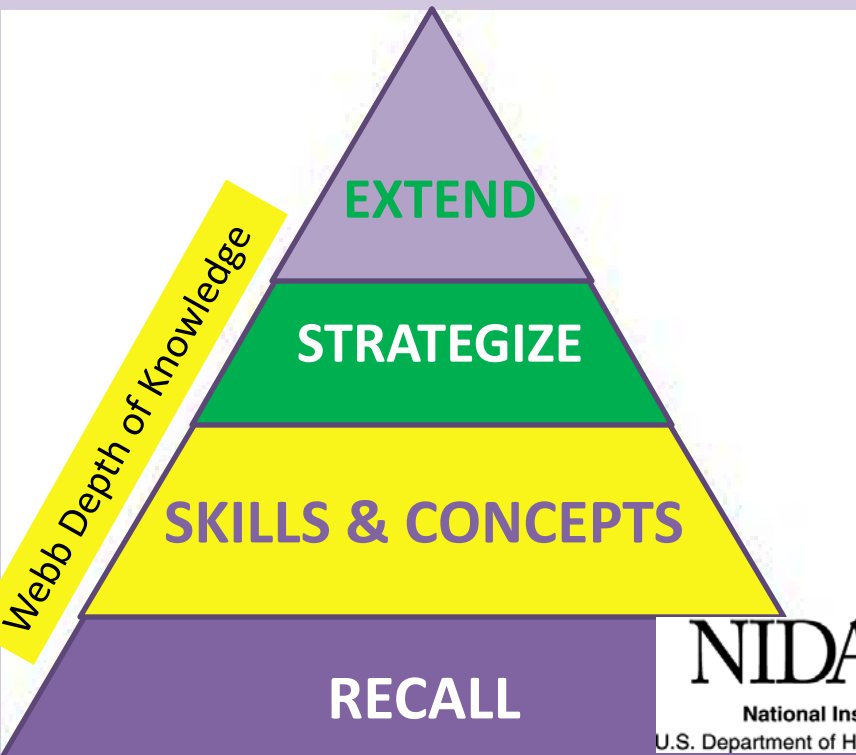
University Credits  
Understanding from  
department regarding rigor  
Guidelines for teachers



Photo Elena Stowell

# Coding Test Questions (from “Biology in Bloom” \*)

## Taxonomy of question rigor



Bloom's Taxonomy  
WEBB Depth of  
Knowledge  
Develop “Recipe” of  
exam composition

\* CBE – Life Science Education (2008)  
Volume 7; 368 - 381

# Teacher's Perspective

## Training to Teach and Balancing Acts



Photo Martin-Morris

- Fidelity
- Autonomy
- Confidence
- Flexibility

# Orting High School Example

Neuroscience and Addiction integrated into  
AP Biology class



45 students (10<sup>th</sup> through 12<sup>th</sup> grade)  
10<sup>th</sup> grade students also had to meet standard on  
Biology EOC

Used test bank examples on formative and  
summative assessments

Students were highly engaged

Many felt “the brain” unit was their favorite of the

# Test Bank Question Ambiguity

Is Chocolate a Drug? Give three reasons supporting your answers



Photo Martin-Morris

**difficulty...  
is a  
function  
of the  
context of  
the class**

What Level is this  
Question?  
Recall and recognition?  
Skill Application?  
Strategic Thinking?  
Extended Thinking?

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# Depth of Knowledge (DOK)

What DOK is about: Intended Outcomes  
and Context

- Recall and Reproduction – Level 1
- Skill or Concept – Level 2
- Strategic Thinking – Level 3
- Extended Thinking – Level 4



Photo Martin-Morris

# Depth of Knowledge (DOK)

## Examples of Each Level of DOK

Using your handout, identify the rationale for each question's level.



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# Depth of Knowledge (DOK)

What DOK is NOT about:  
Time and Difficulty

Task	Level of Thinking Time
Collect Data over 8 weeks	??
Use graph information to predict	??



Photo Martin-Morris

# Depth of Knowledge (DOK)

## What DOK is NOT about: VERBS

Describe three characteristics of neurons.

Describe the difference between stimulants and depressants in relationship to their effect on the brain.

Describe a model you might use to explain relationships within the addiction cycle.

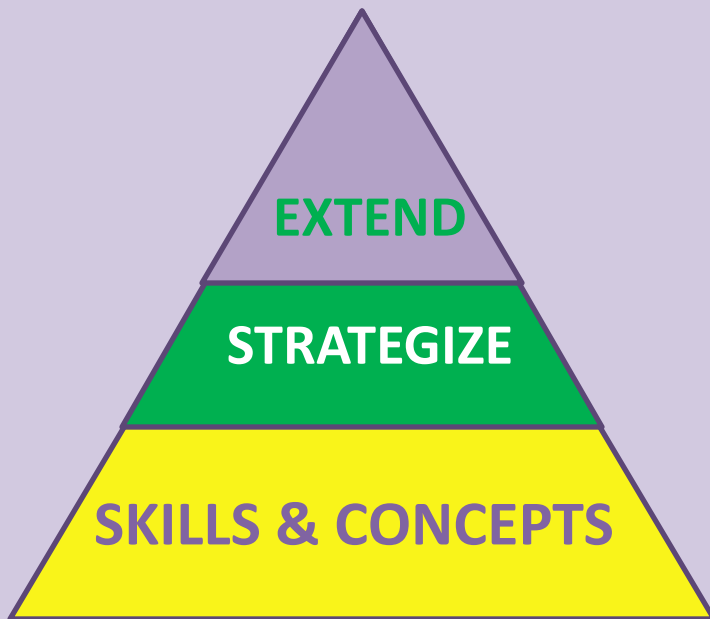


Photo Martin-Morris

# Practicum

2 Biology 100 exam questions

Work with a neighbor  
Rank each question  
Report back



RECALL

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U.S. Department of Health and Human Services

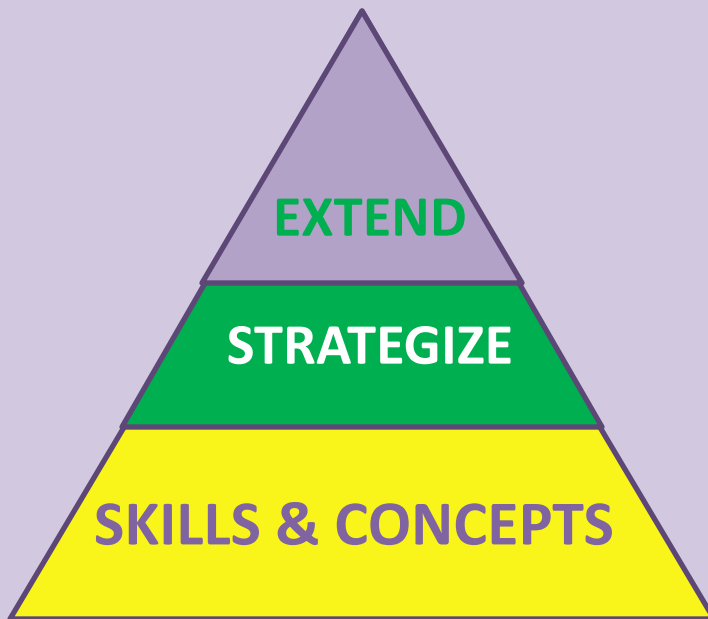
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# Practicum

## Rewrite Low-ranked Question



Same concept  
Write as level 2  
Write as level 3

Share with another group

RECALL

# Conclusions and Questions

## Planning Assessments using Coded Test Bank

University Perspective  
High School Perspective  
Agency Perspective



## Contact Information

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