Peer Instruction #1:
Variables and Output
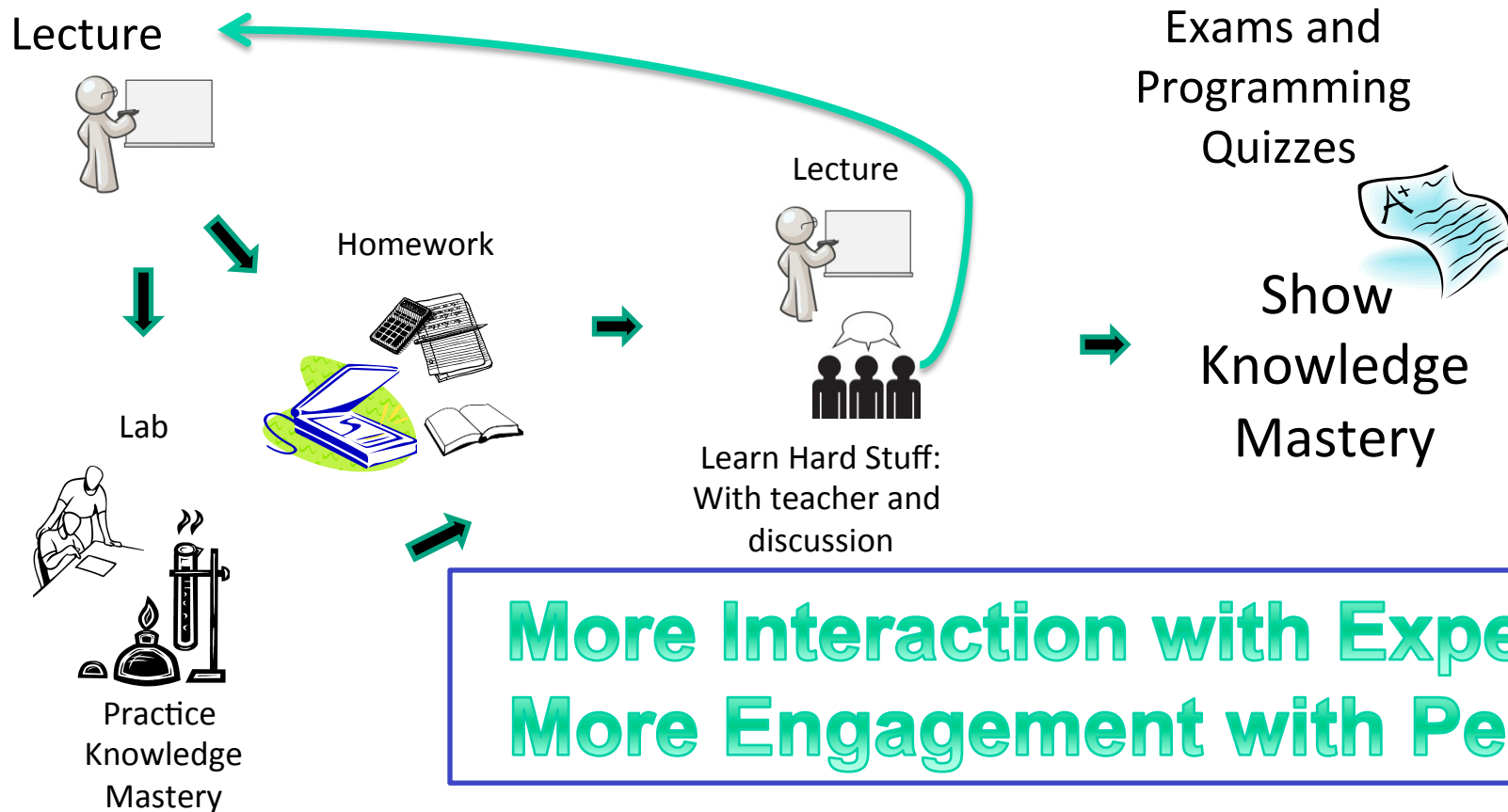
Traditional Class Structure

Lecture	Textbook	Homework	Exam
First Exposure	Read Hard Stuff	See if You Know Hard Stuff	Show Knowledge Mastery

Our Class Structures

Lecture

Exams and
Programming
Quizzes

Lecture

Show
Knowledge
Mastery

Homework

Lab

Learn Hard Stuff:
With teacher and
discussion

Practice
Knowledge
Mastery
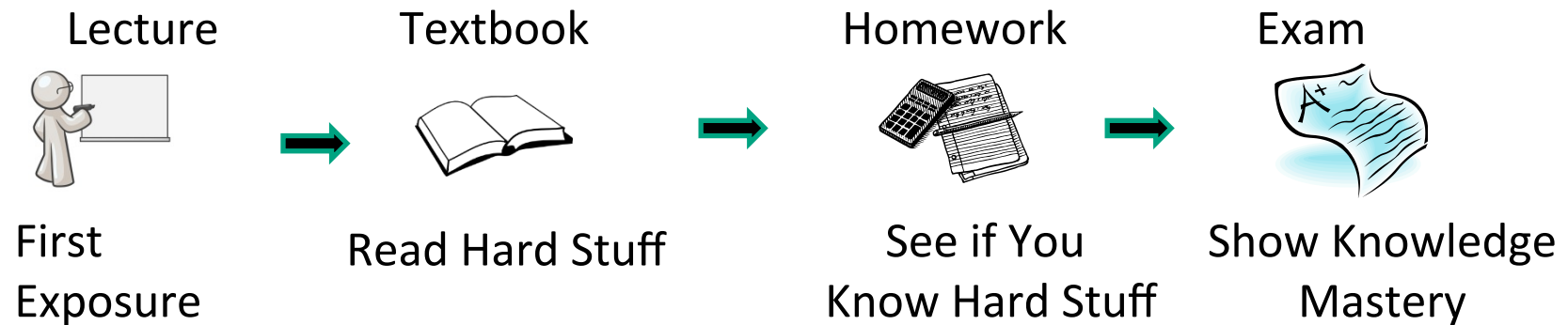
**More Interaction with Experts
More Engagement with Peers**

Nuts and Bolts: The process

- A (somewhat difficult) question will be projected.

- Individually choose an answer and submit.

- Instructor will close poll, without showing results.

- Discuss your answer with your peers.

- In your group, choose an answer and submit.

- Instructor will lead discussion, and show results.

What is the difference between the primitive types shown below?

byte, short, int, long

A. No difference except for the names!

B. Some types are signed, some are unsigned.

C. Some represent integers, others real numbers.

D. Each type has a different size in memory.

E. None of the above.

Primitive Types

Which of the following lists completely follows the rule for identifier syntax?

A. file0, _string, 123name, #real0

B. file1, string_, name123, $real1

C. file2, _string_, float, 1real$

D. file3, __string, 872989, true

E. None of the above

Identifier Syntax

Which of the following variable declarations will not compile?

A. double real0 = 12345;

B. double real1 = 678.90;

C. int integer0 = 3579753;

D. int integer1 = 543.21;

E. All of the above

Type Mismatch

Which of the following type casts is needed to make the statement compile?

A. int integer0 = (short) 97;

B. int integer1 = (byte) 'A';

C. int integer2 = (float) 12345678;

D. int integer3 = (int) 35.790123;

E. All of the above

Type Casting

Which of the following will compile and correctly print the value of the variable?

```
int myVariable = 123456;
```

A. System.out.println("value = " + MyVariable);

B. System.out.Println("value = " + myVariable);

C. System.out.println("Value = " + myVariable);

D. system.out.println("value = " + myVariable);

E. None of the above

Case Sensitivity

What is the value of the variable answer after the following code is executed?

int answer = (10/5) + (10/4) + (12%4) + (11%4);

A. 7.5

B. 8

C. 8.5

D. 9

E. None of the above

Integer Operators

What is the value of the variable answer after the following code is executed?

```
int answer = 10 + 12 / 4 – 3 * 7 / 7 % 4 + 6;
```

A. 8

B. 12

C. 16

D. 24

E. None of the above

Precedence Rules