

Lesson 4.00 — Test Review & Reteach

Overview

Objectives — *Students will be able to...*

- **Re-learn or strengthen** content knowledge and skills from Unit 3.

Assessments — *Students will...*

- **Re-submit** test answers with updated corrections for partial or full credit
 - Credit depends on instructor preference

Homework — *Students will...*

- **Read** BJP 6.1
- **Correct** any incorrect test answers by re-answering on a separate sheet of paper
 - To get back credit, they must justify their new answers
 - Staple new answer sheet to old test and turn in tomorrow

Materials & Prep

- **Projector and computer**
- **Whiteboard and markers**
- **Corrected student tests**
- **Student grades** (posted online, emailed to students, or handed back on paper in class)
- **Digital copy of test questions** for projector

If your class is acing the exams, and you do not feel that you need to re-teach any material, you should skip this lesson and move on directly to LP 4.1. Be sure to update student homework so students have read §6.1 in time for the lesson.

Pacing Guide

Section	Total Time
Bell-work and attendance	5min
Class discussion (if needed)	10min
Test review and reteach	35min
Check student notes and return tests	5min

Procedure

Return student grades before class begins or while students are completing the bellwork.

Do not return students' tests before the review session, since you want to motivate students to pay attention to the entire review, taking supplemental notes the entire time.

Bell-work and Attendance [5 minutes]

Class Discussion (if needed) [10 minutes]

1. If grades are low, invite the class to a discussion of what can be improved. Begin with student complaints and suggestions to build student buy-in. Ask students:
 - How they felt they were going to do before the test
 - What surprised them once they were taking the test
 - What they felt worked in the first unit (lessons, review strategies, assignments)
 - What do they think they want to change for the second unit

2. Once you feel that a dialogue has been established, validate students' feelings, then challenge them (*e.g.* AP courses are stressful, but this is good practice for college, where the pace is faster and professors don't give personalized instruction). In a non-judgmental, supportive tone, remind students that to be successful in the course:
 - Reading is mandatory
 - Homework is mandatory (And valuable! You will never assign "busy" work.)
 - To better manage their time, students should plan for 1 hour of homework a weeknight, with up to 2 hours of homework each weekend. If this seems impossible, they should meet with you or their guidance counselor to assess whether they can fit in an AP class at this time.
 - It is VERY important to keep your tone sympathetic at this point—an overworked, overstressed, underperforming student will slow your entire class down, and color that student against CS for the future!

Test Review and Reteach [30 minutes]

1. Walk the students through each question on the test, glossing over questions that everyone answered correctly.
 - a. You can ask for students to volunteer answers, or call on students randomly. Make sure that students explain their logic when they answer. If a student gives an incorrect answer, the explanation will tell you what you need to re-teach or clarify.
 - b. Do not skip questions that everyone answered correctly, but do not spend more than the time it takes to read the question, and congratulate students' correct answers.
2. Project a copy of each question as you review—this will help students recall the question/process the information.
3. Make sure that students are taking notes during the re-teach, reminding students that for homework, they will have an opportunity to win back some of the points on their exam.
4. For Section II questions, select a sample of student work (with any identifying information obscured), and work through the answer together as a class.

Check student notes and return tests [5 minutes]

At the end of class, check student notes, and return the tests in hard copy form if applicable.

Accommodation and Differentiation

If students' grades are suffering because the reading assignments are taking them too long, you have a few options (some more drastic than others):

- Set aside classroom time to read through the assignment before students leave.
- Give students the lines of code needed to complete assignments, but in jumbled order. Have students rearrange the lines of code into the proper program (this is called a Parsons Problem).
- Flip your classroom: record your lectures, and have students watch them and take notes for homework. Any classwork drills or worksheets can be distributed for "homework," and the more complicated assignments that would normally be done at home, can be completed with your help when they come to class.

create printed-out sheets that students can write code onto. Class time should then be filled with reading assignments, and more complicated coding practice so you are available to tutor as needed.

- Encourage advanced students to take on additional programming challenges. One easy way to do this is to assign Programming Projects from the blue pages at the end of each Chapter. Unit 4 introduces the Magpie lab, a long form programming lab with plenty of enrichment opportunities; encourage students to work on this project if they are ever left with a few minutes after completing a class assignment.

Forum discussion

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