1. WHAT IS TO BE DONE

You are to review a math lesson, and fix it. The lesson in question may be any consecutive ten minutes (slightly more is alright) of video from the Khan Academy Arithmetic and Pre-Algebra course (https://www.khanacademy.org/math/arithmetic).

You should view the video, and prepare a lesson plan to improve the teaching of the same material. You may, of course, choose to keep some of what is done, but you should change enough to make it your own, and to show that you’ve made some improvement in it.

While the Khan Academy has a broad audience and an experimental delivery model, you should have in mind the problem of teaching the material to elementary school students at an appropriate level in a face-to-face classroom. You may, at some parts, have to keep in mind a fictional classroom with a real collection of students. Make sure I know what I need to about them.

I have included below a format that may be helpful to you. Of course, you may use any format you wish, but you should be sure that your format shows your achievement of everything required on the rubric.

2. DUE DATE

The paper should be turned in on or before October 23.

3. GRADING

The usual form questions will be graded, but the content questions will be replaced by the five planning questions on the edTPA rubric, which will be used to evaluate your teaching later on in the teacher education program, and which are similar to those being used in many places for performance evaluation of in-service teachers. They are as follows:

1. How do the candidate’s plans build students’ conceptual understanding, procedural fluency, AND mathematical reasoning and/or problem solving skills?
2. How does the candidate use knowledge of his/her students to target support for students to develop conceptual understanding, procedural fluency, and mathematical reasoning/problem solving skills?
3. How does the candidate use knowledge of his/her students to justify instructional plans?
4. How does the candidate identify and support language demands associated with a key mathematics learning task?
(5) How are the informal and formal assessments selected or designed to monitor students' conceptual understanding, procedural fluency, and reasoning/problem solving skills?

You will notice that none of these is a yes/no question. I will hand out in class the scoring rubric for these five questions; I'm reluctant to post it on my web page due to copyright restrictions. These standards are high — we hope that by the time you finish student teaching you can reach a score of “Proficient” (the middle grade of five) on each of these factors. A perfect performance on the content portion of the grading for the present assignment is to achieve a rating of at least high-emerging (second box from the left) on each of the five items, and a rating of “Proficient” on at least one. Of course, higher scores are better, but I won’t penalize anyone for not exceeding this level.

4. A Possible Format

I certainly don’t require this format of you. However, it includes enough questions to get you thinking a lot about what you would need to plan for in a lesson, and will, in most cases, make sure you don’t just forget a broad area that should be accounted for. To be clear, I will grade on the rubric, not (as such) on the questions below.

**Header:** The title of the lesson, and the grade level.

**Central Focus:** What is the central focus for the content in the learning segment?

**Content Standard:** What standard(s) are most relevant to the learning?

[You may only describe the goals; you need not make formal standards statements.]

**Student Learning Objective(s):** What are the specific skill/procedure learning goal(s) for the student in this lesson? What are the specific concepts/reasoning/problem solving learning goal(s) for the student in this lesson?

**Prior Academic Knowledge and Conceptions:** What knowledge, skills, and concepts must students already know to be successful with this lesson? What prior knowledge and/or gaps in knowledge to these students have that are necessary to support the learning of the skills and concepts for this lesson?

**Common Errors, Misconceptions, and Partial Understandings:** What are common errors or misunderstandings of students related to the central focus of this lesson? How will you address them for this group of students?

**Launch:** How will you start the lesson to engage and motivate students in learning?

**Introduction:** What will you do to engage students in developing understanding of the lesson objective(s)? How will you link the new content (skills and concepts) to students' prior academic learning and their personal/cultural and community assets?

**Teaching:** What will you say and do? What questions will you ask? How will you engage students to help them understand the concepts? What will students do? How will you determine if students are meeting the intended learning objectives?
Structured Practice and Application: How will you give students the opportunity to practice so you can provide feedback? How will students apply what they have learned? How will you determine if students are meeting the intended learning objectives?

Closure: How will you end the lesson?

Differentiation/Planned Support: How will you provide students access to learning based on individual and group needs? How will you support students with gaps in their prior knowledge?

Student Interactions: How will you structure opportunities for students to work with partners or in groups? What criteria will you use when forming groups?

What Ifs: What might not go as planned and how can you be ready to make adjustment?

Theoretical Principles and/or Research-Based Best Practices: Why are the learning tasks for this lesson appropriate for your students?

Materials: What materials does the teacher need for this lesson? What materials does the student need for this lesson?

Overall Academic Language Demands: What language function do you want students to develop in this lesson? What must students understand in order to be intellectually engaged in the lesson?

Vocabulary: What content specific terms (vocabulary) do students need to support learning of the learning objective for this lesson?

Language Use: What specific ways(s) will students need to use language (reading, writing, listening, and/or speaking) to participate in learning tasks and demonstrate their learning for this lesson?

Prior Language Skills: What are your students’ abilities with regard to the oral and written language associated with this lesson?

Language Support: How will you support students so they can understand and use the language associated with the language function demands in meeting the learning objectives of the lesson?

Assessment: Describe the tools/procedures that will be used in this lesson to monitor students’ learning of the lesson objective(s). Attach a copy of the assessment and the evaluation criteria / rubric in a “Resources” section at the end of the lesson plan.