

## TEACHING THE CORE – EXEMPLAR LESSON PREPARATION GUIDE, MATHEMATICS

Thank you for participating in the Teaching the Core exemplar video project. We appreciate your important contribution to creating these valuable professional development resources for teachers across the country. The Teaching the Core exemplar video project is focused on capturing lessons that are exemplars of the Common Core State Standards in practice. In order to support you in planning for this lesson we have developed the following lesson preparation guide. When planning your lesson for video capture please follow the steps outlined below.

### Step 1: Complete the below demographic information.

School Name: <i>Waubansie Valley High School</i>	Teacher Name: <i>Jerrine Roderique</i>
Date: <i>December 2, 2013</i>	Period / Time (e.g. 8:45-9:30): <i>8:18-9:13</i>
Room Number: <i>354</i>	Grade Level: <i>10-12</i>
Demographics of the class (e.g., % ELL, % SPED, other relevant): <i>honors students</i>	

### Step 2: Determine the standard(s) to be addressed in this lesson.

For the purposes of this project, we are prioritizing the standards in the chart below. For K-8, lessons should target the grade level cluster(s), grade level content standard(s) or part(s) thereof as outlined in the table below. These priorities represent a subset of the major work<sup>1</sup> of the grade for K-8. For high school, reference the Widely Applicable Prerequisites<sup>2</sup> for a list of domains and clusters to focus on with the concepts listed in the table below as the top priority.

Gr	First Priority	Close Second
K	K.CC	K.OA
1	1.NBT	1.OA
2	2.OA.A, 2.OA.B	2.NBT
3	3.OA (Excluding 3.OA.9)	3.NF, 3.MD.C
4	4.NF, 4.NBT.B	4.OA.A
5	5.NF, 5.NBT.B	5.MD.C
6	6.RP.A, 6.EE, 6.NS.1 (showing in particular how it arises from 5.NF.7)	6.NS.C
7	7.RP.A, 7.NS.A	7.EE.3
8	8.EE.B, 8.EE.C, 8.F.A	8.F.B, 8.SP.3 (supporting cluster)
HS	<ul style="list-style-type: none"> <li>• Variety of modeling tasks.</li> <li>• Multi-step quantitative problems with lots of units and rates</li> <li>• Applications leading to 2 simultaneous linear equations in two variables</li> <li>• Applications of linear, quadratic, and exponential functions</li> <li>• Seeing and using structure practice with symbolic manipulation</li> <li>• “Thinking like a mathematician” (e.g., making a conjecture, checking consistency, generalizing)</li> <li>• Working with <math>y=mx + b</math></li> </ul>	If the lesson targets geometry in HS: the lesson should be focused on using algebra to solve measurement problems and/or the use of coordinate geometry

a. Note the cluster(s), standard(s) or parts thereof addressed in this lesson.

*HS - modeling, application, making conjectures*

b. Note the aspect(s) of rigor called for by the standard(s) being addressed in this lesson: Conceptual Understanding, Procedural Skill and Fluency, and/or Application.

*Conceptual Understanding, Procedural Skill (using TI), Application*

*(Reminder: the aspect(s) of rigor called for by the standard(s) being addressed should also be the aspect(s) of rigor targeted in this lesson)*

<sup>1</sup> [www.achievethecore.org/focus](http://www.achievethecore.org/focus)

<sup>2</sup> [www.achievethecore.org/prerequisites](http://www.achievethecore.org/prerequisites)

### Step 3: Plan the Lesson

- a. Use the grade-appropriate Instructional Practice Guide ([achievethecore.org/math-common-core/instructional-practice](http://achievethecore.org/math-common-core/instructional-practice)) to plan your lesson. An exemplar lesson will meet all of the indicators for Core Action 1 and many, if not all, of the indicators for Core Action 2 and 3. Please write your lesson plan using the lesson plan format with which you are most familiar. Be sure to note:
- Any materials you will use in the lesson (including multi-media)
  - Where this lesson fits within the context of the larger unit – what was covered before this lesson, and what will be covered after this lesson
  - Any student activities and where in the classroom those activities will take place
- b. Reflect on the lesson you have just planned and note which of the Core Action indicators you think this lesson illustrates particularly well.

*Core Action 1 Indicators A-D*

*Core Action 2 Indicators A, B, C, E, F*

*Core Action 2 Indicators A, B, C, D*

- c. Tell us anything else you feel is important to know about this lesson that is not captured above or in the lesson plan.

*This lesson actually spans 2 days. I'm also planning to give them a pre-modeling assignment, however, that will likely be done on 11/26 due to Thanksgiving Break.*

*We have never taught modeling in the course with the focus on understanding how  $r$  and the residual plot as well as the context can support our choice of*

### Step 4: Share the Lesson

- a model. Hopefully I've anticipated my student's needs in preparation for the lesson.*
- a. At least 10 days before your lesson is recorded, please share all lesson materials (this completed document, lesson plan, handouts, and text) with [INSERT DISTRICT CONTACT(S)]. [INSERT DISTRICT CONTACT(S)] will review and provide you with feedback on your lesson at least one week before your lesson is recorded.
- b. At least three days before your lesson is recorded, email the electronic versions of all lesson materials (this completed document, lesson plan, handouts) to [lessonmaterials@teachingthecore.org](mailto:lessonmaterials@teachingthecore.org).
- c. The day of the lesson, attach a copy of your lesson plan and any student handouts to this document and give it to the videographer.
- d. After the lesson, provide the videographer with samples of student work. If it is not possible to make copies of the student work, the videographer can take a picture. If you are not able to provide student work immediately after the lesson you can also bring samples to your interview.

### Step 5: Prepare for Filming

The filmmaker will make every attempt to minimize the disruption to your classroom. In order to support this goal, we ask that you please keep the following in mind as you prepare for the day of the video-taping.

We ask that you:

- Use black whiteboard markers – they show up better on film. The filmmakers will bring extra black markers in case they are needed.
- You will need to wear a wireless microphone so that your voice is captured clearly on the video. Wear clothing that has a pocket or belt on which to place a transmitter as well a top which will allow a small microphone to clip on easily.

- c. Before the video-taping begins, please advise the filmmaker of any students who have not turned in their video release forms and allow the filmmaker to photograph any previously uncollected video release forms

Important information about the filmmaking process:

- a. The filmmaker may request to adjust the blinds or classroom lighting.
- b. While camera set-up times may vary based on the class size and set-up, it typically takes 20 minutes.
- c. A total of 4 cameras will be placed in the classroom. The most common set up will be 2 in the front and 2 in the back of the room. 6 small audio recorders will be placed in different locations around the room. Once the class has started, the filmmaker will operate the 2 cameras in the back of the room, leaving the 2 front cameras rolling continuously. This will minimize classroom disruption.

## **Step 6: Reflect on the Lesson**

At some point after your lesson you will be asked to participate in an interview. The goal of this interview is to learn more about the lesson, the decisions you made in planning for it, and your assessment of how it could have been strengthened. The questions below will help you reflect on the lesson and prepare some thoughts for the interview. Please take a few moments to think about your responses to the following questions – note that you do not need to write out answers to these questions; imagine this is a conversation with a fellow teacher about your lesson. However, because a few days may elapse between the lesson and the interview, you may want to jot down a few notes so you do not forget your thoughts.

- 1. We want to understand the decisions you made in planning for this lesson and how it fits into the unit and year.**
  - a. How does this lesson connect to and build on students' prior skills and knowledge? What was taught before this lesson, and what will come after it? Discuss the sequence of lessons that surround this one lesson.
  - b. Talk about the standard(s) or cluster targeted in this lesson. What did you do to make the lesson reflect the full intent of that standard or cluster?
  - c. Which of the Core Action indicator(s) do you think this lesson best exemplified? How did you plan for this?
- 2. We are interested in how the Shifts required by the CCSS are being incorporated into your classroom.**
  - a. Discuss how this lesson illustrates the Shifts required by the CCSS.
  - b. How did you teach the content of this lesson prior to the CCSS? What is the same and what is different?
- 3. Student engagement is crucial to the work of the CCSS – we want to understand how you ensured that all students had the opportunity to productively engage in the work of the lesson.**
  - a. How did the students handle this lesson? Did they understand the mathematics of the lesson? How do you know?
  - b. Explain how you differentiated in this lesson. Did all students have opportunities to work on grade-level content? If all students did not have this opportunity, please explain why. Which behaviors from Core Action 3 did the students' best exemplify in this lesson? What actions have you taken as a teacher to make that happen?
  - c. Would you like to comment on any of the submitted student work? Was there something that delighted or surprised you with this work?
- 4. Great instructors are continuously learning – we want to understand what you celebrated in this lesson and what you would improve upon.**
  - a. Reflecting on the lesson, what worked particularly well and what might you do differently?
  - b. Were there any surprises or unexpected student behaviors or reactions?