Canyons School District Lesson Plan Template 06/2015

1.Teacher Name: Allison Duncan **Date:** **Plan Duration: 90 minutes**	**2. Course/Content/Grade: Secondary II, 10th grade** **3. Unit/Topic/Module: Unit 1, lesson 1.3.1, Defining Complex Numbers**
4. Core Standard(s): N.CN.1 – know there is a complex number I such that $i^2 = -1$, and every complex number has the form a + bi with a and b real. N.CN.2 – Use the relation $i^2 = -1$ and the commutative properties to add, subtract, and multiply complex numbers	**5. Essential Vocabulary:** • **Real numbers** • **Imaginary numbers** • **A + bi** • **Complex numbers** • **i**
6. Lesson Objective(s): • **I can understand that the set of complex numbers includes the set of all real numbers and set of imaginary numbers** • **I can express numbers in the form a + bi** • **I can add, subtract, and multiply complex numbers**	**7. Interdisciplinary Connections: Shared vocabulary: argument, analysis**
8. Materials and Technology needed to enhance learning: Smart board or doc camera	
9. Assessment for student learning (Formative): Checks on daily student work, whiteboards for practice problems, exit ticket	

10. Pacing (mins.)	WHAT THE TEACHER DOES: 11. Lesson Sequence- • What will I do and when will I do it? Include Explicit Instruction: I do / We do / You all do / You do	WHAT THE STUDENT DOES: 12. Student Skill or Knowledge for each part of the lesson sequence • What will my students be doing to acquire skills or knowledge during this part of the lesson?	13. DOK Level	HOW STUDENTS SHOW THE TEACHER WHAT THEY KNOW: 14. Opportunities To Respond (OTRs) <u>that provide immediate checks for understanding</u> • How will my students show understanding in this part of the lesson sequence?	HOW THE TEACHER ADJUSTS THE LESSON FOR ALL LEARNERS: 15. Scaffolding for the needs of ALL learners (include interventions) • What will I do for students who are struggling to meet the target? • What will I do for students who have already met the target? AND Grouping Structures needed for effective scaffolding
5 min	Starter: can you find the solution to –25. Why or why not?	Students work with a partner to answer the question	1	Physical response: Thumbs up/down	Precision partnering
5 min	Cloze read introduction on pg. U1-88	Students read paragraph	1	Choral read missing words	Whole class Cloze text to scaffold for various reading levels

15-20 min	leader facilitates learning of 1.3.1 Give student leader copy of teacher U1-88 and U1-89 Graphic organizer for 1.3.1 key concepts Partner work on Practice 1.3.1	Students: • Fill in graphic organizer • Fill in student workbook with examples, Practice 1.3.1	2	Teacher monitors, clarify misunderstandings	Small groups Whole class (if needed) * Teacher may need to do whole class with simplifying imaginary powers
5-10 min	Teacher goes over answers to practice 1.3.1 Clarify any questions	Students check answers	1	Checking work	Whole class
20-30 min	Teacher uses Power point for 1.3.2 Provide explicit instruction for examples: Teacher: example 1, student generated examples Class: (2 + 3i) + (1, - 6i) and (5 – 2i) – (-4 – i) Partner: (3 – 2i) +(3 + 2i) and (10 – 5i) – (6 – 3i) Individual: 1 – 4 Practice 1.3.2 Repeat for examples 2, 3, and 4 Individual work will be: Practice 1.3.2 problems	Students take notes in student workbook Students fill in examples in student workbook Individual practice 1.3.2	2-3	Working on example problems with partners or individually	Teacher adjusts pacing and number of examples dependent on what they observe during explicit instruction

10-15 min	Small group reteach and enrich based on practice 1.3.2 Reteach using resource book problems Enrich in partners: problem based task (with coaching questions) If reteach NOT needed, go on to 1.3.3 Introduction, key concepts, and examples 1 and 2	Students participate in reteach and guided practice, complete additional problems Some students work in partners on problem-based task, using coaching questions to work through the task	2, 3, 4	Students respond in small groups with choral response, oral response, whiteboards, etc.	Skill based small group instruction for students above and below the standard
5-10 min	Exit ticket	Students answer *What did I learn today?* *How did I learn it?* *What questions do I still have?*	2	Student answers provide teacher with information for next lesson	Students grouped for next day's lesson
	16. Closure: • Teacher connects lesson back to objectives. • Students reflect on their learning. • Teacher formatively assesses student learning. Graphic organizer, workbook, and exit ticket serve as formative assessments. Students reflect on lesson to connect back to the objectives.				

Canyons School District Lesson Plan Reflection Questions **06/2015**

1. Were my students ready for this lesson? Which data support this?

2. Was the instructional objective met? How do I know students learned what was intended?

3. Were the students productively engaged? How do I know?

4. Did I alter my instructional plan as I taught the lesson? How and why?

5. If I had the opportunity to teach the lesson again to the same group of students, would I do anything differently? What? Why?

6. Are my students ready to "move on"? If yes, how do I know? If not, what adjustments/re-teaching do I need to make to ensure student understanding?