Curriculum: Katherine Baker

Learning-Focused Toolbox

Date: July 19, 2011 ET

Teacher / Team Name: Geometry Regular

Topic: Unit 2: Reasoning and Proofs(REG)

Days: 12

Subject(s): Math

Grade(s): 9th, 10th, 11th, 12th

Key Learning:

Reasoning and logic will be used to solve geometric proofs.

Unit Essential Question(s): **How do you use reasoning and logic to solve geometric proofs?**

Concept: **Inductive Reasoning, Conjecture, and Logic**	**Concept:** **Conditional Statements and Deductive Reasoning**	**Concept:** **Postulates and Proofs**
Lesson Essential Question(s): How do you use inductive reasoning in mathematics? (A) How do you use logical reasoning to prove statements are true? (A)	**Lesson Essential Question(s):** How do you write conditional statements? (A) What similarities/differences exist between inductive and deductive reasoning? (A)	**Lesson Essential Question(s):** What are the basic postulates that relate to points, lines, and planes? (A) How do you solve an algebraic equation using two column proofs? (A) How do you write a proof involving segment addition and congruence? (A) How do you write a proof involving angle addition and congruence? (A)
Vocabulary: conjecture, counterexample, statement, negation, compound statement, conjunction, disjunction, inductive reasoning	**Vocabulary:** conditional statement, if-then statement, hypothesis, conclusion, related conditionals, converse, inverse, contrapositive, logically equivalent, deductive reasoning, Law of Detachment, Law of Syllogism, valid	**Vocabulary:** proof, theorem, deductive argument, paragraph proof, informal proof, algebraic proof, two-column proof, formal proof

Additional Information:
Sections: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7

Attached Document(s):

Vocab Report for Topic: Unit 2: Reasoning and Proofs(REG)
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Concept: Inductive Reasoning, Conjecture, and Logic

conjecture -
counterexample -
statement -
negation -
compound statement -
conjunction -
disjunction -
inductive reasoning -

Concept: Conditional Statements and Deductive Reasoning

conditional statement -
if-then statement -
hypothesis -
conclusion -
related conditionals -
converse -
inverse -
contrapositive -
logically equivalent -
deductive reasoning -
Law of Detachment -
Law of Syllogism -
valid -

Concept: Postulates and Proofs

proof -
theorem -
deductive argument -
paragraph proof -
informal proof -
algebraic proof -
two-column proof -
formal proof -