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| Teacher: **Beach/Beasley/Bond** | | Grade Level: **8th/9th/10th** | Subject: **Algebra 1** | Scheduled: |
|  | **EOC Practice Test** | **Unit 1 Pretest** | **Structure of Expressions** | **Structure of Expressions**  **Adding and Subtracting Polynomials** |
| Standards/Elements  Essential Questions | All Standards/Elements from GSE Algebra 1 | All Standards/Elements from GSE Algebra 1 Unit 1 | **MGSE9-12.A.SSE.1b**  **MGSE9-12.A.SSE.1a**  **MGSE9-12.A.SSE.1**  1. What are the different parts of an algebraic expression?  2. How are real-world scenarios translated into algebraic expressions?  3. How does changing one part of an expression affect the value of the expression?  4. How can a variable and its power be used to determine which terms are like terms? | **MGSE9-12.A.APR.1**  5. What is the relationship between addition of polynomials and subtraction of polynomials?  6. How can we determine if polynomials are closed under addition, subtraction, or multiplication? |
| Opening/Warm-up | Warm-up: Students will fill in answer document for Algebra 1 EOC Practice test and go to Web and access Practice Test  [Algebra Practice Test](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/usa_full_length_algebra_1.pdf) | Warm-up: Students will fill in answer document for Algebra 1 Unit 1 Pretest and go to Web and access Pretest  [Unit 1 Pretest](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/unit_1_sample.pdf) | Warm-up: [Walch 1.3.1](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/lesson_1.3.1_warm-up.pdf)  Students complete warm-up and whole group discussion | Warm-up: [Walch 1.3.2](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.2_warm_up.pdf)  Students complete warm-up and whole group discussion |
| Direct Instructions | Directions on completing the test | Directions on completing the test | Utilize [Vocabulary Resources](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/1.3_resources.pdf) while completing the [Scaffolded Practice 1.3.1](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/lesson_1.3.1_scaffolded_practice.pdf) Example 1 whole group | Explore idea of representing polynomial expressions with [Algebra Tiles](http://www.glencoe.com/sites/common_assets/mathematics/ebook_assets/vmf/VMF-Interface.html) and how they can be used for arithmetic operations.  [Scaffolded Practice 1.3.2](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.2_scaffolded_practice.pdf) (common error with subtraction is discussed) |
| Work Period | Students will complete the practice test | Students will complete the pretest | Students will complete [numbers 1-5 on Practice Set A and numbers 1-6 on Practice Set B 1.3.1](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/lesson_1.3.1_practice_set.pdf)  **Ixl** Algebra 1 Z.1 (add discussion of polynomial degree) [slide provided for reference](http://images.slideplayer.com/14/4320646/slides/slide_18.jpg) | **Ixl**: A1.Z.2-Match models to expression  A1.Z.3- Add and Subtract with models  A1.Z.4-Add and Subtract without models  A1.Z-5-Add and Subtract to find Perimeter  [**Frameworks Task** Polynomial Patterns Task](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/polynomial_patterns_student_task.pdf)(preview multi) |
| Closing | Gather answer documents and technology is returned | Gather answer documents and technology is returned | Students will be selected to share their solutions and any strategies they implement  Kahoot on Polynomial Vocab | Lesson 1.3.2 Post Lesson Assessment |
| Differentiation |  |  | **Accelerated Learners:** Complete [Problem Based Task 1.3.1](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/lesson_1.3.1_pbt.pdf) and remaining items on either Problem Set A or B  **Remediation/Support:** Additional practice problems in ixl | **Accelerated Learners:** Complete [Problem Based Task 1.3.2](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.2_problem_based_task.pdf)  **Remediation/Support:**   * Allow continued use of virtual algebra tiles * Provide physical algebra tiles for manipulatives * Complete [Practice Set A and/or B 1.3.2](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.2_practice_set_a___b.pdf) * [Video Examples](https://drive.google.com/file/d/0B_-UkFVwowbkWVlaM3puZDBzNTg/view) * [Matts Math Lab items A-F](http://www.gwinnett.k12.ga.us/PhoenixHS/math/grade09GSE/Unit01/Section%201-07%20-%20Polynomials-BLANK.pdf) |
| Technology Usage | Web based delivery | Web based delivery | Web based delivery | Web based delivery  Virtual manipulatives |
| Assessments/  Assessment Usage | Data from Practice test will be compared to 2 other administrations of the test to monitor student growth | \*Formative assessment will be used during the work time to identify the needs of the student/group and appropriate research based strategies will be used to address the identified need | \*Formative assessment will be used during the work time to identify the needs of the student/group and appropriate research based strategies will be used to address the identified need | \*Formative assessment will be used during the work time to identify the needs of the student/group and appropriate research based strategies will be used to address the identified need |
| Teacher: **Beach/Beasley/Bond** | | Grade Level: **8th/9th/10th** | Subject: **Algebra 1** | Scheduled: |
|  | **STRUCTURE OF EXPRESSIONS MULTIPLYING POLYNOMIALS** |  |  |  |
| Standards/Elements  Essential Questions | **MGSE9-12.A.APR.1**  6. How can we determine if polynomials are closed under addition, subtraction, or multiplication?  How can we multiply polynomials using different representations and connect to real-world scenario? |  |  |  |
| Opening/Warm-up | Warm-up: [Walch 1.3.3 warm-up.](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.3_warm-up_student_worksheet.pdf) [Debrief](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.3_warm-up_debrief.pdf) and video for whole group discussion |  |  |  |
| Direct Instructions | Video link to Multiply using [area model](https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/multiplying-binomials-2/v/area-model-for-multiplying-binomials)  Video link to Multiply using [FOIL method](https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/multiplying-binomials-2/v/multiplying-binomials)  [Walch 1.3.3 Guided Practice](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.3_guided_practice_student.pdf)  [Walch 1.3.3 Guided Practice Key](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.3_guided_practice_key.pdf) |  |  |  |
| Work Period | IXL Algebra 1: Z.6 through Z.10 Multiplying Polynomials various representations  [Walch 1.3.3 Practice Set A](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/1.3.3_practice_student_worksheet_a.pdf) or  [Walch 1.3.3 Practice Set B](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/1.3.3_practice_student_worksheet_b.pdf) |  |  |  |
| Closing | Kahoot on Multiplying Polynomials |  |  |  |
| Differentiation | **Accelerated Learners:** [Walch 1.3.3 Problem Based Task](http://robertlbeach.weebly.com/uploads/1/2/3/8/12382487/walch_1.3.3_problem-based_task_student_worksheet.pdf)  **Remediation/Support:**  Higher SmartScore on ixl for increased skill practice  [Matt’s Math Lab items G through M](http://www.gwinnett.k12.ga.us/PhoenixHS/math/grade09GSE/Unit01/Section%201-07%20-%20Polynomials-BLANK.pdf) | **Accelerated Learners:**  **Remediation/Support:** | **Accelerated Learners:**  **Remediation/Support:** | **Accelerated Learners:**  **Remediation/Support:** |
| Technology Usage | Web based delivery  Video Tutorial | Web based delivery | Web based delivery | Web based delivery |
| Assessments/  Assessment Usage | \*Formative assessment will be used during the work time to identify the needs of the student/group and appropriate research based strategies will be used to address the identified need | \*Formative assessment will be used during the work time to identify the needs of the student/group and appropriate research based strategies will be used to address the identified need | \*Formative assessment will be used during the work time to identify the needs of the student/group and appropriate research based strategies will be used to address the identified need | \*Formative assessment will be used during the work time to identify the needs of the student/group and appropriate research based strategies will be used to address the identified need |

**Standards of Mathematical Practice (SMP)**

1-Make sense of problems and persevere in solving them

2-Reason abstractly and quantitatively.

3-Construct viable arguments and critique the reasoning of others.

4-Model with mathematics.

5-Use appropriate tools strategically.

6-Attend to precision.

7-Look for and make use of structure.

8-Look for and express regularity in repeated reasoning.

**MGSE9-12.A.SSE.1**

Interpret expressions that represent a quantity in terms of context.

**MGSE9-12.A.SSE.1a**

Interpret parts of an expression, such as terms, factors, and coefficients, in

context.

**MGSE9-12.A.SSE.1b**

Given situations which utilize

formulas or expressions with multiple terms and/or factors, interpret the meaning (in context) of individual terms or factors.

**MGSE9-12.A.APR.1**

Add, subtract, and multiply polynomials. Understand that polynomials form a system analogous to the integers in that

they are closed under operations.

**Essential Questions**

1. What are the different parts of an algebraic expression?

2. How are real-world scenarios translated into algebraic expressions?

3. How does changing one part of an expression affect the value of the expression?

4. How can a variable and its power be used to determine which terms are like terms?

5. What is the relationship between addition of polynomials and subtraction of polynomials?

6. How can we determine if polynomials are closed under addition, subtraction, or multiplication?