**Edwards Syllabus** **☺ 2017-2018 ☺ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ☺Block\_\_\_\_\_\_**

**GEOMETRY HONORS UNIT 4 - TRIANGLES & THEIR RELATIONSHIPS**

**HOMEWORK POLICY:** *In order to receive a 3, you must do the following (.5 off for each objective not completed):*

1. Write your name and date along with the assignment in the top margin. All of your work must be done in pencil or a black pen.
2. Copy each problem. If you have to do any graphing, it must be done on graph paper.
3. Every problem must be attempted to the best of your ability. Use the internet (Khan Academy) if you have problems understanding.
4. All algebraic work must be shown, and it should be neat and organized (hint: circle or underline your answers).
5. All worksheets should be checked and fully corrected using a red pen before coming to class. Go to **cindyedwards.weebly.com.**
6. *Finally, assess your understanding by evaluating yourself before coming to class.*

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| **DATE** | **DAILY LEARNING TARGETS & OBJECTIVES** | | **INDEPENDENT PRACTICE (HOMEWORK)** | | | | **GRADE** |
| Wed, Nov. 15  ***Day 0*** | **Test on Unit 3**  Classifying Triangles | | Complete the Classifying Triangles Notes  *Do IXL F.1 (you must score 80% or higher!)* | | | |  |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Fri, Nov. 17  ***Day 1*** | Review Classifying Triangles  Angles of Triangles | | *Do IXL F.2 & F.3 (you must score 80% or higher!)* | | | |  |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Tue, Nov. 21  ***Day 2*** | Congruent Triangles (CPCTC)  Prove Triangles Congruent by SSS, SAS, ASA, and AAS | | Day 02 Congruent Triangles Worksheet  IXL J.1, J.2, K.1, K.3, K.5 | | | |  |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| ***Early Release Nov. 22– Adjusted Schedule… Return to school on Monday, Nov. 27!***  ***Happy Thanksgiving!*** | | | | | | | |
| Mon, Nov. 27  ***Day 3*** | Proofs on Proving Triangles Congruent  Classwork: Day 03 Congruent Triangles Review | | Day 03 Proofs on Proving Triangles Congruent | | | |  |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Wed, Nov. 29  ***Day 4*** | Review of Unit 4A (1/2 way through the unit) | | Review of Unit 4A Worksheet (Pretest) | | |  | |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Fri, Dec. 1  ***Day 5*** | Day 05 Segments in Triangles | | Day 05 Segments in Triangles Practice WS  IXL M.3 | | | |  |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Tue, Dec. 5  ***Day 6*** | Day 06 Inequalities in One Triangle and  Triangle Inequality Theorem | | Day 06 Skills Practice Worksheet  IXL M.4 & M.5 | | | |  |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Thu, Dec. 7  ***Day 7*** | Day 07 Inequalities in Two Triangles | | Day 07 Skills Practice Worksheet | |  | | |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Mon, Dec. 11  ***Day 8*** | Unit 4B Review (the final ½ of the unit) | | Unit 4B Test Review Worksheet  Review Unit 4A Test Review Worksheet |  | | | |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |
| Wed, Dec. 13  ***Day 9*** | **Unit 4 Test** | | **TOTAL POINTS:** | | | |  |
| L. Target? | Emoji | What Questions do you still have? | What were your AHA Moments? | | | | |

**LEARNING TARGETS:**

**Target 1:** I CAN classify triangles by sides and angles & apply the triangle sum & exterior-angle theorems in real world situations.

**Target 2:** I CAN use CPCTC to find missing sides and angles of congruent triangles

**Target 3:** I CAN prove that triangles are congruent using the following methods: SSS, SAS, ASA, AAS, or HL

**Target 4:** I CAN identify and apply the properties of special segments in triangles, including altitudes, medians, and bisectors.

**Target 5:** I CAN apply the inequality relationships of angles or sides of one or two triangles in real world situations, including ordering the sides and angles of a triangle.

**ENDURING UNDERSTANDINGS: Triangles are the cornerstone of geometry.**

1. Congruent triangles share corresponding parts.
2. The coordinate plane can be used to prove congruent triangles.
3. Triangles are essential in architecture.
4. The measure of segment lengths determines whether a figure is a triangle.
5. Relationships of geometric figures must be based on provable facts and not assumptions.

**ESSENTIAL QUESTIONS: Why are triangles important in geometry?**

1. How do you identify corresponding parts of congruent triangles?
2. How do you use coordinate geometry to find relationships within triangles?
3. How are triangles used in structural design?
4. What relationship exists between the side lengths of triangles?
5. How will changing the measure of one angle affect the triangle?

**VIRGINIA STATE SOL Objectives (2009):**

**G.5** The student, given information concerning the lengths of sides and/or measures of angles in triangles, will

a) order the sides by length, given the angle measures;

b) order the angles by degree measure, given the side lengths;

c) determine whether a triangle exists; and

d) determine the range in which the length of the third side must lie.

These concepts will be considered in the context of real-world situations.

G.6 The student, given information in the form of a figure or statement, will prove two triangles are congruent, using algebraic and coordinate methods as well as deductive proofs.

**VIRGINIA BEACH OBJECTIVES:**

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| **GH.TR.4.1** | The student will apply properties of triangles in situations involving Science, Technology,  Engineering and Mathematics (STEM), including: classifying triangles based on sides  and angles; applying the triangle sum theorem; and applying the exterior-angle theorem. |
| **GH.TR.4.2** | The students will show that triangles are congruent by SSS, SAS, ASA, AAS or HL using  algebraic and coordinate methods as well as deductive proofs, including flow, paragraph  or two-column proof. **(SOL G.6)** |
| **GH.TR.4.3** | The student will draw conclusions about segments or angles using the corresponding parts of congruent triangles theorem, including the use of altitude and median of a triangle, and overlapping triangles. **(SOL G.6)** |
| **GH.TR.4.4** | The students will apply the inequality relationships for angles or sides of one or two  triangles in situations involving Science, Technology, Engineering and Mathematics  (STEM), including ordering the sides and angles of a triangle. **(SOL G.5 a, b, c, d)** |