**Multimedia Inquiry Lesson Plan**

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**Date Created:** 4/24/14

**Subject(s):** Geometry

**Topic or Unit of Study (Title):** Isosceles and Equilateral Triangles

**Grade Level:** 10th Grade

***Materials:*** Notes, Laptops (or have a requested computer lab with internet)

**Summary (*and Rationale*):** Discuss the definition of isosceles triangle, the Triangle Angle-Sum Theorem, and a basic algebraic equation as proof of the Isosceles Triangle Theorem. Want to be certain students understand what is meant by a side being “opposite” an angle.

**I. Focus and Review (Establish Prior Knowledge):** [5 minutes] Review definitions and properties of isosceles and equilateral triangles, definition of bisect, definition of perpendicular, and properties of parallel lines.

**II. Statement of Instructional Objective(s) *and Assessments*:**

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| **Objectives** | **Assessments** |
| *The students will be able to use and apply properties of isosceles triangles.* *The students will practice and refine knowledge and skills in multimedia to create diagrams that relate to congruent triangles. Three theorems and two corollaries will be discussed and proven. The students will go to the computer lab and use a program such as Inspiration to create diagrams of the theorems about isosceles and equilateral triangles.* | Instructor will have students make inferences about the properties of isosceles and equilateral triangles.Instructor will walk around the lab as students create diagrams about isosceles and equilateral triangles to ensure students understand the concept. Instructor will answer clarify any confusion and answer any questions while assisting students in creating their diagrams. |

State the objective: [5 minutes] to use and apply properties of isosceles and equilateral triangles.

Assessment: [time]

**III. Teacher Input (Present tasks, information and guidance):**  [40 minutes] (Show video to introduce students to new lesson - <http://www.phschool.com/atschool/academy123/english/academy123_content/wl-book-demo/ph-398s.html>) Define parts of an isosceles triangle. Use parts of an isosceles triangle to set up Isosceles Triangle Theorem and Converse of the Isosceles Triangle Theorem. Distinguish difference between the two Isosceles Theorems with examples. Introduce perpendicular bisectors. Show how the Isosceles’ Theorems can assist in solving for angle measures. Introduce two corollaries pertaining to equilateral triangles.

**IV. Guided Practice (Elicit performance):** [30minutes] Work through practice problems before going to the computer lab and having students make their own inferences about the concepts being learned.

***V.* Closure (Plan for maintenance):** [10 minutes] Review concepts learned during class. Provide link for short online quiz to complete as an extra assessment - <http://www.phschool.com/webcodes10/index.cfm?fuseaction=home.gotoWebCode&wcprefix=aua&wcsuffix=0405>.

***VI.* Independent Practice:** [N/A] No Homework Tonight!! Yay!!!

**STANDARDS:**[CCSS.MATH.CONTENT.HSG.CO.C.10](http://www.corestandards.org/Math/Content/HSG/CO/C/10/)

HS.TT.1.2

**Plans for Individual Differences:** Draw an isosceles triangle on the board. Ask what type of triangle it is. Trace the base of the triangle. Ask what that particular side is called. Trace the sides of the triangle. Ask what the two sides are called. Trace the vertex angle and ask what the name of the angle is. Ask how they would define it and what the names of the other two angles are.

**References (APA style):**

Charles, R., Hall, B., Kennedy, D., Bass, L., Johnson, A., Haenisch, S., Murphy, S., Wiggins, G. (2011). *Geometry.* (Teacher’s Ed.). Upper Saddle River: Pearson.

*Properties of Isosceles Triangles.* (2009). Retrieved from <http://www.phschool.com/atschool/academy123/english/academy123_content/wl-book-demo/ph-398s.html>.

*Lesson 5 Quiz.* (2009). Retrieved from <http://www.phschool.com/webcodes10/index.cfm?fuseaction=home.gotoWebCode&wcprefix=aua&wcsuffix=0405>.

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