**Course**: Honors Geometry

**Chapter/Section:** Introduction to Chapter 10: Circles

**Date:** March 7th, 2013

**Objective(s):**

[CCSS.Math.Content.7.G.A.1](http://www.corestandards.org/Math/Content/7/G/A/1) Solve problems involving scale drawings of geometric figures, including computing actual lengths

[CCSS.Math.Content.7.G.B.4](http://www.corestandards.org/Math/Content/7/G/B/4) Know the formulas for the area and circumference of a circle and use them to solve problems

1. **Introduction (5 minutes)**
   1. Explain that we are going into a new chapter: Circles
   2. Ask students for a review of what they know about circles
      1. Radii- What does this represent?
      2. Circumference- What does this represent? How do we find it?
   3. Ask students, “What can circles help us do?”
   4. Transition:
      1. “We have seen circles in the past so now we are going to put them to use!”
2. **Analysis of TAKEN 2 (10 minutes)**
   1. Introduce the scene for the clip
      1. Dad has been kidnapped; he has done some calculations so his daughter can find him!
      2. We have been hired by a production company to analyze the mathematics used in this clip
      3. It is your responsibility to write how and why Liam Neeson calculated what he did
      4. There may also be errors in his calculations that you need to find
   2. Play *TAKEN 2* clip (~5 minutes)
   3. Call on students to announce what they found Liam Neeson had done
   4. Choose students to argue what they found to be incorrect and what he should have done instead
   5. Transition:
      1. “Since we have done such an excellent job analyzing others’ work; we have now been hired by the police because MISS BISHOP HAS BEEN KIDNAPPED!!”
3. **Extension Kidnapping (20 minutes)**
   1. Hand out Activity write-up to each student
   2. Students will be working in their groups of 4
   3. Read directions
      1. Highlighted part of write-up
   4. Walk around during activity to prompt groups for questions
      1. What ideas do you have to start this?
      2. How are circles going to help?
      3. Why are there helpful hints at the bottom?
   5. Misconceptions
      1. Students may convert units incorrectly
      2. May not know how to calculate distance
   6. Transition
      1. Have students finish up their written portion
      2. Choose one student to turn in write-up and map
4. **Closure (10 minutes)**
   1. Choose two groups to explain how they worked through the activity
5. **Homework**
   1. Read and take notes on 10.1
6. **Materials**
   1. Taken 2 movie
   2. Calculators
   3. Activity write-ups
   4. Maps of area
   5. Protractors
   6. Projector
   7. Speakers
7. **Assessment**
   1. Ask questions to assess analysis of movie clip
   2. Walk around during activity to monitor their written work
   3. Ask questions during activity to assess problem solving and critical thinking skills
   4. Grade one write-up per group to analyze thought processes and explanation