**SCALING UP STEM LEARNING WITH THE VCL PROJECT[[1]](#footnote-1)**

**AGENDA FOR GEOMETRY WORKSHOP**

**THE WILLIAM AND IDA FRIDAY INSTITUTE FOR EDUCATIONAL INNOVATION**

**NORTH CAROLINA STATE UNIVERSITY**

**JULY 25, 2011 – JULY 29, 2011**

**DAY 1 – Agenda**

9:30 – 10:00 Welcome, Introductions, Overview

10:00 – 10:45 Introducing Circles

 Chords in a Circle

10:45 – 11:00 Break

11:00 – 12:00 Tangents to a Circle

 Tangent Circle Problem

12:00– 12:45 Lunch

12:45 – 1:45 Mathematical Task Framework

1:45 – 2:00 Break

2:00 – 3:00 Arcs and Angles of Circles

 Angles formed by secants, chords, and tangents

3:00 – 4:00 Sharing of Activities Developed During the Past Year

Homework Read Chapters 1-3 in 5 Practices Book

**DAY 2 – Agenda**

9:30 – 10:00 VCL Training

10:00 – 11:00 Circumference-Diameter relationships

 Area-Radius relationships

11:00 – 11:15 Break

11:15 – 12:00 Sectors and Segments of Circles Activity

12:00– 12:45 Lunch

12:45 – 1:30 Pythagorean Theorem

1:30 – 2:15 Proofs of the Pythagorean Theorem

2:15 – 2:30 Break

2:30 – 3:15 Pythagorean Triples, Isosceles Right Triangle, 30-60-90 Right Triangle

3:15 – 3:45 Discussion of Readings

3:45 – 4:00 Sharing of Activities Developed During the Past Year

Homework Read Chapters 4 and 5

**DAY 3 – Agenda**

9:30 – 10:15 Geometric Mean (in pairs)

Right Triangle Trig Ratios (in pairs)

10:15 – 11:00 Modeling a Ladder Problem

Radian Measure

11:00 – 11:15 Break

11:15 – 12:00 Sine Wave Tracer

 Cosine Wave Tracer or Tangent Wave Tracer

12:00– 12:45 Lunch

12:45 – 1:30 Tangent Circle Problem and Video Analysis

1:30 – 2:30 Lesson Planning

2:30 – 2:45 Break

2:45 – 3:00 VCL Training

3:00 – 5:00 Work with Professional Role Models

Homework Work on Lesson Plan

For those with video – identify one or more clips that relate to the five practices

**DAY 4 – Agenda**

9:30 – 10:15 Law of Sines

 Law of Cosines

10:15 – 11:00 Video Sharing

11:00 – 11:15 Break

11:15 – 12:00 Folding to create a parabola

Patty Paper Parabolas with GSP

12:00– 12:45 Lunch

12:45 – 1:30 Hyperbola with GSP

 Ellipses with GSP

1:30 – 2:15 Lesson Planning

2:15 – 2:30 Break

2:30 – 4:00 Lesson Planning

Homework Finalize Lesson Plans

**DAY 5 – Agenda**

9:30 – 11:00 Geometry Post-Test

11:00 – 11:15 Break

11:15 – 12:00 Lesson Presentations (4 presentations)

12:00– 12:45 Lunch

12:45 – 1:30 Lesson Presentations (4 presentations)

1:30 – 2:15 Lesson Presentations (4 presentations)

2:15 – 2:30 Wrap Up and Next Steps

1. Funding provided by the National Science Foundation [↑](#footnote-ref-1)