



Lesson Title:	Force Plates and Postural Stability
Length of Lesson	1 Days
Created By	Michael Andre Hamilton
Subject	Geometry
Grade Level	10 th -12 th grade
State Standards	Geometry 2a
DOK Level	DOK 2
DOK Application	Graph, Compare, Estimate Infer, Predict, Interpret, Make Observation, Summarize
National Standards	Geometry for 9 – 12 th Math Standards
Graduate Research Element	Human Factors and Work Physiology

Student Learning Goal:

National Standards for Geometry for 9-12th

- A: analyze properties and determine attributes of two- and three-dimensional objects;
- B: explore relationships (including congruence and similarity) among classes of two- and three-dimensional geometric objects, make and test conjectures about them, and solve problems involving them;
- C: establish the validity of geometric conjectures using deduction, prove theorems, and critique arguments made by others;
- D: use trigonometric relationships to determine lengths and angle measures.

State Standards for 9 – 12th Geometry

- A: Apply problem solving skills to solve and verify the solutions for unknown measures in similar polygons.

Materials Needed (supplies, hand-outs, resources):

- None

Lesson Performance Task/Assessment:

- The objective of this study is the to give the students insight on how mathematics is used in postural stability and force analysis

Lesson Relevance to Performance Task and Students:

The relevance of this lesson is to show the students how to use the theorems and formulas used in class to a real world problem

Anticipatory Set/Capture Interest:

At the beginning of class, we will watch video of from sport science and how they use force plate data

Guided Practice:

The Students listen to a presentation about teach by force plates work and they will be shown some simple application of AMTI Force plate programs and shown how it works.

Independent Practice:

The students and the instructor will work together during this process.

INSPIRE GK12 Lesson Plan



Remediation and/or Enrichment:

Remediation

Individual IEP; partner help throughout lesson; shorten parts of assignment; focus on few process

Enrichment:

None

Check(s) for Understanding:

Day 1:

1. Why is studying posture is important?
2. Give me an example of bad posture

Closure:

Have an end of the class discussion

Possible Alternate Subject Integrations:

*None.

Teacher Notes: