Curriculum: West Shore SD 2009 Curriculum
Course: Physics

WEST SHORE SD
Date: May 21, 2009 ET

Topic: Torques
Subject Area(s):

Days: 7
Grade(s):

Key Learning: **All rotational motions are due to torques.**

Unit Essential Question(s): What factors affect changes in rotation motion of an object?

Concept: **a) moments of inertia** S11.A.1.3.1, S8.A.2.1.2, 3.4.12.C	Concept: **b) T = fxd** S11.A.1.3.1, S8.A.2.1.2, 3.4.12.C	Concept: **c) measurement of I and T** S8.A.2.1.2, 3.4.12.C
Lesson Essential Question(s): What affects the rotational inertia of an object? (A) How does the geometry of an object affect its the moment of inertia of an object? (A)	**Lesson Essential Question(s):** How do you calculate the Torque on an object? (A)	**Lesson Essential Question(s):** How can you measure and quantify the rotational inertia or torques on an object? (A)
Vocabulary: Rotational Inertia, Moment of Inertia	**Vocabulary:** Torque, Cross Product	**Vocabulary:**

Concept: **d) Torque is analogue of Force** S8.A.2.1.2, 3.4.12.C	Concept: **f) happen on different scales** S8.A.2.1.1, 3.4.12.C	Concept: **g) objects and systems** S11.A.1.1.4, S11.C.3.1.2, 3.4.12.C
Lesson Essential Question(s): How are torque and force related? (A)	**Lesson Essential Question(s):** How torque applied microscopically and macroscopically? (A)	**Lesson Essential Question(s):** How are torques used in natural and man-made objects and systems? (A)
Vocabulary:	**Vocabulary:** Electric Dipoles, Magnetic Dipoles	**Vocabulary:**

Additional Information:
Activation: predition of what affects the rotational inertia of object followed by downhill races.

Attached Document(s):