**Honors Particle Physics (Blocks)**

***Assignments:***

Read Chapters: READ\_Standard Model & Particle Adventure Website **CW\_Hadrons**

**CW\_Particle Reactions 1 & 2**

**LAB\_Bubble Chamber**

**LAB\_Z Boson Analysis**

**LAB J/Psi Analysis  
 LAB\_Particle\_ConceptMap**

**PROJECT\_StopMotion**

**PROJECT\_SMBreakout**

Day 1:

DISC\_Particle Physics (slides 1-20)

Explain PROJECT\_Stop Motion & PROJECT\_SMBreakout

*Review Bubble Chamber Resources*



Day 2:

LAB\_BubbleChamber

Day 3:

DISC\_Particle Physics (slides 21-39)

CW\_HadronComposition

Day 4:

DISC\_Particle Physics (slides 40-53)

CW\_Particle Reactions 1 & 2

Day 5:

PROJECT\_SMBreakout

Day 6:

DISC\_Accelerators and Detectors  
 LAB\_Z Boson Analysis

Day 7:

LAB\_J/Psi Analysis

Day 8:

**TEST\_Particle Physics**

PROJECT\_Breakout Student Testing

**AP1 Particle Physics (45 min periods)**

Day 1:

DISC\_Introduction to Particle Physics

HW: Particle Adventure & Read through DISC\_Bubble Chambers & Bubble

Chamber\_PREP

Day 2:

Bubble Chamber Challenge

HW: Particle Adventure & READ\_Standard Model

Day 3:

DISC\_Standard Model and Beyond

HW: vector reading: (<http://www.physicsclassroom.com/class/vectors/Lesson->

[1/Component-Addition](http://www.physicsclassroom.com/class/vectors/Lesson-))

Day 4:

Z Boson Activity (use <http://www.1728.org/vectors.htm>)

HW: Stop Motion Video

Day 5:

DISC\_Accelerators and Detectors

HW: Stop Motion Video

Day 6:

J/psi Masterclass Activity

<http://cms.physicsmasterclasses.org/pages/cmsjpsi.html>

HW: none

**Cross Curricular Applications:**

* Research in Library
* Art/Audiovisual stuff
* 20th Century history/current events social studies