

The background features a dark blue gradient with a starry space pattern. On the left side, there are several technical diagrams, including a large circular scale with numerical markings from 140 to 260 and various circular arrows and lines, suggesting a technical or scientific context.

HST 2014 WORKING GROUP 4

GROUP MEMBERS:

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USING ANIMATIONS TO INTRODUCE PARTICLE PHYSICS IN SECONDARY SCHOOL

Animations should be used to

- enhance our lessons by varying the medium of learning
- grab the attention of the students
- encourage an excitement about particle physics

TWO DIMENSIONS TO THE PROJECT

- Identify and organise useful existing animations
- Create storyboards for new animation which fit curricular goals

WEBSITE

The screenshot shows the CERN60 website's Multimedia section. At the top left is the CERN logo with the text "YEARS/ANS CERN". To the right are language options "EN" and "FR", and a navigation menu with "NEWS", "EVENTS", "MULTIMEDIA", and "MENU". The main banner features a folder icon and the heading "Multimedia" with the text: "Discover all the photos and videos of the CERN60 celebrations and download your posters, wallpaper and much more!". Below the banner is a breadcrumb trail: "CERN 60 > Multimedia > CERN exhibitions content > Physics > Animations". On the left is a sidebar with "CERN60 RESOURCES" and "CERN EXHIBITION CONTENTS" including "Overview", "Physics", "LHC Accelerators", "Experiments", "Computing", "Knowledge Transfer", and "History". The main content area is titled "Animations" and contains two thumbnails: "Animation Forces" showing two spheres (one blue, one red) and "Higgs Boson and Higgs Field" showing a complex particle interaction visualization.

- <http://cern60.web.cern.ch/en/exhibitions/physics/animations>

PROJECT WORK SO FAR

Classified Animations as follows;

- Usefulness (in class)
- Length
- Topic (curricular)
- Level (Beginners/Intermediate/Advanced)

After discussion we identified

- Duplicates on the website
- The most useful ones for lesson plan ideas
- Some gaps in the animations to address common questions from our students

FOCUS POINTS

Animations need context for teaching!

In each of the following areas, we will build a short lesson plan to tie animation to relevant syllabus objectives.

We are going to focus on these areas

1. (Beginners) CERN Introduction
2. (Intermediate) Creating a new animation explaining the Standard Model
3. (Intermediate) Creating a new animation explaining the applications of particle physics in real world
4. (Advanced) Overview of Accelerator Science at CERN
5. (Advanced) Medical Applications of CERN Physics

EXAMPLE



RECOMMENDATIONS SO FAR

- Animations are difficult to find and often duplicated – display all in the same page
- Animations have no description on them – include 2 sentences which describe the content and length of this animation
- Animations must be downloaded before seeing them – attach a small snapshot or link to Cern60 youtube channel instead
- More to follow...
- If you have any ideas – please share!