Particles & Dynamics Course:
Simulating Natural Phenomena

Professor Shaun Foster

Flipped Assignment: Image Driven Hardware Particles

Overall Goal of Course

Provide an overview of the aesthetic, technical & workflows for particles & dynamics systems available inside of Autodesk Maya. Focus on strong visual design output requires practice of technical skills, the flipped classroom leverages speed of technical information delivery allowing greater discussion and classroom focus on aesthetic choices.

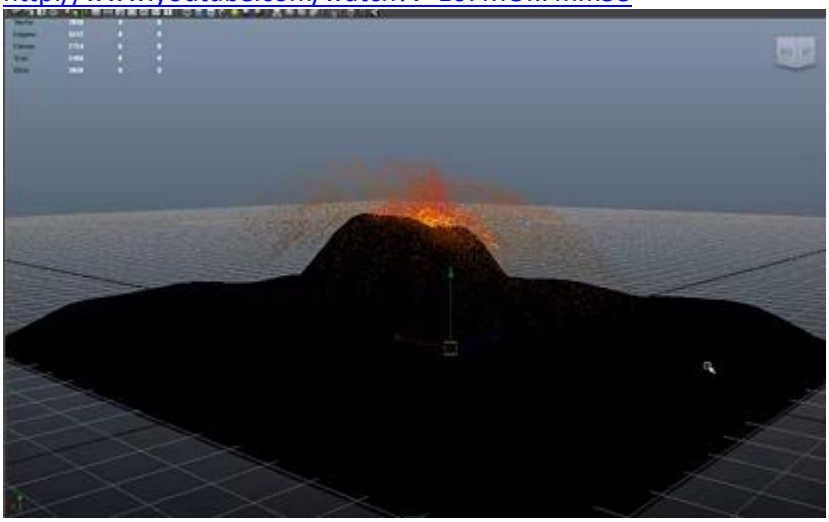
Example Goal

This example is given as an early introduction to:

1) One way of generating particles from an object – specifically, by using an image to drive emission (or no emission from black) and color
2) Introduction to connecting the visualization to a gravity field

Out of Class Content:

http://www.youtube.com/watch?v=E67MOk7mm58



In class Activities

Students will be expected to come to class having tried out this technique at home. They will then be expected to re-apply the technique, but must achieve a very different visual effect.

- Discussion of possible alternative uses & combos with other techniques
    - Emit from an image of a face – use a mesh of a head to generate a facial image
- Aesthetics – best ways to put the virtual camera to film a simulation, in a single shot, or in a 3 shot sequence
- Limitations of this type of particle system
- Ways to improve the look:
    - By generating multiple particle systems
    - Applying blurs and glows as part of post production

Expected Results

Students will get a strong practical foundation and knowledge base for creating an efficient particle system and be exposed to many of the additional tools they will be expected to learn throughout the course. The power and flexibility of this initial assignment often "sparks" considerable enthusiasm and curiosity for how to achieve greater visual and technical results.