This tutorial shows how to use advanced PaintEffects and particles. We look at examples of making an animated sun, pebbles on a rock formation and particles flowing along a curve.

**Part 1 Tubes**

Create a tube in Paint Effects, go to Visor > glass section, select GlassTree. Go to Attribute Editor to the GlassTree1.

Go to Tubes > Growth, select branches
Go to Shading, edit color 1 = color of branch 1 and color 2 = other branching Tube shading
The following illustrations show how to edit a texture on the Paint Effect tube in order to express various look and feels
Part 2 – Trees of ice and of fire
Part 3 – Curves - example the sun
Go to Modeling > Create > Create a CV curve, draw a curve. Go to Edit Curve > Rebuild Curve. Select the curve as an object, green. Go to Visor > Plants, select VineGrey, Go to rendering > Paint Effects > Curve Utilities > Attach Brush to Curve. The brush flows on the curve. Now you can go back to vineGrey and edit the shaders.
Select vineGreyBud1, go to Attribute Editor, vineGreyBud1 tab > Growth > Behaviors
In the following illustrations, I create a close shot animation of the sun with Paint Effects applied to a sphere.

We want the PaintEffects to snap to the sphere. Go to Rendering > Paint Effects > Make Paintable. Go to Visor > Fun, select the swirl Snail brush; start to paint on the sphere. In attribute Editor, select swirlSnail1 tab, go to shading and edit the swirl with fire colors.
Part 4 – Paint Effects, example rocks
In the following illustrations, I use the brokenStone brush to simulate paper littering on the ground
Or pebbles falling from a rock formation. Note that Make Paintable helps to snap pebbles along the cracks of the rock formation. Go to Rendering >Paint Effects > Make Paintable. Go to Visor > ObjectMesh, select the brokenStone brush; start to paint on the rock formation.
Note how to match colors between the rendering of the rock formation and the PaintEffects. In the attribute Editor, go to the brokenStone tab > Shading > Color, use the eye picker tool in order to check the coloration of the rocks in the rendering window.

In the following illustration, I use a Pressure Curve in order to slightly animate the pebbles as they snap and fall along the cracks of the rock formation. Select the curve or brush stroke that generates the PaintEffects. Go to Rendering > PaintEffects > Curve Utilities > Make Pressure Curve. Select points from the Pressure Curve, move the points > the pebbles slightly move around the rock. Keyframe the animation.
Part 5- Particles, example flow of particles on a body surface
The following tutorial is a shorter version of the in-depth tutorial available at http://www.tinkering.net/pdf/flow.pdf > go to > Part 2b- Tornado in Maya

Blobs

Blobs

Tubes
Clouds
The following tutorial is a short text version of the in-depth-tutorial available at http://www.tinkering.net/pdf/flow.pdf go to Part 2b- Tornado in Maya

In Modeling, select the snap to grid tool, go to Create > CV Curve Tool create a curve on the grid. Rotate the curve to a vertical position. With the curve selected, go to Edit Curves > Rebuild Curve in order to smoothen the curve.
In dynamics, go to Effects > Create Curve Flow
Set the following parameters
Flow Group Name to tornadoFlow
Num Control segments to 6
Particle Lifespan to 3
Goal Weight to 0.62
Press Create a new node called tornadoFlow is created
Set up the types of particles as spheres and preview the motion of particles.
Test your scene the particles follow the curve in 3 seconds 90 frames since lifespan = 3
Select the circles – the control segment - at the upper end of tornado and scale it up. Scale the other circles in a similar fashion. For rendering select the clouds particles type.
With the curve selected, go to Animation > Deform > Create Lattice
Set the following divisions to 5, 9, 2
Autoparent to Selection is On
In the component selection mode > choose points. Select points from the lattice and scale or move the lattice points with the scale or move tool. Create keyframe for each deformation of the lattice. Y frame the tornado moving on the terrain
Keyframe the group lattice-curve
Rewind to frame 1
Test the results, playback the animation
Points

Spheres