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1

Using the Creative Process to Solve an Artistic Problem

Identifying the problem is sometimes simple, sometimes hard. The problem is usually given to you by a client, customer, patron, art director, project lead, or team lead. In this case, you are not going to have to identify the problem because it will be given to you.

You are presented with a visual task to solve using the remaining steps of the creative process.

1. **The Task**

    You are the Admiral Garlarth Von Slagathor the VI. You answer only to the Supreme Emperor. Strange emanations have been coming from an uncharted portion of the known universe. As the most trusted of all the starship commanders, you have been tasked with discovering the source of these signals that are turning regular citizens into drooling, gibbering monsters who can no longer be trusted to mine the most precious pepperoni-flavored rocks because they tend to eat each other. As you search for the source of the destructive signal, you are tasked with the survey and mapping of any previously unknown planetary systems or individual planets large enough to land a drop ship. Photograph and bring back pertinent data.

It is always good to have a back story or base to build any idea upon. Your task is to design a few of the alien landscapes on the planets you discover.

You build this landscape in Autodesk 3ds Max using only standard and extended primitive shapes. Figure 01
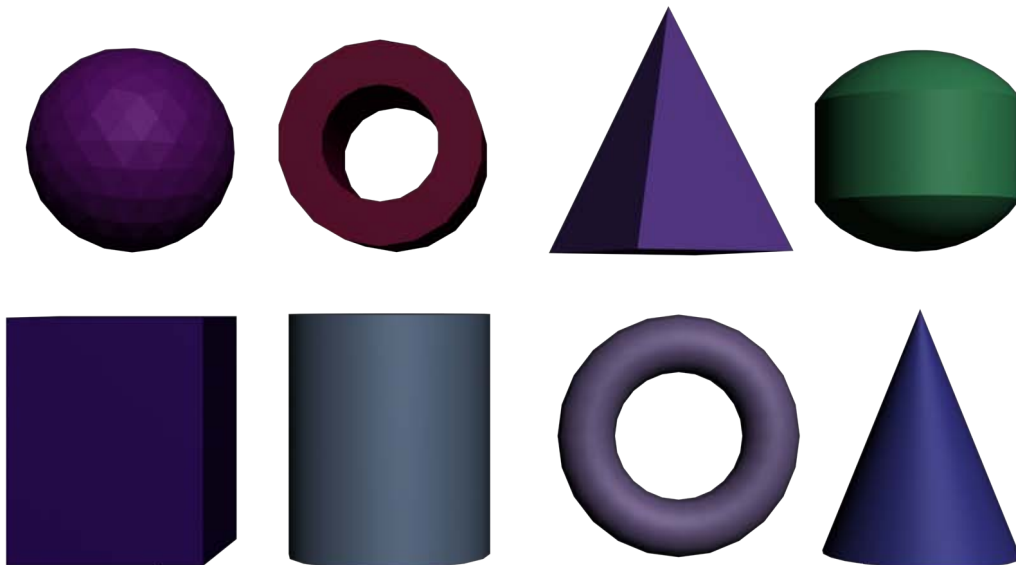

Figure 01

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LEVEL 2

IDEATION
Applied

Autodesk

2

- Primitives are divided into two categories: standard primitives and extended primitives.

  Geometric primitives are familiar as objects in the real world such as beach balls, pipes, boxes, dough-nuts, and ice cream cones. In 3ds Max, you can model many such objects using a single primitive. You can also combine primitives into more complex objects, and further refine them with modifiers.
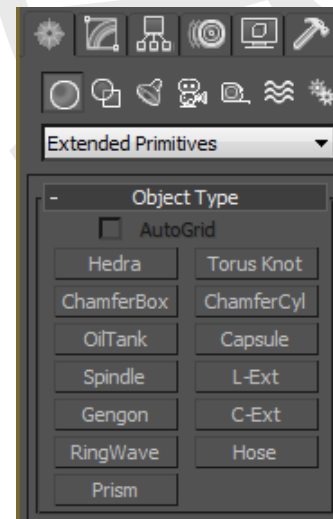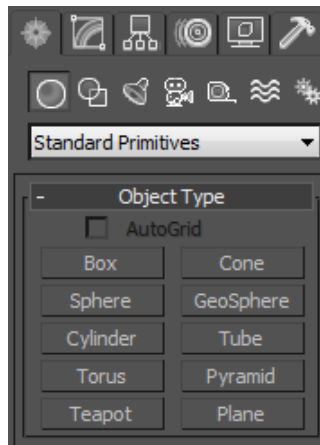
- Extended Primitives

  Extended Primitives are a collection of complex primitives for 3ds Max.

These can be accessed by clicking on the Geometry category in the Create Panel

The Create panel contains controls for creating new objects, the first step in building a scene. Despite the variety of object types, the creation process is consistent for most objects.

DESIGN
ANIMATION ACADEMY **2010**

Autodesk

LEVEL 2
IDEATION
Applied

3
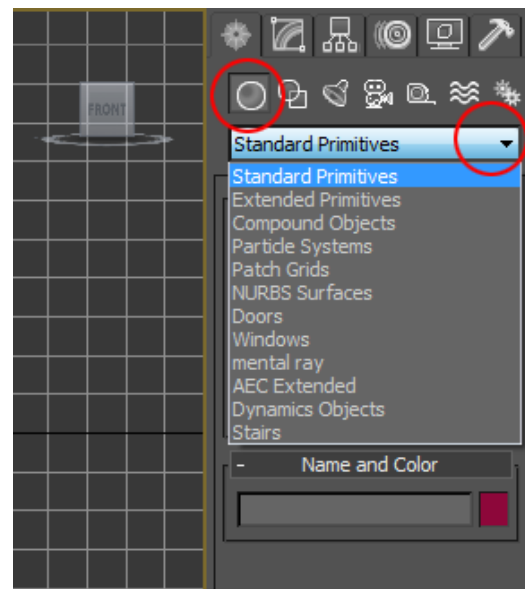
The Create panel groups the kinds of objects you create into seven categories. Each category has its own button. Within each category there can be several different subcategories of objects. A drop-down list lets you choose among object subcategories, and each kind of object has its own button, which you click to begin creation. In this lesson we will be concentrating on Geometric Primitives . Geometric primitives are basic shapes that 3ds Max provides as parametric objects.
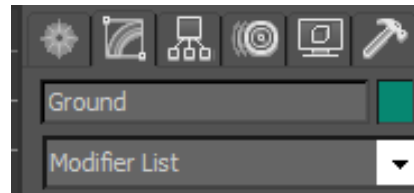
The Modify panel provides controls to complete the modeling process. You can rework any object, from its creation parameters to its internal geometry. Both object-space and world-space modifiers let you apply a wide range of effects to objects in your scene. The modifier stack allows editing of the modifier sequence.

DESIGN

LEVEL 2

IDEATION

Applied

Autodesk

ANIMATION ACADEMY **2010**
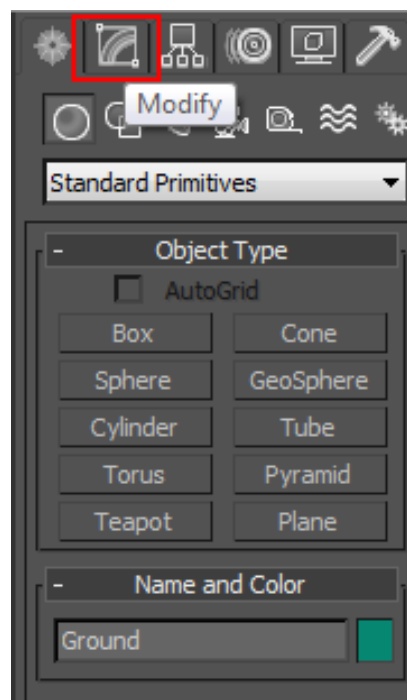
4

In this lesson with 3ds Max, you will model basic parametric objects into more complex ones by:

- Changing parameters

- Applying modifiers
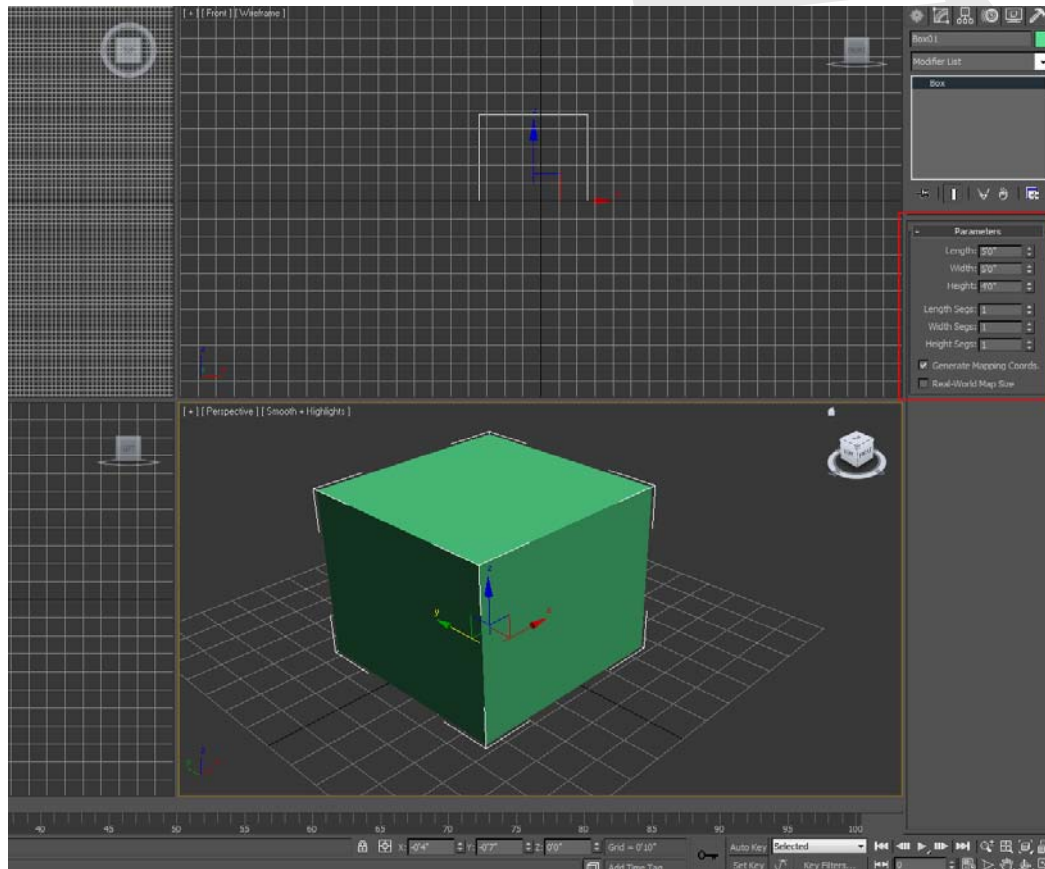
When you create objects you want to be sure to set the parameters to the correct scale and so that you will have enough segments for the modifiers to affect the objects. It is also a good idea to name each object in your scene, you can name objects in the panel next to the object color swatch.

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2010
LEVEL 2
ANIMATION ACADEMY
IDEATION
Applied
Autodesk

5
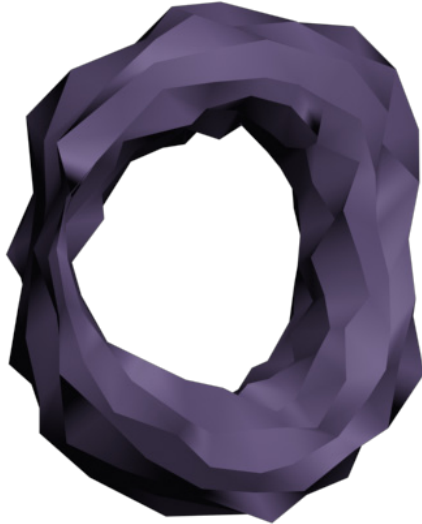
What you can modify depends on whether an object is classed as a geometric primitive like a sphere, or as another kind of object, such as a light or a space warp. Each category has its own range of possibilities. The contents of the Modify panel are always specific to the category as well as to the selected object. When you make a change from the Modify panel, you immediately see the results transferred to the object.

- Bend
- Melt
- Noise
- Relax
- Ripple
- Skew
- Spherify
- Squeeze
- Stretch
- Taper
- Twist
- Wave

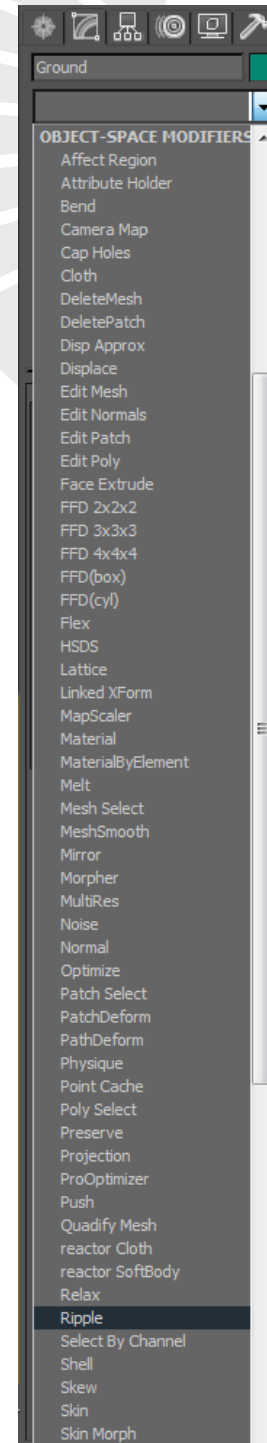The primitives can be modified using a number of Object Space Modifiers: Figure 02

Ground

OBJECT-SPACE MODIFIERS
Affect Region
Attribute Holder
Bend
Camera Map
Cap Holes
Cloth
DeleteMesh
DeletePatch
Disp Approx
Displace
Edit Mesh
Edit Normals
Edit Patch
Edit Poly
Face Extrude
FFD 2x2x2
FFD 3x3x3
FFD 4x4x4
FFD(box)
FFD(cyl)
Flex
HSDS
Lattice
Linked XForm
MapScaler
Material
MaterialByElement
Melt
Mesh Select
MeshSmooth
Mirror
Morpher
MultiRes
Noise
Normal
Optimize
Patch Select
PatchDeform
PathDeform
Physique
Point Cache
Poly Select
Preserve
Projection
ProOptimizer
Push
Quadify Mesh
reactor Cloth
reactor SoftBody
Relax
Ripple
Select By Channel
Shell
Skew
Skin
Skin Morph

DESIGN

LEVEL 2

IDEATION
Applied

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6

Figure 02

This task is broad enough to give you a great deal of latitude for a creative solution.

2. Analyze the Problem

This is an easy problem to analyze. Most of your research is looking at images of alien landscapes that have been created in the past. You might want to look at:

- Early astronomy and space travel books

- Science fiction book covers

- Old comic strips like Flash Gordon

- Watch movies

- Watch cartoons

- Search the internet for images based on key words.

If possible, compile a folder of images and sketches as inspiration.

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LEVEL 2

IDEATION

Applied

7

3. Generate Image Ideas Using Thumbnail Sketches

Thumbnail sketches can be created using paper and pencil or by using Sketchbook Pro on the computer. These sketches should be small and take no more than five or ten minutes to create. The main goal is to explore composition, value, and points of view. Remember, you are only designing the landscape using sketches, based on what you are able to build with primitives using the modifiers.

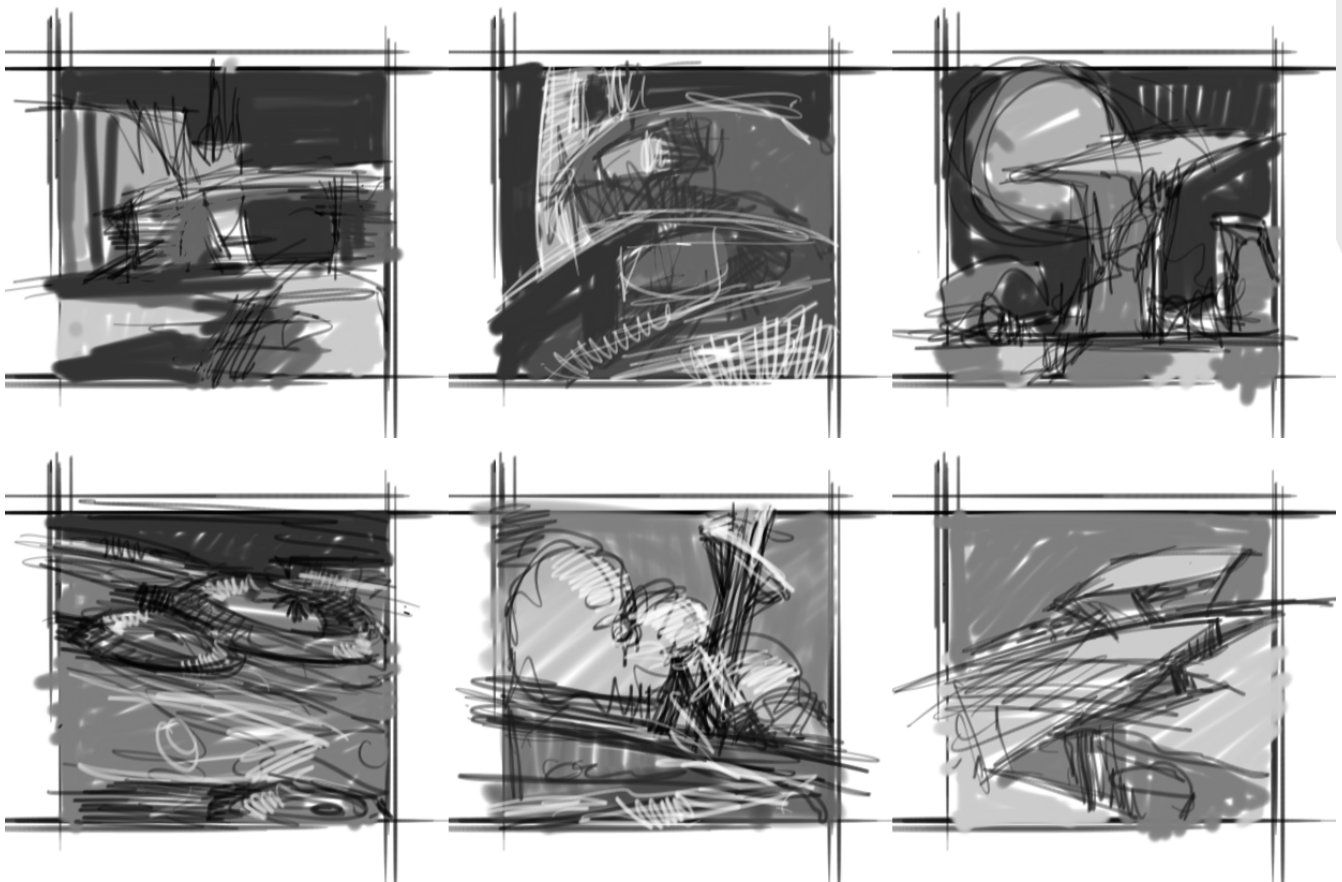Figure03 shows examples of what your thumbnail sketches should look like.

Figure 03

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ANIMATION ACADEMY
IDEATION
Applied

8

Using Sketchbook Pro 2010 in conjunction with a Wacom stylus and tablet is a great way to create thumbnail sketches. There is little learning curve and you will be sketching within a few minutes of starting the program. Making changes and corrections to sketches is easy. The interface is simple and the tools are fast. Figure 04
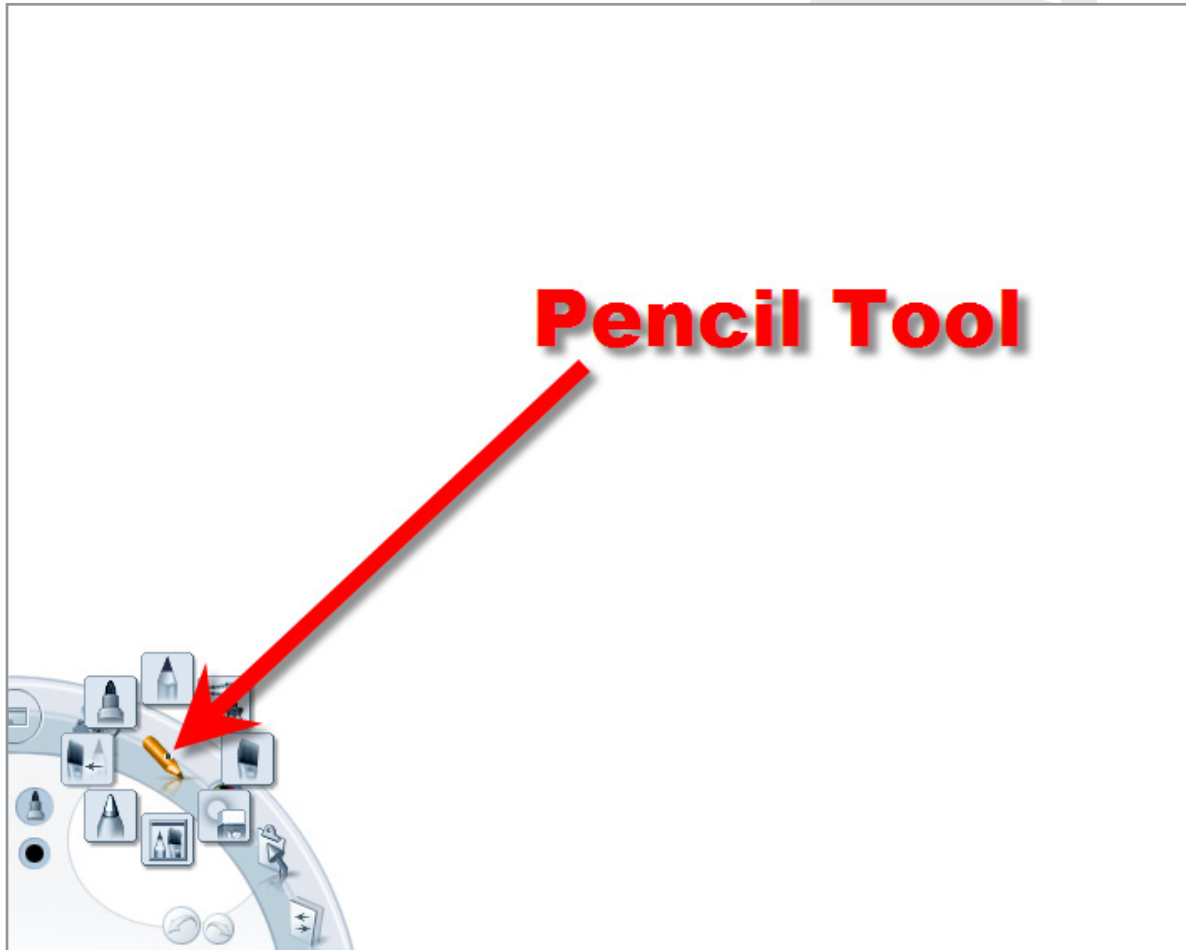
Figure 04

CLICK HERE TO PLAY VIDEO

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9

With the program open, you simply select the Pencil tool and begin to sketch. If you want to use another brush, click and hold the Pencil icon. Drag your stylus to any other brush you want to use. If you click the Brush icon displayed on the menu, a toolbox full of different brushes is displayed. Figure 05
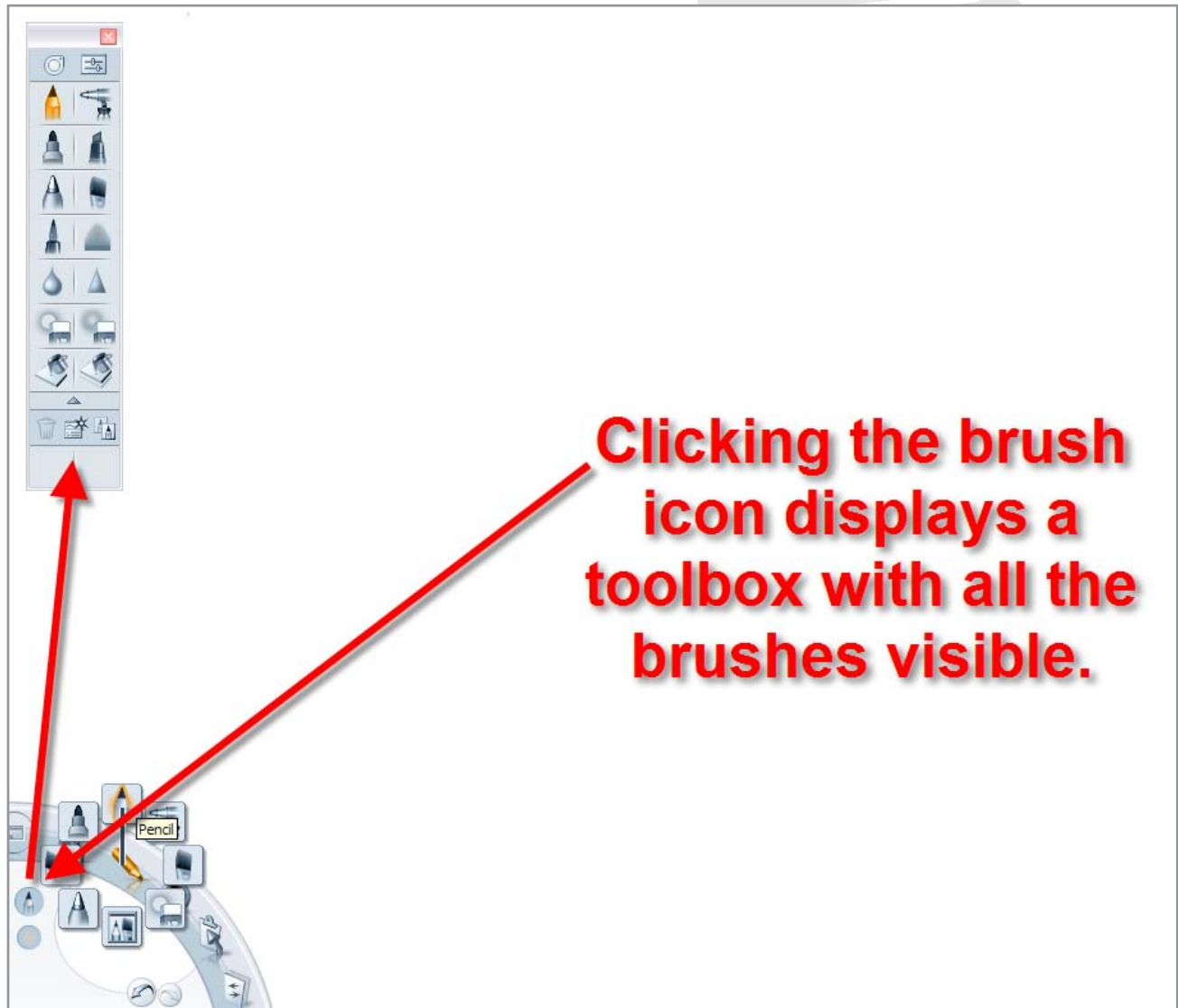
Clicking the brush icon displays a toolbox with all the brushes visible.

Figure 05

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LEVEL 2

IDEATION
Applied

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10

Keep the sketches small and simple using just a few drawing tools. You should concentrate on quickly generating original ideas and evaluating different value patterns, compositions, points of view, and possibly color. Limit the amount of detail drawn, as in the example in Figure 06.
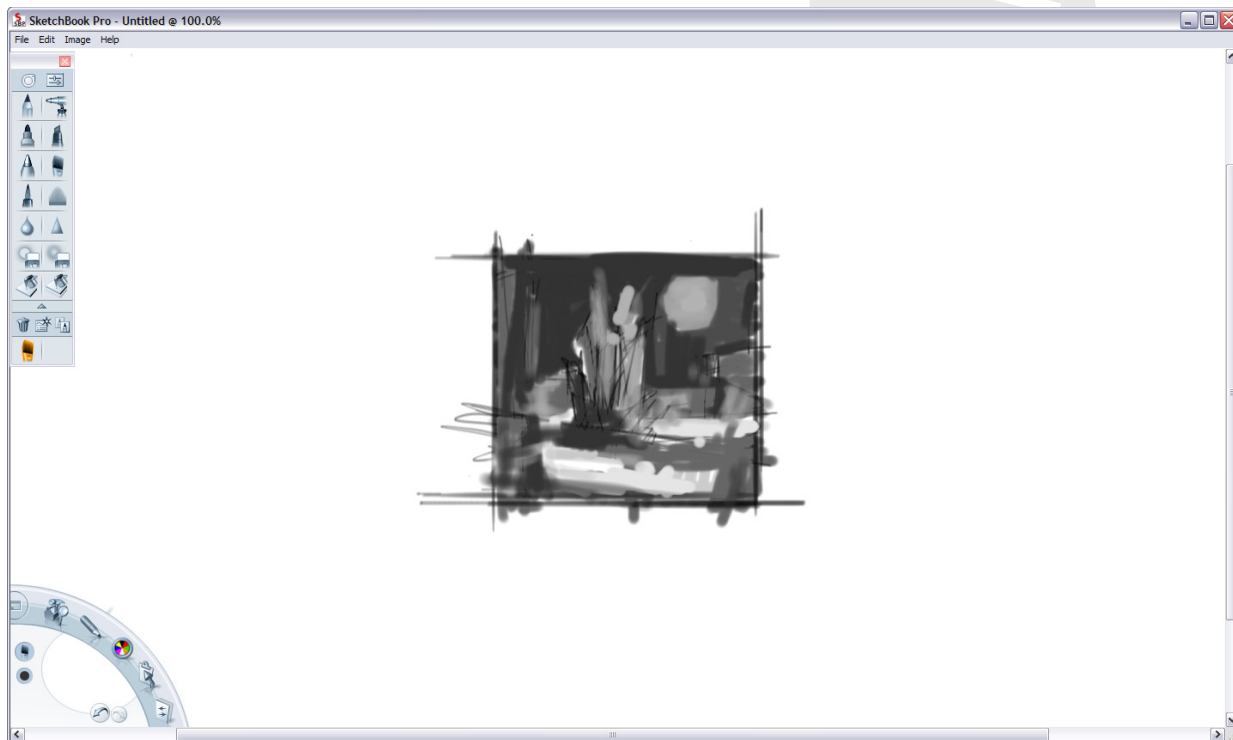

Figure 06

While layers are available in **Sketchbook Pro**, using them will sometimes slow down the speed that should be part of the creative process while sketching the thumbnails. You may want to put a small sketched frame on the base layer and then draw the sketches on layers on top of the frame. It is easy to draw straight vertical and horizontal lines by holding down the Shift key as you draw. You can draw lines constrained to 45° angles holding down the D key. Whatever process works for you is the process you should use.

DESIGN

LEVEL 2

IDEATION
　　　　Applied

Autodesk

ANIMATION ACADEMY **2010**

11

4. **Choose Your Favorite Thumbnail and Create the Alien Landscape:**

This part of the exercise is done on the computer and probably takes a fair amount of time. Choose several of your thumbnail sketches and create 3D scenes using primitives and modifiers representing the alien landscape you have drawn. Use only value with very little color at this point. Keep it simple. Too much detail can quickly ruin what would have been a great image. Try to work as close to your sketches as possible as in the example in Figure 07
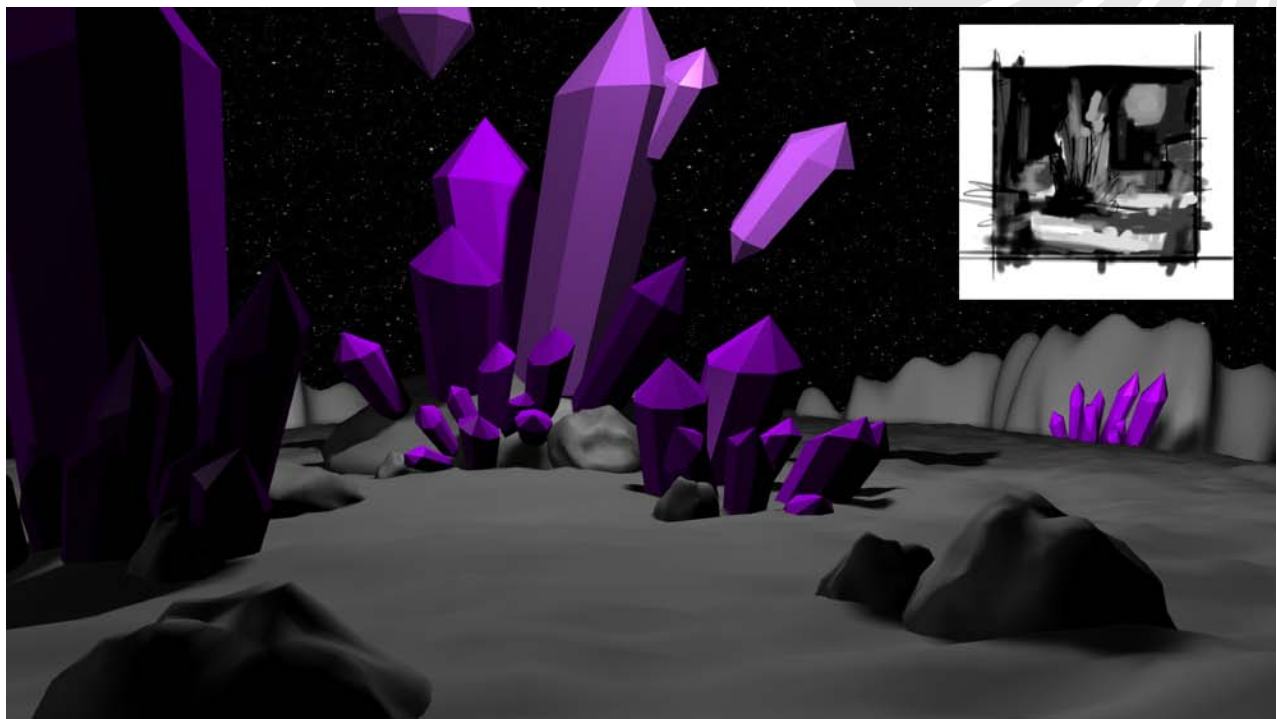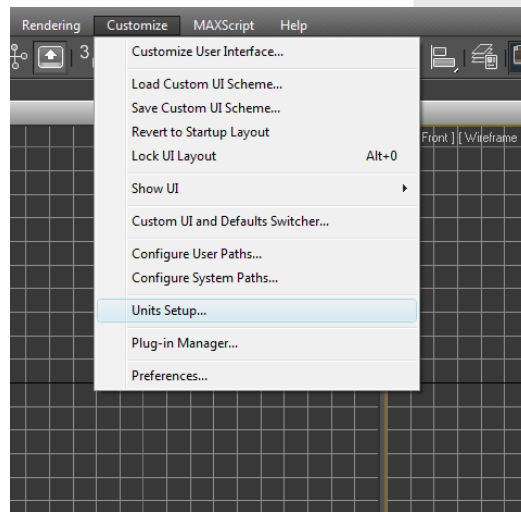

Figure 07

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LEVEL 2
IDEATION
Applied

ANIMATION ACADEMY 2010

Autodesk

12

Before you start your project you will want to use the Units Setup dialog to set the scale. For this project keep your landscape within 50 by 100 feet.

The Units Setup dialog establishes the unit display method, giving you the choice between generic units and standard units (feet and inches, or metric). You can also create custom units, which are used whenever you create an object.

The units that you set up are used to measure geometry in your scene. In addition to these units, 3ds Max also uses system units as an internal mechanism. System units should only be changed before you create your scene or import a unitless file. Do not change the system unit in an existing scene.

To set the units go to Customize menu > Units Setup > Units Setup dialog.

DESIGN
LEVEL 2
IDEATION
Applied
Autodesk
ANIMATION ACADEMY 2010
13
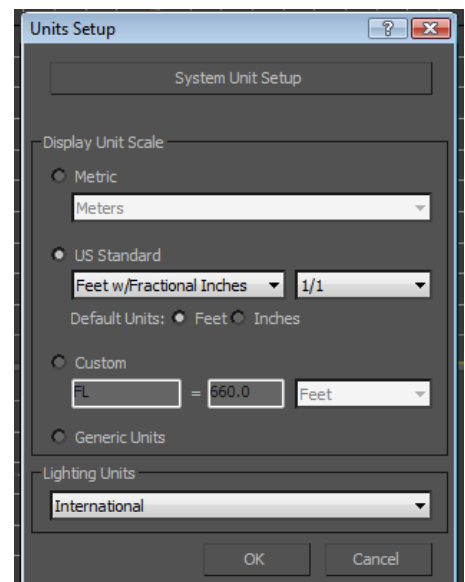
To change units to feet and inches:

1. On the Units Setup dialog, choose US Standard.

2. Choose from among the display options on the drop-down list.

    - If you want to display measurements as feet with inches, choose how inches should appear: fractional or decimal. Also choose, for Default Units, Feet or Inches

    - If you choose one of the Fractional display options, choose the fraction on the drop-down list to the right.

You can change the colors of your objects as you work by clicking on the color swatch by the object's name in any command panel. For this lesson you will be using the color swatch for your color, sometimes it's a good idea to work in monotones like grays to get a better idea of the shapes when you are designing. For now you will want to use the default lighting.

DESIGN
LEVEL 2
IDEATION
Applied

Autodesk

ANIMATION ACADEMY 2010

14
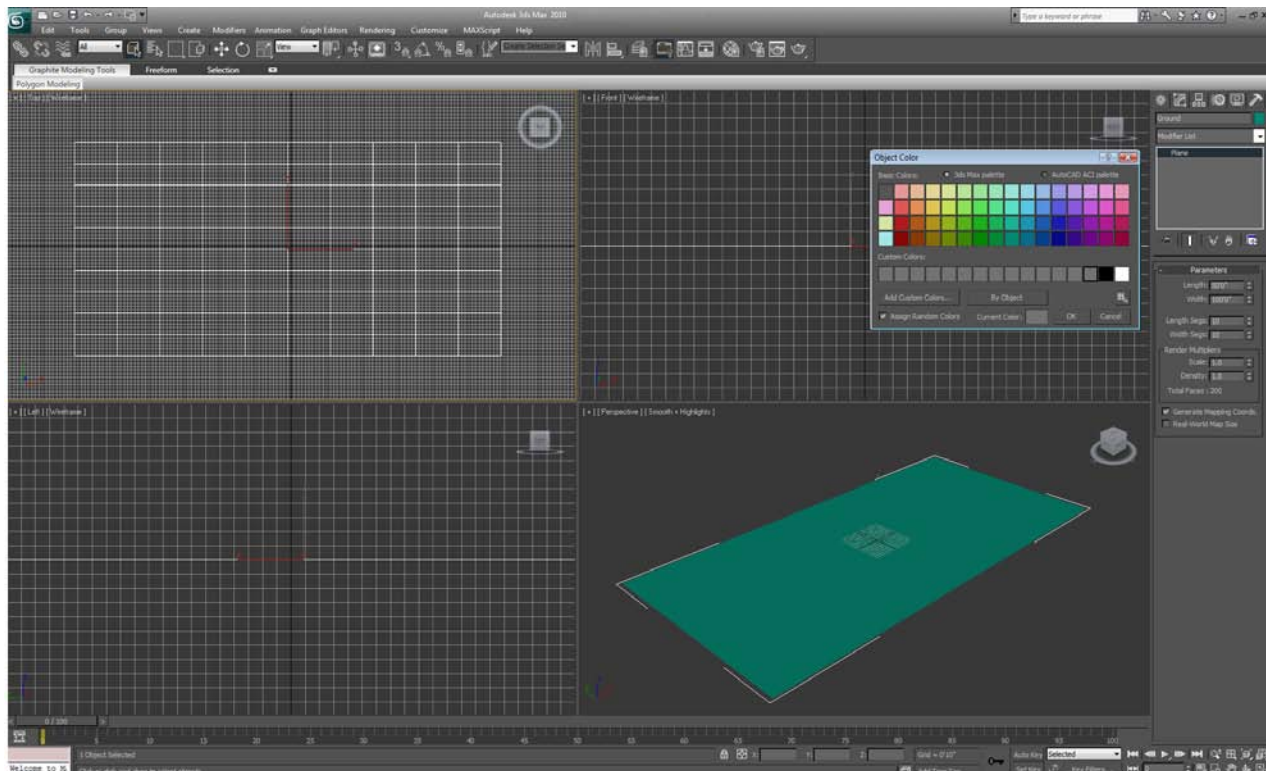
To render your images go to Rendering menu › Render Setup, for now you want to select Single and set the size to 600x800. Leave the other settings as default settings at this time.
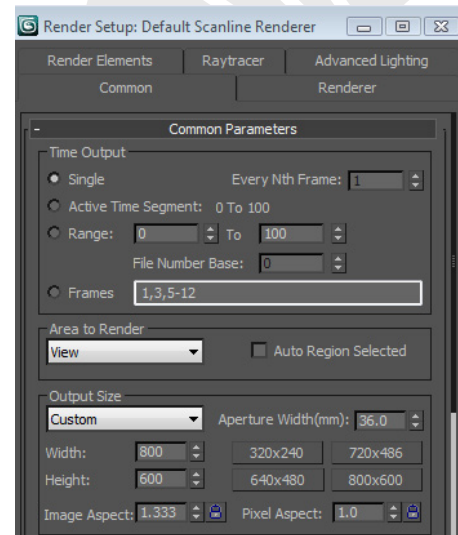
To render an image click the Render Production icon on the menu bar and make sure you are in the Perspective viewport. Click the yellow Save Image icon and select jpeg file as the type, navigate to your project folder and save your file as Alien_Scene01.

DESIGN
LEVEL 2
IDEATION
Applied

Autodesk

ANIMATION ACADEMY 2010

15
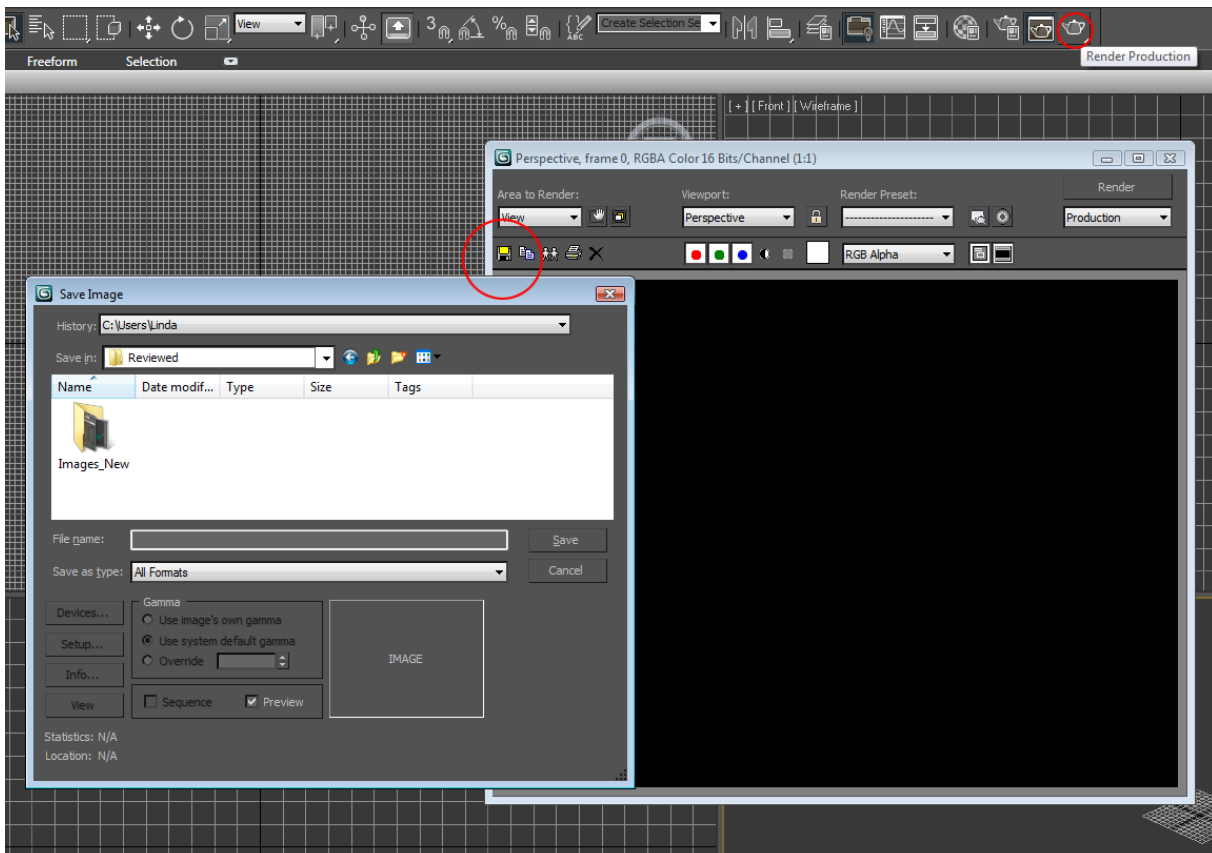
5. Render Your Image

With the rendered images on the screen or printed, evaluate what you could have done better or what changes you would want to make if you were to start over. Was your design successful? Was it as good as it could have been? What did you learn? All of these are questions you should answer honestly at the end of the exercise.

What You Learned

In this section, you learned to:

- Demonstrate the creative process. This process is what all artists use to generate ideas to solve visual problems.

- Use the creative process to design an alien landscape that you will build in a later session using Autodesk 3ds Max.