3 - Selecting Objects

Most operations you will do in Rhino require you to select one or more objects. Objects can be selected by clicking anywhere on the object. Click away from the object to deselect it. This method lets you select one object at a time.

Objects can be selected before you start a command. This is called *prepick*. Prepicking is handy for selecting input objects for many commands. The prepicked objects act as input for the first prompt to select objects.

Objects can also be selected during a command sequence anytime the command prompts you to select objects.

By default, objects change color to yellow when they are selected so you can see which objects are selected. This color can be customized to suit you in Rhino Options > Appearance > Colors > Object display > Selected objects.

Select and deselect objects

Practice selecting objects

1. Open the tutorial model **Select Objects.3dm**.

   (Help menu > *Learn Rhino >Tutorials and Samples > User's Guide > Select Objects)*
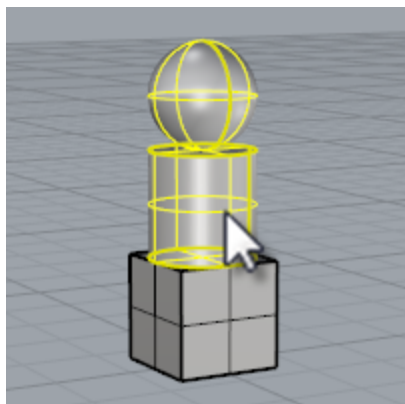
2. In the **Perspective** viewport, click the sphere to select it.
   Notice that the Perspective viewport shows the objects in Shaded mode. The other viewports use Wireframe mode.
   In Shaded mode, you can click anywhere on the object to select it. You don't have to aim for one of the wires.
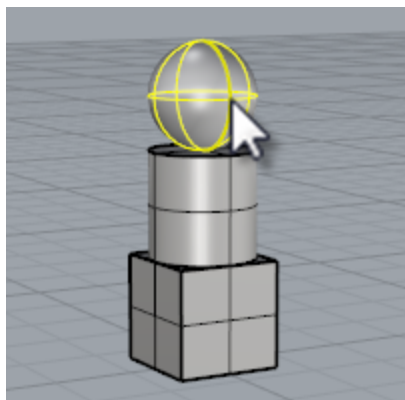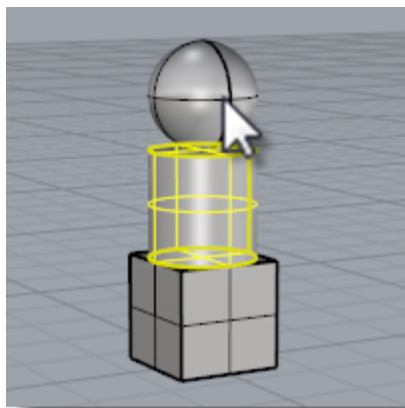

3. Hold the **Shift** key and select the cylinder.
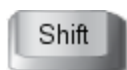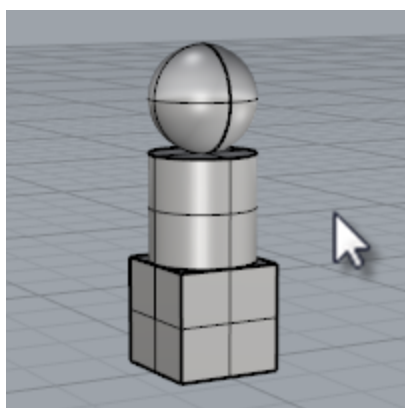   The cylinder is added to the selection.

4. Hold the **Ctrl** key and click the sphere again.
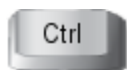
The sphere is removed from the selection.

5. Click away from the objects, or press the **Esc** key.
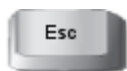
The selection is canceled.

To select additional objects

▶ Hold the **Shift** key while clicking the objects.

To remove objects from the selection

▶ Hold the **Ctrl** key and click the objects again.

To cancel the selection

▶ Click away from the objects, or press the **Esc** key.

Selection menu

If you click a location that is very close to the place where several objects are close to each other, it is possible that Rhino will not be able to determine which object you want to select. When this happens, a selection menu will appear with a list the possible objects.

As move the mouse over the object name in the list, each object highlights. You can also scroll through the potential objects using the arrow keys on your keyboard. When the object you want to select highlights, click or press the **Enter** key to select it. Choose **None** to cancel the selection.
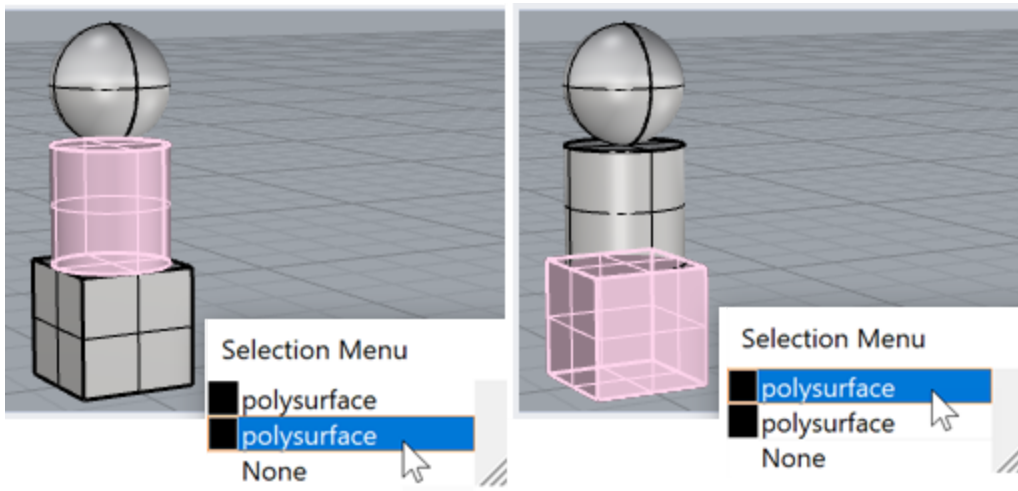
Selection menu.

# Select objects with windows

Another method is to make a *window* selection or a *crossing* selection to select multiple objects in one operation.

You can click in an open area of the screen and drag to create a selection window.

A window selection selects all objects completely enclosed by the window. A crossing selection selects all objects that are enclosed by the window or any object the window crosses.
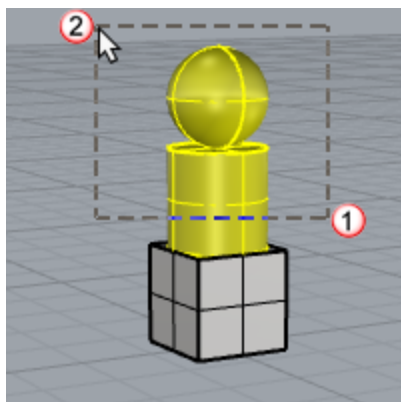
To make a window selection

▶ Click in an open area of the screen and drag to the right.
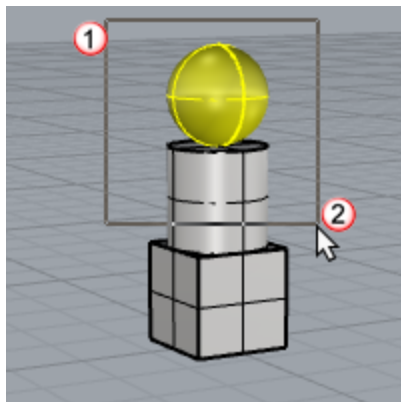
To make a crossing selection

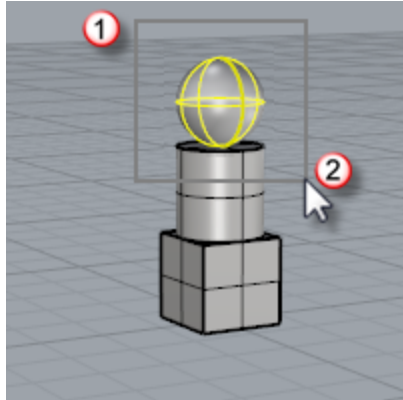▶ Click in an open area of the screen and drag to the left.

To add objects

▶ Hold the **Shift** key while making a window or crossing selection.

To remove objects

▶ Hold the **Ctrl** key while making a window or crossing selection.

Practice window and crossing select

1. In the **Perspective** viewport, click and drag a window around the sphere as shown in the illustration below.


The sphere is selected.

2. In the **Perspective** viewport, hold the **Shift** key then click and drag a window section from left to right around the box and the cylinder as shown in the illustration below.
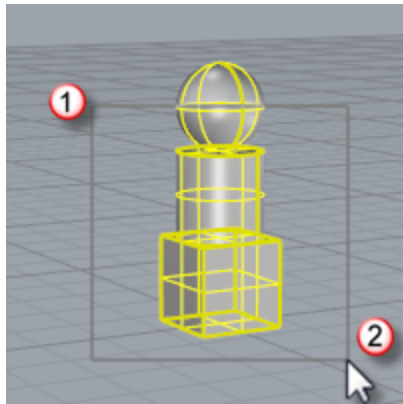
The cylinder and box are added to the selection.

3. In the **Perspective** viewport, hold the **Ctrl** key then click and drag a crossing selection from right to left over the box and cylinder as shown in the illustration below.
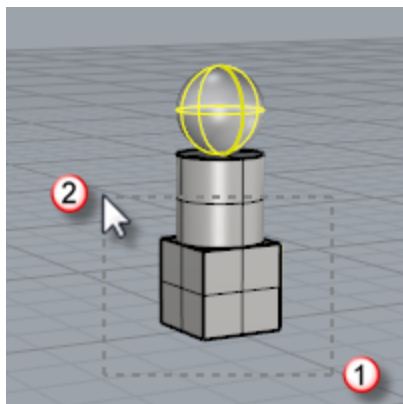
*The cylinder and box are removed from the selection.*

Other ways of selecting objects

Rhino has many commands and methods for selecting objects. You can select an object by name, layer, color, type; by capturing with boundaries or crossing fences; by volume shapes, by group name and many others. Search the Help for the topic *Selection commands*.

Practice selection by object type
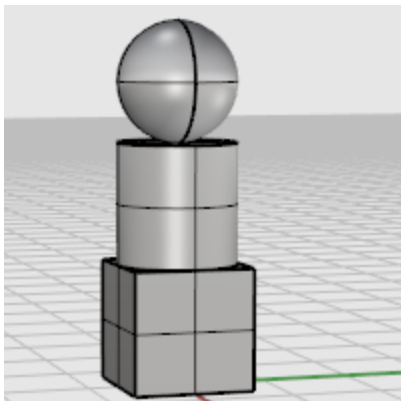
1. At the command prompt, type **SelAll**.

   The SelAll command selects all visible, unlocked objects in the model.
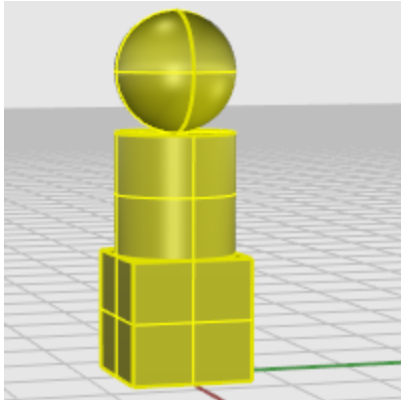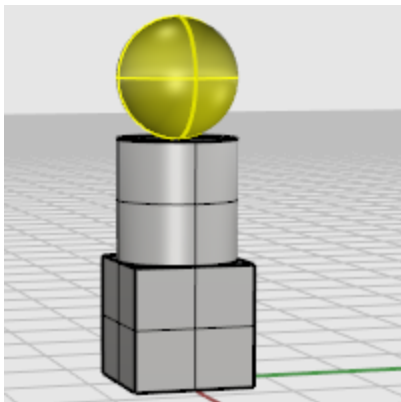

2. Type **SelNone**.

   The SelNone command removes all of the currently selected objects from the selection.
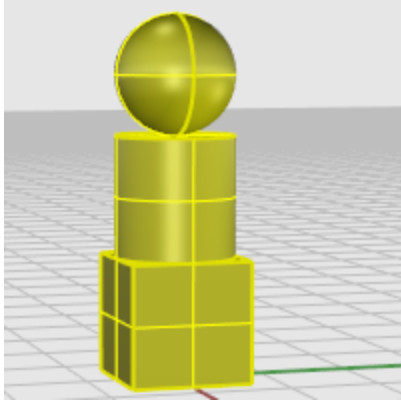

3. Type **SelSrf**.

   The SelSrf command selects all visible, unlocked surfaces. In this case, only the sphere is a surface, the other objects are polysurfaces.

4. Type **SelPolysrf**.

The SelPolysrf command adds all [polysurfaces](#) to the selection. In this case, the cylinder and box are polysurfaces.

5. Press the **Esc** key.

The Esc key clears the selection the same as the SelNone command.

Sub-object selection

You can select sub-parts of objects to use in commands, for example, select a surface edge to use as input for a Loft or ExtrudeCrv operation. The available parts include polysurface faces; surface and polysurface edge curves; control points; mesh vertices, faces, boundaries, and edges; and objects within a group. Search the Help for the topic *Sub-object selection*.

To select parts of objects for use with other commands

▶ Press and hold both the **Ctrl** and **Shift** keys at the same time and click an object part.

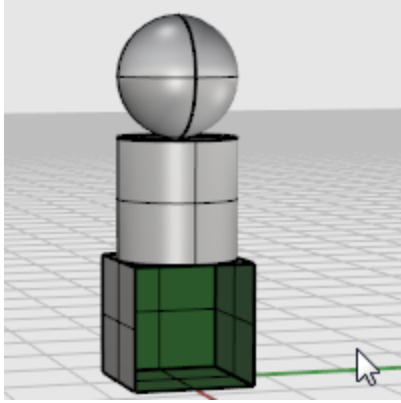### Practice sub-object selection

1. In the **Perspective** viewport, press the **Ctrl** and **Shift** keys and click a face of the box as shown in the illustration below.
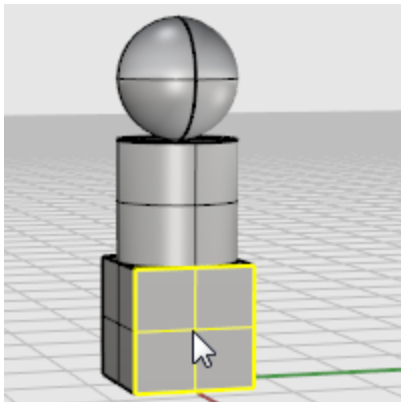
The face you select highlights.

2. Press the **Delete** key.

   The face of the box is separated from the box solid and deleted.