

http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=Using_Select_By_Location

Select by Location – Allows users to select features based on their location to other features (in other layers/feature classes). This is known as a spatial query. (Also see **Select by Attributes**)

Where do I Find it?

- In ArcMap - Main Menu – Choose Selection dropdown – Select by Location

The screenshot shows the 'Select By Location' dialog box. The title bar reads 'Select By Location'. The main text says: 'Lets you select features from one or more layers based on where they are located in relation to the features in another layer.' Below this, there is a section 'I want to:' with a dropdown menu set to 'select features from'. Underneath is 'the following layer(s):' with a list box containing two items: 'HRM_5mcontour' and 'HRM_parks', both with unchecked checkboxes. A checked checkbox 'Only show selectable layers in this list' is followed by 'that:' and a dropdown menu set to 'intersect'. Below that is 'the features in this layer:' with a dropdown menu set to 'HRM_5mcontour'. There are two unchecked checkboxes: 'Use selected features (0 features selected)' and 'Apply a buffer to the features in HRM_5mcontour'. The buffer distance is set to '0.000000' and the unit is 'Decimal Degrees'. At the bottom are buttons for 'Help', 'OK', 'Apply', and 'Close'.

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Parameters:

I want to: Allows the user to have control of what is being put in the selection.

Select features from – This is default option. It will create a new selection of records/features from the feature class. If anything is currently selected it will be cleared before the new selection is made.

Add to currently selected features in – It will maintain any features that are currently selected and then add new features based on the new query.

Remove from currently selected features in – It is used to reduce the number of features currently selected. Anything that meets the selection query will be removed. The final number of records should never be larger than the initial number of records selected

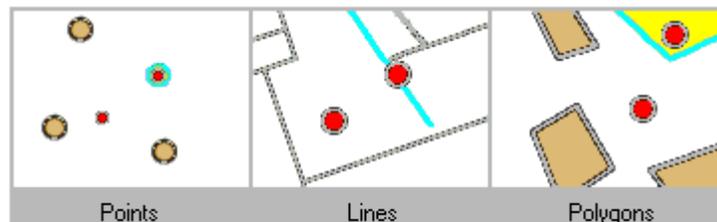
Select form currently selected features in – It will reduce the number of records that are currently selected. The selection that is made is ONLY based on the features that are currently selected.

the following layer(s) – List of layers where the user selects which layer(s) features will be selected from. It is known as the “Target Feature”. Check the appropriate box(es) where you want data selected from.

Only show selectable layers in this list (checkbox) – If Selectable Layers have not been set then leave as default. It shows only the selectable layers – if nothing is changed the default is that all layers in the MXD are selectable.

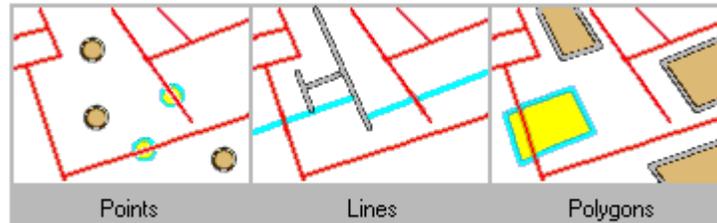
That: Specifies what spatial relationship is to be used.

Intersect – Returns any feature that geometrically shares a common part with the source feature(s). The Cyan colour indicates what is being selected.

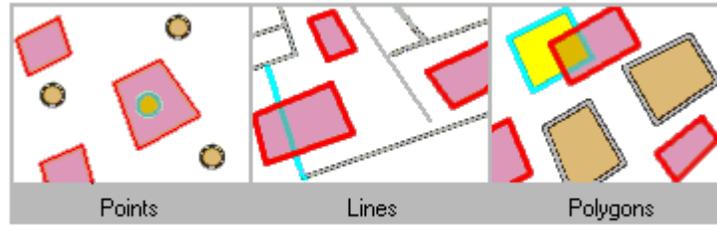


Finding features that intersect with point features

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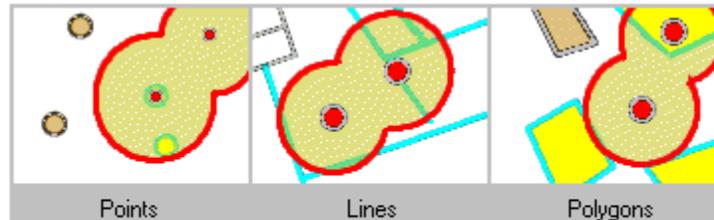


Finding features that intersect with line features

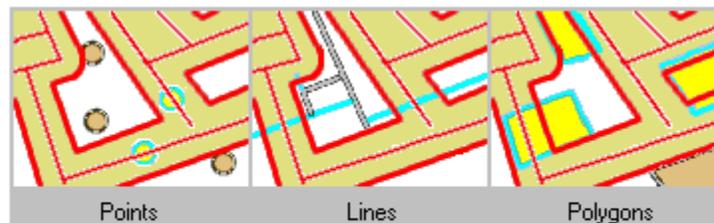


Finding features that intersect with polygon features

Are within a distance of: Creates an equal sized buffer of user specified distance (this means the "Apply a buffer to feature" checkbox must be checked and the distance and unit must be specified), then returns all features that intersect the buffer. The Cyan colour indicates what is being selected.

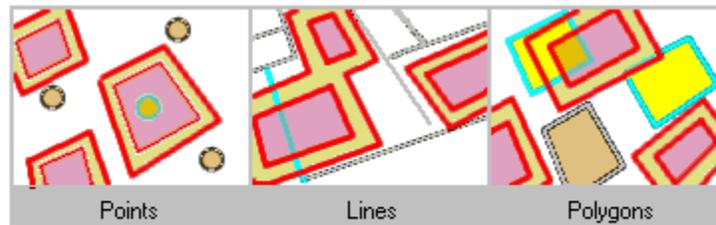


Finding features that are within a distance of point features



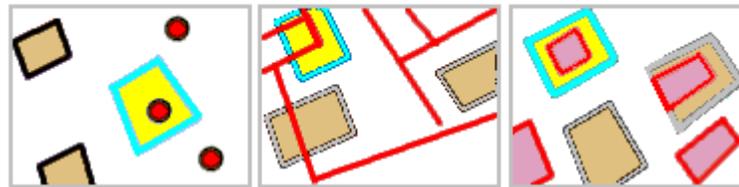
Finding features that are within a distance of line features

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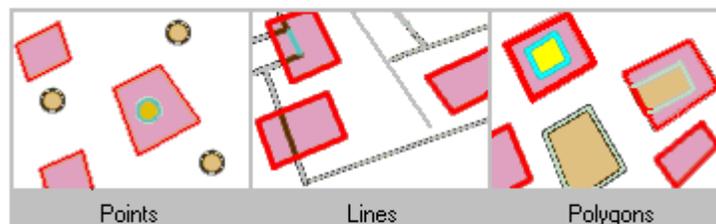
Finding features that are within a distance of polygon features

Completely contain – Each point of the geometry of the source feature must fall inside the geometry of the target feature, excluding the target’s boundaries (the boundaries can’t touch). The target feature must be a polygon. The highlighted cyan features are selected because they completely contain the red features.



Finding polygon features that completely contain point, line, or polygon features

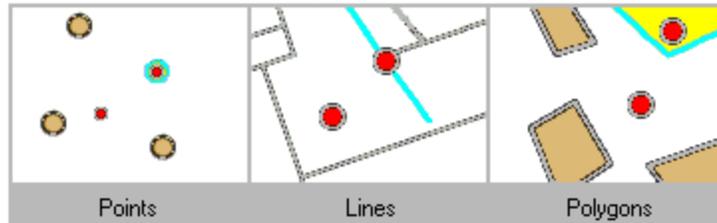
Are completely within – Each point in the target feature geometry must fall within the geometry of the source features, excluding the source’s boundary (the boundaries can’t touch). It is the reverse to the “Completely contain” parameter. The source must be a polygon file. The highlighted cyan features are selected because they are completely within the red features.



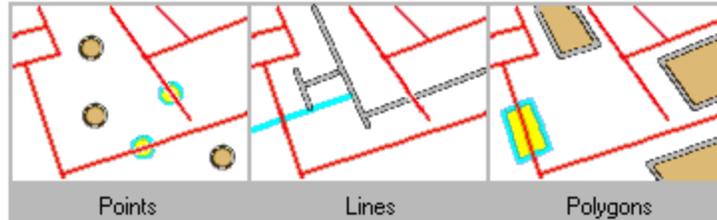
Finding features that are completely within polygon features

Have their Centroid in – A target feature is selected if the centroid of its geometry falls in the geometry of the source feature. The highlighted cyan features are selected because they have their centroids in the red features.

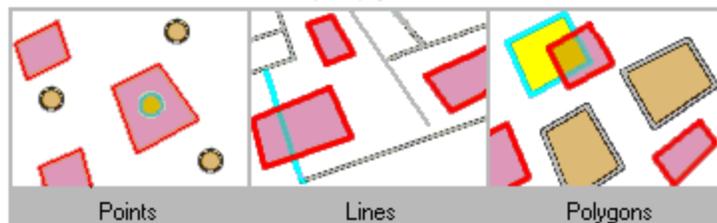
http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=Using_Select_By_Location



Finding features that have their centroid within a distance of point features

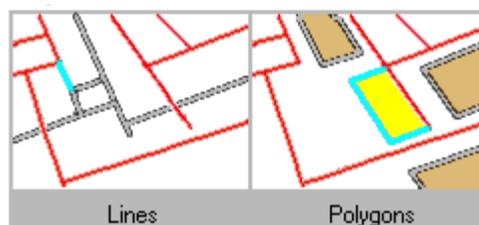


Finding features that have their centroid within a distance of line features



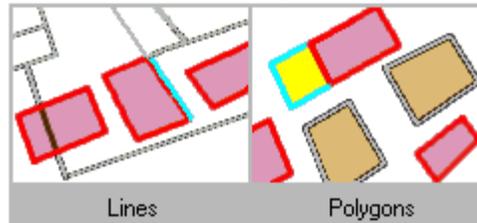
Finding features that have their centroid within a distance of polygon features

Share a line segment with – Source and Target are considered to have shared line segment if their geometries have at least 2 contiguous vertices in common. Therefore Source and Target must be either lines or polygons. The highlighted cyan features are selected because they share a line segment with a red feature.



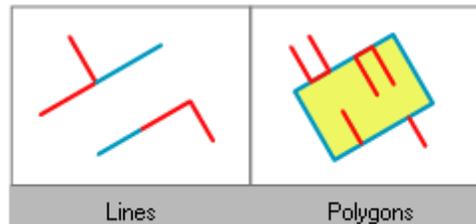
Finding features that share a line segment with line features

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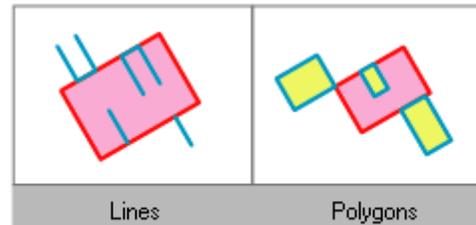


Finding features that share a line segment with polygon features

Touch the boundary of – A target feature will be selected if the intersection of its geometry and the geometry of the source is non-empty. It will include features that are entirely contained or if they share a vertex.

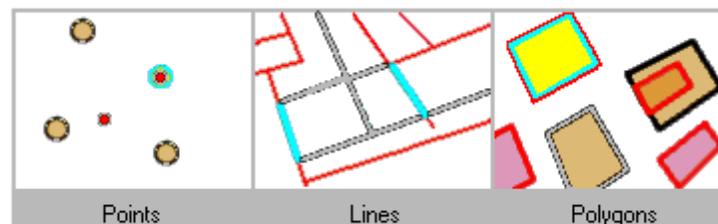


Finding features that touch the boundary of line features



Finding features that touch the boundary of polygon features

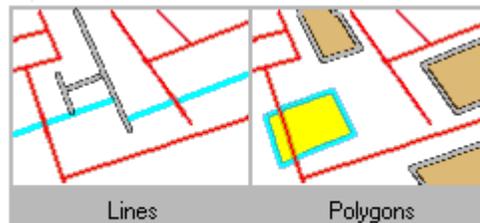
Are identical to – Selects features that are equal. Therefore the source and target must be of the same type (both point, line, or polygons). The highlighted cyan features are selected because they are identical to the red features.



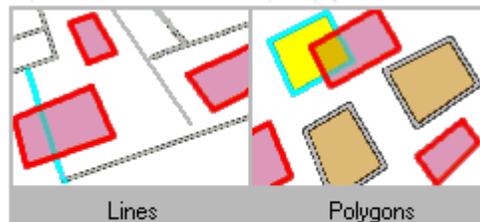
Finding features that are identical to other features

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Are crossed by the outline of – A target feature will be selected if it shares at least a vertex or endpoint, but doesn't share a line segment. Source and target layers must be either lines or polygons.

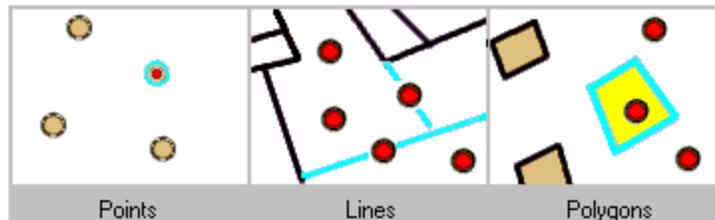


Finding features that are crossed by the outline of line features

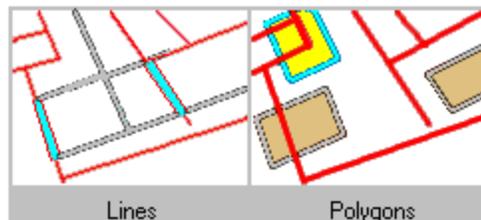


Finding features that are crossed by the outline of polygon features

Contain– Similar to “Completely contain” but the geometry must fall inside the geometry of the target feature including its boundaries.

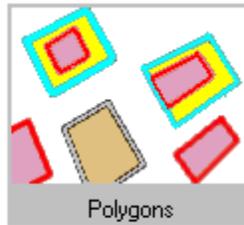


Finding features that contain point features



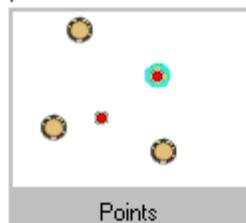
Finding features that contain line features

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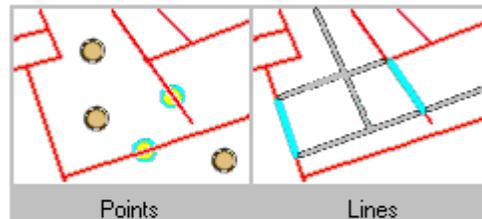


Finding features that contain polygon features

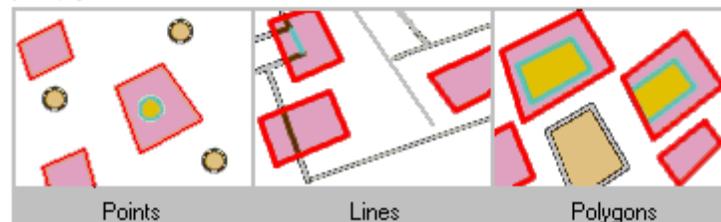
Are within– Similar to “Are completely within” but the geometry must fall inside the geometry of the target feature including its boundaries.



Finding features that are within (contained by) point features



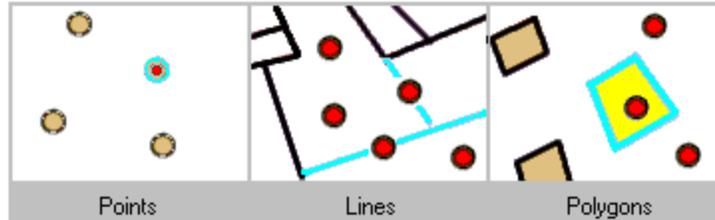
Finding features that are within (contained by) line features



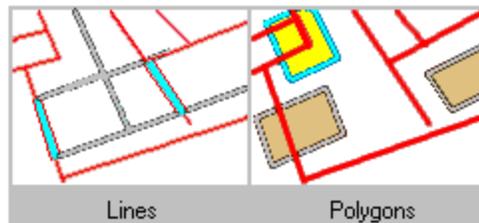
Finding features that are within (contained by) polygon features

http://webhelp.esri.com/arcgisdesktop/9.3/index.cfm?TopicName=Using_Select_By_Location

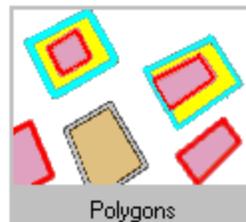
Contain (Clementini)– Similar to “Contain” but the source geometry must fall completely inside the geometry of the target feature it will not be included.



Finding features that contain (Clementini) point features

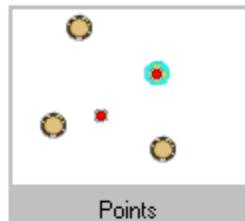


Finding features that contain (Clementini) line features

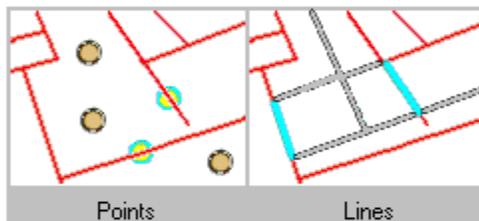


Are within (Clementini)– Similar to “Are within” unless the boundary is shared and no part of the target is within the source feature.

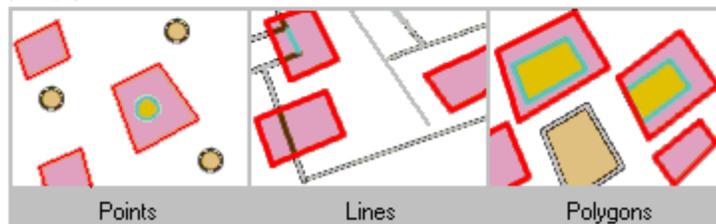
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Finding features that are within (Clementini) point features



Finding features that are within (Clementini) line features



Finding features that are within (Clementini) polygon features

Hints:

This only selects the data in the existing file. If you want to create a new file that has just the selection in it then;

- Right click on the layer name in the Table of Contents
- Go to the Data Option
- Export Data
- Enter the location and name of the file to be created