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Topics ❯

Qt设计工作室手册 ❯ 3D模型
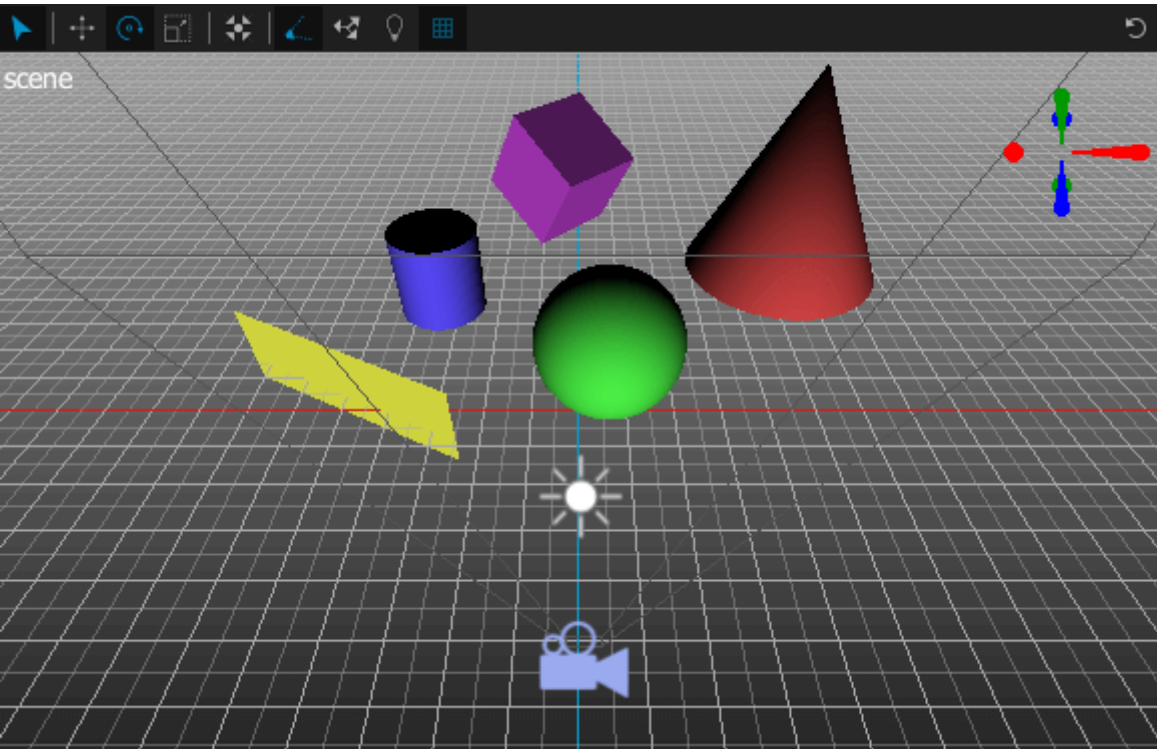
3D模型

"组件"视图包含一些内置的原始 3D 模型。这允许您将立方体、圆锥体、圆柱体和平面（矩形）添加到场景中。

模型组件从文件加载网格数据。您可以使用材质修改组件的着色方式。有关更多信息，请参见材质和着色器和创建自定义材质。

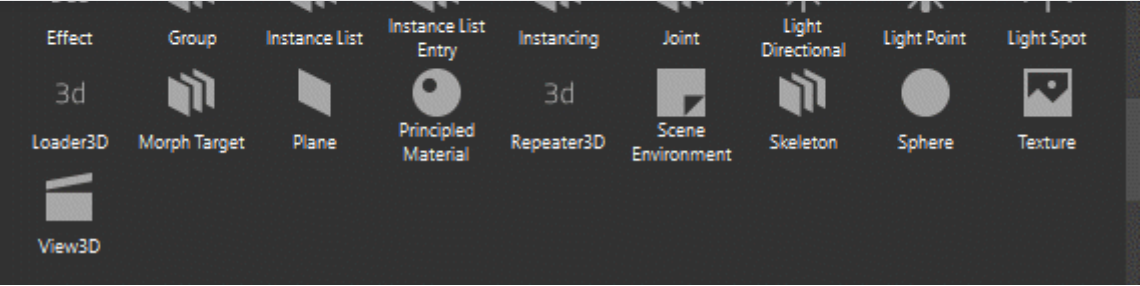若要将模型组件添加到 UI，请执行下列操作之一：

> 将模型组件从**组件**> Qt Quick 3D 拖动到 3D 视图或导航到"**>视图 3D** >**场景"。**
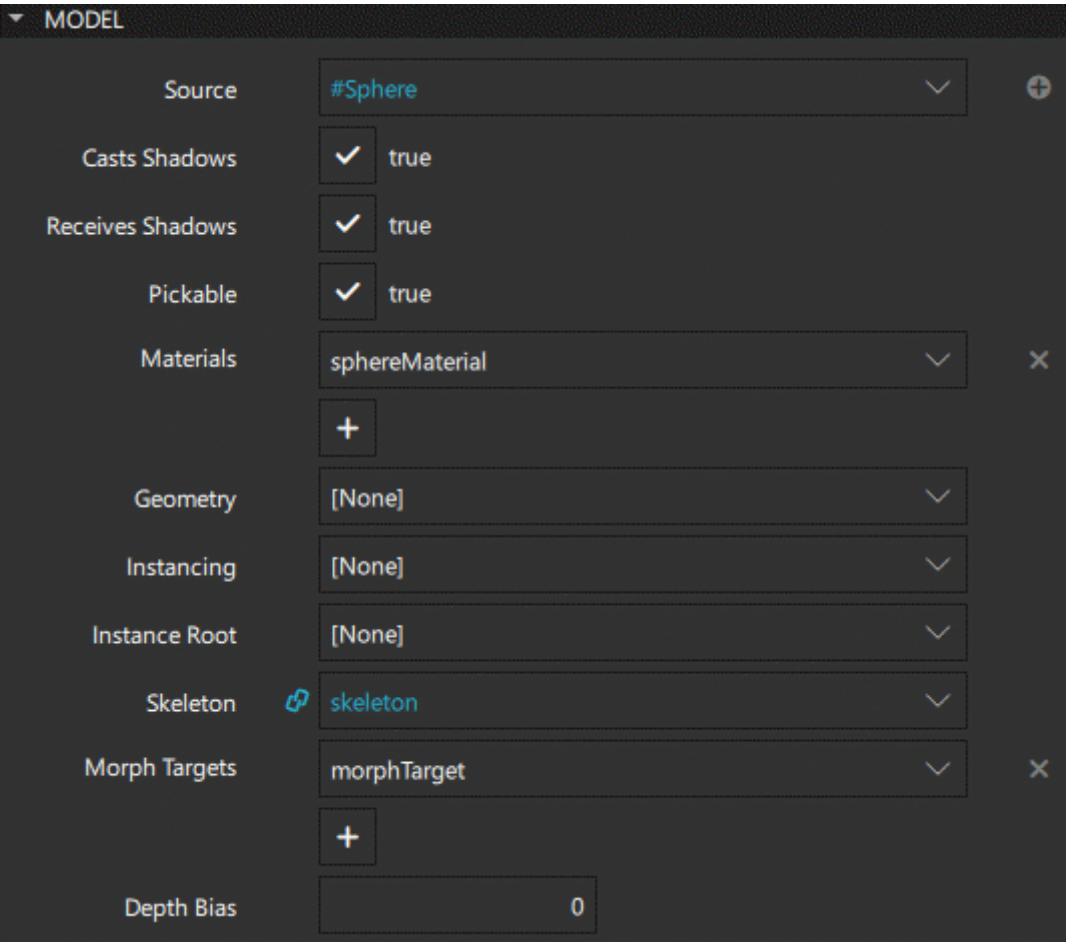> 在 **3D** 视图中单击鼠标右键，然后从上下文菜单中选择**创建**>**基元。**

> **注意：** 不能以这种方式创建**空**模型。

如果在"**组件"**中找不到模型组件，请将 **QtQuick3D** 模块添加到项目中，如添加和删除模块中所述。

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模型属性

您可以在**"属性"">**"模型>**"源"**字段中更改**模型**类型。选择该➕按钮以将自定义模型类型添加到列表中。

To use the geometry of this model when rendering to shadow maps, select the **Casts shadows** check box. To allow casting shadows on the model, select the **Receives shadows** check box.

To enable picking the model against the scene, select the **Pickable** check box. Picking transforms the screen space x and y coordinates to a ray cast towards the specified position in scene space.

A model can consist of several sub-meshes, each of which can have its own material. Select the material from the list in the **Materials** field. Select the ➕ button to add materials to the list. For more information about materials, see Materials and Shaders.

Specify a custom geometry for the model in the **Geometry** field. The **Source** field must be empty when custom geometry is used.

Set the **Instancing** property to render a number of instances of the model as defined by an instancing table. The

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Set the **Instance root** property to define the origin of the instance's coordinate system.

Specify the **Skeleton** property to define the **Skeleton** component used for this model. **Skeletons** are used for skeletal animation.

Specify **Morph targets** to use for rendering the provided geometry. Meshes should have at least one attribute among positions, normals, tangent, and bitangent for the morph targets. **Quick 3D** supports the maximum of eight **Morph targets**. Any additional targets after the first eight will be ignored. This property is not used when the model is shaded by a **Custom Material**.

Define the **Depth bias** property to ensure the shadows of your model are displayed correctly.

Tessellation Properties Available in Qt 5

The properties discussed in this section are only available if you selected **Qt 5** as the **Target Qt Version** when creating the project.
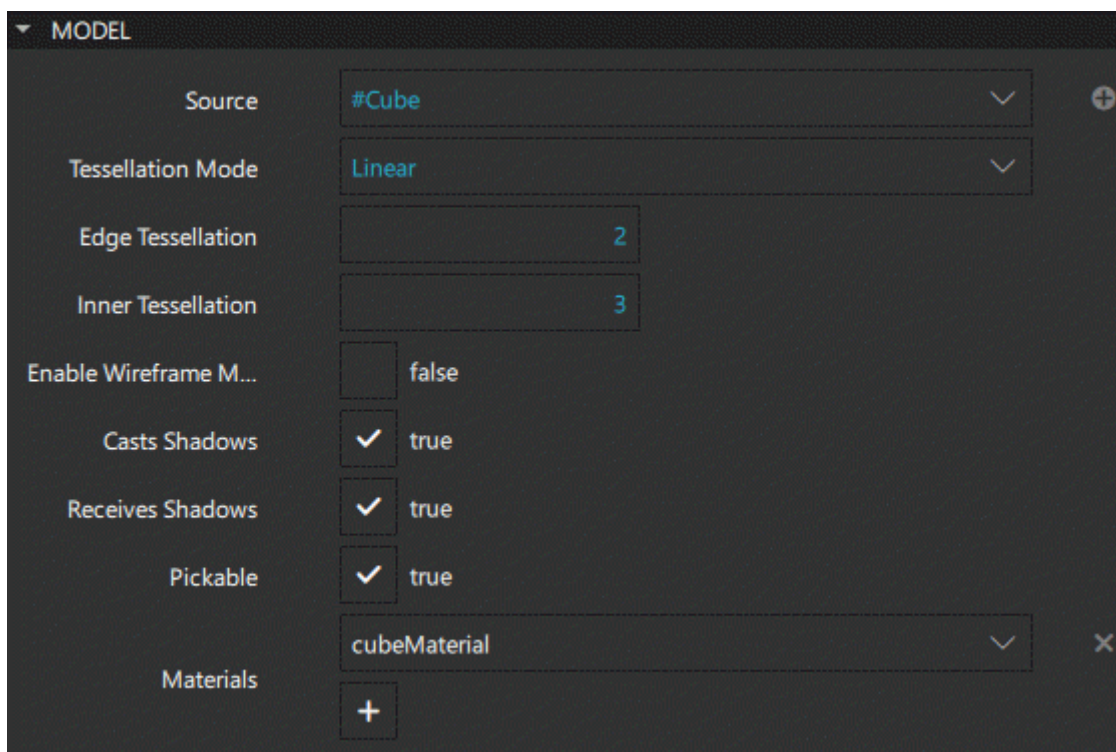
Tessellation refers to additional geometry that resembles tiling, which you can add to your model. To dynamically generate tessellation for the model, select **Linear**, **Phong**, or **NPatch** as the **Tessellation mode**. Tessellation is useful when using a displacement map with geometry, or to generate a smoother silhouette when zooming in.

Specify an edge multiplier to the tessellation generator in the **Edge tessellation** field and an inner multiplier in the **Inner tessellation** field.

To display a wireframe that highlights the additional geometry created by the tessellation generator, select the **Enable wireframe mode** check box.

‹ Skeletal Animation   Materials and Shaders ›

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