# Unit 1: Unity Editor

## Lesson 3: Lights

### Activity 4 (⏱ 15' minutes): Gap text

**Fill the gaps with the words you've heard in the video.**

To light our scene we use the Light component. There are four different types of lights, each of them affect the look of our game in a completely different way:

- Point light behaves like a _____. It illuminates objects in the scene based on the light's position in the scene. Rotation has no influence on the light as this light shines _____ in all directions in a spherical shape.
- Directional light behaves like _____. It affect all the objects in the scene lighting them based on the direction of the light set by the GameObject's rotation. Position in the scene is irrelevant.
- Spot light behaves like a _____, or headlamps on a car. They point in a direction based on their transform's rotation and illuminate all objects within a _____. So spotlights respond to both rotation and position.
- Area lights shine in all directions to one side of a _____ plane.

In addition, two other items can influence the lighting in the scene:

- _____ light controls global non-directional lighting in the scene
- _____ materials are created by setting the emission property in an appropriate self-illuminated shader

Several properties let us customize the light:

- Range determines how _____ a light is emitted from the centre of the GameObject holding the light component. Range only works with point and spot lights. For spot lights we also have access to the spot angle property, this determines the _____ of the cone used by the spot light in degrees.
- Color will control the colour of the light. Note the scene _____ colour will change to match the color property.
- Intensity controls the _____ of the light and this is independent of range.

As well as simple illumination, lights can also use a number of effects: shadows, flares, halos and something called a cookie. A Cookie acts like a virtual mask or flag in front of the light to create a _____ shadow. Cookies use the _____ channel of a texture to give the light a projected shadow pattern.

There are two types of shadows available when _____ shadows from a light: hard and soft shadows. Hard shadows are the most efficient, soft shadows are often more convincing but they are most expensive to render.

Halo will draw the default scene halo around the light. A Flare is similar to a halo but imitates a bright light source seen through _____ glass. When a flare asset is loaded into the flare slot, the light will render using a lens flare.