



Sparkle the Rat

PROJECT 6

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Images



Figure 1: Slightly different blue, we can see a mild reflection on the tummy of the rat



Figure 2: Large increase in uK_r to really see the reflection

KEY CODE

```

vec4 ambient = uKa * uColor;

float d = max( dot(Normal,Light), 0. );
vec4 diffuse = uKd * d * uColor;
vec3 R = normalize( reflect( -Light, Normal ) );
float s = 0.;
if( dot(Normal,Light) > 0. )           // only do specular if the light
can see the point
{
    vec3 ref = normalize( 2. * Normal * dot(Normal,Light) - Light );
    s = pow( max( dot(Eye,R),0. ), 10 );
}

```



```
//Use reflect in lighting for a very shinny look
vec4 specular = uKs * s * uSpecularColor;
vec3 reflcolor = textureCube( uReflectUnit, R ).rgb;
gl_FragColor = vec4( ambient.rgb + diffuse.rgb + specular.rgb +
uKr*reflcolor.rgb, 1. );
}
```

VIDEO LINK

https://media.oregonstate.edu/media/t/o_di5bxu8i

COMMENTS

My rat's name is Sparkle. Using noise small sparkly specs appear across her body. She also has reflective lighting to show how shiny and sparkly she can be. The lighting can be adjusted so Sparkle reflects less or more of the cube map around her. A-D-S can be set at 0 to really showcase the reflective lighting.