

Código 5: Animación

```
#include <windows.h>
#include <gl/glut.h>

float v=150;
float t=0;
float a=-9.81;

void inicializa(void)
{
    glClearColor(0.6,0.8,1.0,0.0);
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();
    gluOrtho2D(0.0, 640.0, 0.0, 480.0);
}

void dibuja(void)
{
    float x,y;
    glClear(GL_COLOR_BUFFER_BIT);
    x = v*t; // ecuaciones
    y = .5 * a * t*t; // movimiento
    glColor3f(.6, .2, 0); //cafe
    glRecti(0+x,389+y,100+x,397+y);
    glColor3f(0.3, 0.3, 0.3); //gris
    glBegin(GL_TRIANGLES);
        glVertex2i(100+x,380+y);
        glVertex2i(130+x,393+y);
        glVertex2i(100+x,406+y);
    glEnd();
    glColor3f(.8, 0, 0);
    glBegin(GL_QUAD_STRIP);
        glVertex2f(-20+x,385+y);
        glVertex2i(-5+x,385+y);
        glVertex2i(-12+x,393+y);
        glVertex2i(4+x,393+y);
        glVertex2i(-20+x,401+y);
        glVertex2i(-5+x,401+y);
    glEnd();
    glutSwapBuffers();
}

void tiempo(void)
{
    t += 0.05;
    glutPostRedisplay();
}

int main(int argc, char** argv)
{
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_DOUBLE | GLUT_RGB);
    glutInitWindowSize(640,480);
    glutInitWindowPosition(100, 150);
    glutCreateWindow("Flecha");
    inicializa();
    glutIdleFunc(tiempo);
    glutDisplayFunc(dibuja);
    glutMainLoop();
    return 0;
}
```

