```javascript
var canvas;
var c;
var w;
var h;
var x;
var y;

window.onload = init;
function init()
{
    canvas = document.getElementById("mycanvas");
    c = canvas.getContext("2d");

    w=parseInt(canvas.getAttribute("width"));
    h=parseInt(canvas.getAttribute("height"));

    canvas.onmousemove = onMouseMove;
    draw();
}

function onMouseMove( e )
{
    x = e.clientX + window.pageXOffset -
        canvas.offsetLeft;
    y = e.clientY + window.pageYOffset -
        canvas.offsetTop;
    draw();
}

function draw()
{
//   Set up the Sun
    var sx=200;
    var sy=600;
    c.clearRect( 0, 0, w, h );
    c.lineWidth=1;
    c.strokeStyle="black";
    c.fillStyle="yellow";
    circle(c,sx,sy,10);

//   Draw the "background" stars
    for (var i=1; i<10; ++i)
        circle(c,i*40,50,5);

//   Draw the Earth's orbit
    c.beginPath();
    c.arc(sx,sy,100,0,Math.PI,true);
    c.lineWidth=2;
    c.strokeStyle="blue";
    c.stroke();
    c.closePath();
```

```javascript
//   Draw Mars' orbit
    c.beginPath();
    c.arc(sx,sy,158,0,Math.PI,true);
    c.lineWidth=2;
    c.strokeStyle="red";
    c.stroke();
    c.closePath();

//   Draw the Earth
    c.strokeStyle="black";
    c.fillStyle="blue";
    var dx=x-sx;
    var dy=sy-y;
    if (dy<0) dy=0;
    var etheta=Math.atan(dy/dx);
    if (dx<0) etheta=etheta+Math.PI;
    var ex=100*Math.cos(etheta);
    var ey=100*Math.sin(etheta);
    c.lineWidth=1;
    circle(c,ex+sx,sy-ey,10);

//   Draw Mars and retard its motion
//   around the Sun by about a factor of 2
    c.strokeStyle="black";
    c.fillStyle="red";
    var mtheta=etheta-(etheta-Math.PI/2)/2;
    var mx=158*Math.cos(mtheta);
    var my=158*Math.sin(mtheta);
    c.lineWidth=1;
    circle(c,mx+sx,sy-my,10);

//   Finally, draw the "sight line"
    var slope=-((sy-my)-(sy-ey))/
                ((mx+sx)-(ex+sx));
    tslope=Math.atan(slope);
    if (slope<0) tslope=tslope+Math.PI;
    var lx=sy*Math.cos(tslope)+(ex+sx);
    var ly=(sy-ey)-sy*Math.sin(tslope);
    c.moveTo(ex+sx,sy-ey);
    c.lineTo(lx,ly);
    c.strokeStyle="black";
    c.lineWidth=2;
    c.stroke();
}

//   Shortcut to draw circle
function circle( c, x, y, r )
{
    c.beginPath();
    c.arc( x, y, r, 0, Math.PI*2, true );
    c.closePath();
    c.fill();
    c.stroke();
}
```