```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Ostracod Bioluminescence Simulation</title>
    <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
    <style>
        body { font-family: Arial, sans-serif; text-align: center; }
        canvas { max-width: 600px; margin: 20px auto; }
        .tank {
            display: inline-block;
            width: 200px;
            height: 200px;
            border: 2px solid black;
            margin: 10px;
            position: relative;
            background-color: black;
        }
        .ostracod {
            width: 5px;
            height: 5px;
            border-radius: 50%;
            position: absolute;
        }
    </style>
</head>
<body>
    <h1>Ostracod Bioluminescence Simulation</h1>
    <p>Tracking bioluminescent courtship displays under different LED intensities</p>

    <div id="simulation">
        <div class="tank" id="controlTank">Control (No LED)</div>
        <div class="tank" id="lowLedTank">Low Intensity LED</div>
        <div class="tank" id="highLedTank">High Intensity LED</div>
    </div>

    <canvas id="bioluminescenceChart"></canvas>

    <script>
        function createOstracods(tankId, count, color) {
            const tank = document.getElementById(tankId);
            tank.innerHTML = tankId.replace('Tank', ' Tank');
            for (let i = 0; i < count; i++) {
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        let ostracod = document.createElement('div');
        ostracod.classList.add('ostracod');
        ostracod.style.left = `${Math.random() * 180}px`;
        ostracod.style.top = `${Math.random() * 180}px`;
        ostracod.style.backgroundColor = color;
        tank.appendChild(ostracod);
    }
}

function updateBioluminescence(week) {
    let controlCount = Math.max(20 - (week * 1), 0);
    let lowLedCount = Math.max(20 - (week * 3), 0);
    let highLedCount = Math.max(20 - (week * 6), 0);
    createOstracods('controlTank', controlCount, 'yellow');
    createOstracods('lowLedTank', lowLedCount, 'blue');
    createOstracods('highLedTank', highLedCount, 'red');
}

let week = 0;
setInterval(() => {
    if (week < 3) {
        week++;
        updateBioluminescence(week);
    }
}, 3000);

const weeks = [1, 2, 3];
const controlData = [100, 95, 90];
const lowLEDData = [100, 85, 70];
const highLEDData = [100, 60, 30];

const ctx = document.getElementById('bioluminescenceChart').getContext('2d');
new Chart(ctx, {
    type: 'line',
    data: {
        labels: weeks.map(w => `Week ${w}`),
        datasets: [
            { label: 'Control (No LED)', data: controlData, borderColor: 'green', fill: false },
            { label: 'Low Intensity LED', data: lowLEDData, borderColor: 'blue', fill: false },
            { label: 'High Intensity LED', data: highLEDData, borderColor: 'red', fill: false }
        ]
    },
    options: {
        responsive: true,
```

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            plugins: { legend: { position: 'top' } },
            scales: {
                y: { beginAtZero: true, title: { display: true, text: 'Bioluminescence Activity (%)' } },
                x: { title: { display: true, text: 'Weeks' } }
            }
        }
    });
  </script>
</body>
</html>
```