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<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Climate Change Model: Projected Temperature Rise</title>

  <script src="https://cdn.plot.ly/plotly-latest.min.js"></script>

</head>

<body>

  <h1>Climate Change Model: Projected Temperature Rise</h1>

  <div id="plot" style="width: 100%; height: 500px;"></div>


  <script>

    // Constants

    const years = Array.from({ length: 101 }, (_, i) => 2000 + i);

    const initialTemp = 14.0;

    const co2Levels = Array.from({ length: years.length }, (_, i) => 350 + (i * (700 - 350) / (years.length - 1)));

    // Temperature increase model (simplified)

    const tempIncrease = co2Levels.map(co2 => (co2 - 350) * 0.02);

    const avgTemp = tempIncrease.map(increase => initialTemp + increase);

    // Plotting data using Plotly

    const data = [{
      x: years,
      y: avgTemp,
      type: 'scatter',
      mode: 'lines',
      name: 'Projected Avg Temperature',
```

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    line: { color: 'orange' }  
  }  
};
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const layout = {  
  title: 'Climate Change Model: Projected Temperature Rise',  
  xaxis: { title: 'Year' },  
  yaxis: { title: 'Average Temperature (°C)' },  
  showlegend: true,  
  grid: true  
};
```

```
Plotly.newPlot('plot', data, layout);
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</script>
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</body>
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</html>
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