

CO Buildup City - Time of Day Protocol

Purpose: To see if there is a relationship between the time of day and air quality.

Materials:

- Data collection chart
- CO Buildup City Simulation at <http://coep.pharmacy.arizona.edu/air/index.html>

Procedures:

1. Open the CO Buildup City simulation
2. Click “Go”
3. Leave the city size at the default setting.
4. Change the time of day to “Sunrise.” Read the Air Quality Index on the sign labeled AQI for CO. Record this data in the column marked “Air Quality Index.”
5. Observe the cars, CO pollution, movement of CO pollution, and sun. Record this information in the observational notes.
6. Repeat with the remaining times of day. When needed, click the “explain” button to see why the CO levels are where they are.

Data:

<u>Time of Day</u>	<u>Air Quality Index</u>	<u>Observational Notes</u>
Sunrise (5:30 am)		
Morning Rush Hour (8:30 am)		
Mid Day (1:25 pm)		
Afternoon Rush Hour (5:15 pm)		
Night		

Conclusion:

How does the time of day affect the buildup of CO in a city?
 How does this affect the air quality?