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**Jordan Public Schools  
Middle School**

**Inspection Date  
04-10-2019**



## Observations and Air Quality Measurements

Observations and air sampling results are outlined in the following table:

Room / Location	Time	Number of Occupants	CO2 (ppm)	CO (ppm)	RH (%)	Temp. (F)	Comments/Observations
Main Office	8:54 AM	4	954	0	26	66	
106 Work Room	8:55 AM	1	618	0	24	68	
107 Nurse	8:57 AM	2	829	0	25	67	
101	8:58 AM	1	1058	0	23	69	
102	8:59 AM	1	607	0	20	69	
104	8:59 AM	1	594	0	21	70	
105	9:00 AM	1	768	0	21	70	
400	9:01 AM	3	577	0	21	71	
420	9:04 AM	1	1058	0	21	71	
418	9:05 AM	1	639	0	19	71	
417 Lab	9:07 AM	1	550	0	19	71	
411	9:08 AM	29	1291	0	26	71	
410	9:10 AM	29	2036	0	29	71	
409	9:11 AM	24	1418	0	26	72	
408	9:12 AM	29	1733	0	26	73	
407	9:14 AM	30	1112	0	22	73	
406	9:15 AM	32	1343	0	25	73	
413	9:16 AM	1	934	0	21	72	
412	9:17 AM	1	894	0	21	71	
405	9:17 AM	28	1206	0	26	72	
404	9:19 AM	26	1448	0	27	72	
Gym	9:20 AM	42	681	0	22	70	
206	9:22 AM	15	1173	0	29	71	
306	9:24 AM	5	731	0	21	71	
200	9:26 AM	2	1243	0	29	71	
201	9:27 AM	2	799	0	23	72	
202	9:28 AM	1	570	0	23	72	
203	9:29 AM	10	980	0	28	72	
Media Center	9:30 AM	2	934	0	26	71	
204A	9:32 AM	1	925	0	27	71	
205A	9:32 AM	1	895	0	25	72	
211 Kitchen	9:34 AM	3	674	0	21	71	
236	9:36 AM	1	800	0	24	71	
220	9:39 AM	1	857	0	23	72	
216	9:42 AM	1	634	0	23	72	
217	9:42 AM	1	740	0	22	72	
218	9:43 AM	1	660	0	22	73	
219	9:44 AM	2	727	0	23	73	
222	9:45 AM	2	717	0	21	72	
221 Office	9:46 AM	1	676	0	22	73	
223 Office	9:46 AM	1	660	0	23	73	
224 District Office	9:48 AM	4	865	0	25	73	Plants
232	9:49 AM	2	827	0	23	73	
232	9:50 AM	1	795	0	23	73	
230	9:51 AM	2	886	0	24	73	
229	9:52 AM	1	950	0	25	73	
228	9:53 AM	1	910	0	24	74	
227	9:53 AM	2	887	0	24	74	

226	9:54 AM	1	860	0	23	74	
225	9:55 AM	2	898	0	24	74	
208	9:56 AM	2	860	0	22	71	
207	9:59 AM	1	718	0	22	71	
109 PLC	10:00 AM	1	620	0	21	70	
110	10:02 AM	3	893	0	23	71	
124	10:04 AM	8	892	0	21	72	
123B	10:05 AM	18	1144	0	23	72	
123	10:07 AM	2	667	0	19	72	
123A	10:08 AM	1	915	0	19	72	
122	10:09 AM	1	954	0	20	72	
120	10:11 AM	28	1103	0	25	72	
121	10:12 AM	8	708	0	20	72	
119	10:13 AM	1	1083	0	24	72	
118	10:14 AM	2	883	0	23	72	
116	10:15 AM	30	1161	0	27	72	
115	10:16 AM	3	1061	0	24	72	
114	10:16 AM	29	1498	0	29	73	
112	10:17 AM	26	1558	0	27	74	
111	10:19 AM	10	1287	0	26	74	
305	10:20 AM	1	943	0	20	72	
305A	10:22 AM	1	911	0	20	72	
304	10:23 AM	2	807	0	21	72	
302	10:24 AM	25	1097	0	24	73	
307	10:25 AM	1	656	0	20	73	
213 PLC	10:26 AM	3	725	0	24	71	
Outdoors	10:30 AM	1	378	1	58	33	

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## Summary of Concerns & Recommendations

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See below for IEA's list of concern areas and recommendations:

### **Indoor Air Quality Parameters/Guidelines**

IEA recorded area(s) with humidity levels outside the ASHRAE recommended range of 30-60%. Relative humidity levels identified in areas listed below were found to be outside these guidelines. Low humidity levels tend to dry mucous membranes which may result in increased susceptibility to irritation. An evaluation of the ventilation system controls, performance and operation is recommended. Low relative humidity is common in buildings during the heating season.

All Areas

IEA recorded area(s) with carbon dioxide measurements over 1,200 ppm in the building. IEA considers carbon dioxide measurements above 1,200 ppm as an indication of a possible ventilation issue. The air-handling system serving the location with these levels should be evaluated. Possible issues with air distribution and/or the control system may be the source for the carbon dioxide measurements.

Room 111	Room 112	Room 114	Room 200
Room 404	Room 405	Room 406	Room 407
Room 408	Room 409	Room 410	Room 411

IEA recorded area(s) with temperatures outside the recommended range. During the heating season, ASHRAE recommends that temperatures be between 68° and 75°F. Evaluation of temperature controls and/or ventilation system performance and operation is recommended.

Main Office - 66°      Room 107 Nurse Office - 67°

IEA did not record any areas with elevated carbon monoxide levels. IEA considers carbon monoxide over 5 ppm to be a possible indication of ventilation and/or equipment issues. Systems and equipment in locations with elevated carbon monoxide should be assessed.

### **Odors**

Odors were not detected during the site visit in the building. If odor issues arise, the source should be investigated. If the source for the odor cannot be easily identified, it is recommended that further investigation be conducted by a professional consulting service.

### **Water Stained Ceiling Concerns**

Water-impacted ceiling materials should be replaced when discoloration or water staining is observed. Water-impacted ceiling materials can be a source for microbial growth. The source for the moisture infiltration should be investigated and repaired. No issues observed.

### **Visible Fungal Growth Concerns**

Building materials with visible fungal growth should be removed and/or cleaned under controlled conditions, per the New York City Guidelines (<https://www1.nyc.gov/assets/doh/downloads/pdf/epi/epi-mold-guidelines.pdf>) or following the Institute of Inspection, Cleaning and Restoration (IICRC) S520 *Standard and Guide for Professional Mold Remediation* to prevent possible contamination of adjacent locations and impact to building occupants. No issues observed.

### **Efflorescence Concerns**

During the walkthrough, IEA did not identify any areas with efflorescence. Should issues develop, IEA recommends checking the area to note humidity levels and investigating moisture concerns in the area.

### **Bubbling/Peeling Paint Concerns**

IEA did not observe bubbling/peeling paint in throughout the building. Bubbling/peeling paint can be caused by moisture issues. IEA would recommend investigating the cause and repairing the paint. IEA recommends ensuring that the paint is not lead-based prior to disturbance.

### **Condensation Concerns**

IEA did not locate any areas where condensation was forming. Condensation forming on interior sources may suggest a temperature or humidity issue within the space. Elevated humidity can be a source of microbial growth. Temperature differentials that cause condensation on surfaces can suggest a ventilation concern. The condensation can be deposited on surfaces can increase the likelihood for fungal growth and damage to building materials. Window condensation can occur during extreme cold outdoor temperatures.

### **Plants**

Plants in an occupied location can be a source of allergens to sensitized individuals due to the pollen and soil mold. It is recommended that plans be removed from locations occupied by sensitized individuals. If plants are to remain in the area, the following actions are recommended:

- Water plants from the bottom to aid in preventing fungal growth on the soil surface
- Do not locate plants on top of air unit ventilators, if present in a room, to prevent soil and leaves from falling into the units.
- Do not locate plants near air supply diffusers, this will limit air currents over the plants and may prevent pollen or mold spores from becoming airborne.

District Office

### **Taxidermy**

IEA did not observe any areas with taxidermy mounts present. Individuals with allergies or asthma may be sensitive to dust, animal fur, dander, body fluids, and feces and may have a reaction when exposed to these allergens. IEA recommends using an alternative to animals if allergen symptoms are found by occupants within a classroom containing taxidermy.

### **Live Animals**

During the walkthrough, IEA did not observe any live animals. Prior to having animals, the District Nurse should be consulted to verify children's allergies. Consult parents about potential allergies in a take-home note with students or during parent-teacher conferences. IEA recommends that sensitive students are located away from the animal and that cages are regularly cleaned.

### **Poor Airflow**

Poor airflow was not identified in the building during the site visit. If the building is occupied, air handling systems should be set to operate in "occupied" mode. If poor airflow is identified while systems are in "occupied" mode, a ventilation and controls assessment is recommended.

### **Poor Housekeeping**

Areas were not identified by IEA as having poor housekeeping (excessive clutter, excessive dust/debris on horizontal surfaces, etc.). Poor housekeeping can limit building maintenance from conducting a proper regular cleaning of the area. This can result in elevated potential for allergen issues in sensitized individuals due to dirt and debris loading. Poor housekeeping can also allow for pest (insects and rodents) issues in the space.

**Structural Failure**

IEA did not observe any areas in which external and/or internal structural failure was present. IEA would note these items as pre-cautionary and would recommends that they are examined by a licensed engineer.

**Blocked Air Diffusors**

IEA did not observe any blocked air diffusors in the following rooms. IEA would recommend that items are moved from the vicinity of the air supply diffuser and return grates. Blocked supply and return on the units can limit efficient air exchange within the occupied space.