



Legislation Details (With Text)

**File #:** Res 0065-2014    **Version:** \*    **Name:** Dept of Education to review the use of the "Rainbow" experiment in NYC public schools.

**Type:** Resolution    **Status:** Filed (End of Session)

**In control:** Committee on Education

**On agenda:** 2/26/2014

**Enactment date:**    **Enactment #:**

**Title:** Resolution calling upon the New York City Department of Education to review the use of the "Rainbow" experiment in New York City public schools, as well as to adhere to the DOE Science Safety Manual and Fire Code procedures and facility requirements for all potentially volatile science demonstrations, including the "Rainbow" experiment.

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**Indexes:**

**Attachments:**

Date	Ver.	Action By	Action	Result
2/26/2014	*	City Council	Introduced by Council	
2/26/2014	*	City Council	Referred to Comm by Council	
12/31/2017	*	City Council	Filed (End of Session)	

Res. No. 65

Resolution calling upon the New York City Department of Education to review the use of the "Rainbow" experiment in New York City public schools, as well as to adhere to the DOE Science Safety Manual and Fire Code procedures and facility requirements for all potentially volatile science demonstrations, including the "Rainbow" experiment.

By Council Members Rosenthal, Chin, Levine, Williams, Treyger, Koslowitz, Lander, Dromm and Menchaca

Whereas, The "Rainbow" experiment is a common high school chemistry experiment where teachers mix methanol with mineral salts in small dishes to show how various mineral salts produce different color flames when burned; and

Whereas, Methanol is highly flammable and has a very low boiling point, allowing it to produce flammable vapors at room temperature that can be ignited by a spark or static electricity in winter; and

Whereas, There are numerous examples from around the country of the "Rainbow" experiment causing fires in classrooms that lead to serious injuries, including a 2006 case where a girl in Ohio was severely burned

over more than 48 percent of her body, a 2013 case in Texas where a student had to be flown to a burn center for treatment, and a 2004 case in Washington State where a teacher was severely burned by four-foot flames; and

Whereas, The U.S. Chemical Safety Board (CSB) released a video safety message focused on potential dangers of the “Rainbow” experiment on December 10, 2013; and

Whereas, The CSB said that the organization had no sure way to reach individual teachers and that New York State’s science education officials were not among the 60,000 subscribers who received the warning from the agency; and

Whereas, Lab safety education is not part of the written requirements for science teacher certification in New York State; and

Whereas, According to *The New York Times*, surveys find that lab accident rates are 10 to 100 times higher in schools than in industry; and

Whereas, A survey conducted in New York City in the mid-1990s found that some schools had no science laboratory facilities, that an overall shortage of lab facilities across schools compromised student safety, and that, on average, the City spent \$2.02 per student for laboratory supplies, compared to \$16.79 per student per year spent by a suburban district on Long Island; and

Whereas, More recent research shows a similar lack of resources for safe science experiments in New York’s schools, including a survey conducted for The Campaign for Educational Equity’s *Deficient Resources* report, which found that 14 out of 33 schools surveyed lacked appropriate equipment and materials to instruct students in science, half of which had out-of-date laboratories that lacked sufficient sinks with running water, appropriate devices for measuring and weighing, microscopes, and mandated shower stations; and

Whereas, Further, a survey for the New York City Charter Center’s 2013 report, *Building Inequality*, found that a third of secondary charter schools in New York City do not have science labs; and

Whereas, On January 2, 2014, the “Rainbow” experiment caused a fire at the Beacon School on the

Upper West Side of Manhattan, burning two students, one of whom was in critical condition in the burn unit of New York-Presbyterian Hospital/Weill Cornell Medical Center; and

Whereas, The New York City Fire Department cited the Beacon School for eight violations after the experiment, including violations for storing chemicals unsafely and for deficiencies in safety equipment and practices in multiple rooms, including the classroom in which there was a fire; and

Whereas, Science safety experts say that the problems leading to violations at the Beacon School are widespread in American schools; now, therefore, be it

Resolved, That the Council of the City of New York calls upon the New York City Department of Education to review the use of the “Rainbow” experiment in New York City public schools, as well as to adhere to the DOE Science Safety Manual and Fire Code procedures and facility requirements for all potentially volatile science demonstrations, including the “Rainbow” experiment.

LS #395  
MD/JA  
2/21/14