

Guide for Using Understanding Air for Public STEM Events

Understanding Air is excellent for booths at public STEM events, festivals, or fairs. Below is a collection of the materials and instructions necessary to create your own booth with different stations. Please download the following documents and mats from:

<https://edgerton.mit.edu/molecule-sets/understanding-air>



Instructions:

- [Booth Setup Instructions](#)
- [Station Volunteer Instructions](#)
- [Station LEGO Layout Cards](#) (includes lists of bricks)

Mats:

- [Atom Key/Layout Mat](#)
- [What Is Air Made Of Mat](#)
- [Burning Fuel: Complete Combustion Mat](#)
- [Burning Fuel: Incomplete Combustion Mat](#)
- [Air Chemistry and Pollution Mat](#)
- [CO₂ Graph](#)

PREPARATION BEFORE THE EVENT

STEP 1: Print and cut out 2 copies of the Station LEGO Layout Cards. Tape each to the bottom of a small box (plastic takeout boxes work well). Fill each box with the LEGO bricks on the Layout Card.

STEP 2: Print copies of the Station Volunteer Instructions (one for each volunteer at each station).

STEP 3: Print out the CO₂ Graph for station 1.

STEP 3: Print double-sided copies of the 8.5" x 11" mats on card stock as follows:

- [Atom Key/Layout Mat](#) (5 copies)
- [What Is Air Made Of Mat](#) (3 copies)
- [Burning Fuel: Complete Combustion Mat](#) (4 copies)
- [Burning Fuel: Incomplete Combustion Mat](#) (4 copies)
- [Air Chemistry and Pollution Mat](#) (3 copies)

STEP 4: Purchase 8 plastic stands for 8.5" x 11" pages. Use the Booth Setup Instructions to place the following mats in the plastic stands with the designated sides out toward the participants:

- [Atom Key/Layout Mat](#) (1 copy – Atom Key side out)
- [What Is Air Made Of Mat](#) (1 copy – What is Air Made of side out)
- [Burning Fuel: Complete Combustion Mat](#) (2 copies – 1 of each side out)
- [Burning Fuel: Incomplete Combustion Mat](#) (2 copies – 1 of each side out)
- [Air Chemistry and Pollution Mat](#) (1 copy – white blanks side out)
- [CO₂ Graph](#) (1 copy – graph side out)

STEP 5: Use the Booth Setup Instructions to gather the materials for each station.

STEP 6: Meet with the volunteers in advance to go over the Station Volunteer Instructions and have them practice using the LEGO bricks before the event.

SETUP AT THE EVENT

STEP 1: Use the Booth Setup Instructions to set up each station.

STEP 2: Make sure each volunteer has their Station Volunteer Instruction sheet for reference.

STEP 3: Place 2 participant chairs for each station. This table set up can only handle 2 participants at each station at a time – the chairs show whether there is an open place.

STEP 4: Have fun!



Wilmington STEM Fair with MIT SRP
Wilmington, MA 2023



Beijing Science Festival
Beijing, China 2015



First Cambodian Science Festival
Phnom Penh, Cambodia 2015