

## **Read It; Build It**

**Grades:** 2<sup>nd</sup>, 3<sup>rd</sup>

**Team Size:** 1-2 participants

**Duration:** 30 minutes

**Supervisors:** Koen Verbrugghe, Maisha Ostergren and Patricia Pacania

All teams will be given an identical set of items and instructions. Teams will attempt to build a “picture” from the items based on the given instructions. This event tests each team’s ability to understand and follow written or graphical instructions. The team that most closely follows the instructions will win.

The “picture” is composed of items arranged on a posterboard. Unlike Lego or IKEA instructions, teams will **NOT** be provided with a final illustration of the final composition. Team scores will be determined by what the teams have arranged on the poster board based on the instructions at the end of the event. The highest scores will reflect correct placement of items that most closely replicates the “picture”.

An advanced task will be built into the instructions as an initial tie breaker. This task will represent a challenge that demonstrates the team’s skills, abilities, and understanding at a grade level higher than their current grade.

### **Concepts Covered:**

- Spatial Orientation – location, orientation, and placement of items to construct objects in the “picture”
- Scientific Literacy -- ability to understand and follow written or graphical instructions
- Technical writing - introduction to the field of technical writing that focuses on explanation, instruction or directions.

### **Rules and Expectations:**

1. Teams will have a total of 30 minutes to complete the event. Start time, End time, and a Five-Minute warning will be clearly indicated.
2. After 30 minutes all teams will be escorted back to the staging area.
3. **ONE (1)** set of all materials necessary to compete will be provided to each team.

4. Items used for this event are EVERYDAY items – any shape, any color, any dimension, any size.
5. Teams will use materials to build a “picture” based on a set of written or graphical instructions. 2<sup>nd</sup> grade will use at least 12 items; 3<sup>rd</sup> grade will use at least 15 items.
6. Teams are responsible to write the NAME of the SCHOOL VISIBLY and LEGIBLY on the TOP of the poster board.
7. FAILURE TO COMPLETE STEP 6 will result in ZERO (0) points being awarded to the team.
8. NO other writing, drawings, illustrations, or numbering is allowed on the poster board.
9. Builders **must rely on** their understanding and interpretation of the set of instructions given to correctly place the items in the “picture”.
10. The instructions will be written to use all the materials provided.

### Event Definitions:

**Item:** Everyday items (for example: popsicle sticks, fuzzy sticks, water bottle caps, etc.) that are used to build an object according to instructions given. The instructions will include a key to help identify each item. The item key will include pictures of the items, item number (Item #1, Item #2, etc.), and the name of each item (bottle cap, string, etc.).

**Object:** A collection of individual items arranged according to the instructions. One of multiple objects that create the final “picture”. (Refer to the RIBI presentation for Grade 2 and Grade 3 object examples)

**Picture:** A composition made up of objects that teams must build according to the instructions given. The picture is built on a poster board measuring 11” x 14”.

### Scoring System

The team who most closely follows the instructions to build the “picture” is declared the winner. Three possible points are awarded for each item correctly placed.

- One for **placement** (Is the item present on the poster board? Is the item correctly altered; e.g. folded in the correct shape? Is the item on another as instructed?))
- One point for **location** (Is the item in the correct place?)

- One point for **orientation** (Is the item upside down, right side up, at the correct angle, etc.)

The team with the highest score will be declared the winner. Ties will be broken using the advanced task and the build of other items in the “picture”.

Advanced task – one object or one instruction will present an advanced challenge requiring the team to “mentally stretch” and correctly place the item in the “picture”. The score for this task will count as the first tie breaker. If needed, we will use other objects or items as additional tie breakers. These will either be pre-selected by the event supervisors or we will use those items that have the greatest spread in points during the competition.

## Practice and Preparation

**Practice** should involve the teams building using any random items based on a set of written or graphical instructions – making a sandwich, building Legos, building anything from IKEA. The goal is to build confidence in interpreting and correctly executing ANY set of instructions.

**Ask** questions – What are you asked to do? What action comes next? How many steps are there? What words do you **not** understand? Describe/Draw/Explain. When you ask questions, you help the teams to develop their vocabulary and thinking skills.

**\*\*No cell phones or smart watches are allowed in event rooms. Participants who bring those items will be asked to leave them with the event supervisor for the duration of the event. Participants observed using them during the event will be disqualified.**

## Event Questions

Please go to <https://wesoscience.org/events/> for information on how to submit questions about this event to the supervisors.