Safety Information

WARNING! Not suitable for children under 3 years. Choking hazard — small parts may be swallowed or inhaled. Keep the packaging and instructions as they contain important information. Store the experiment material and assembled models out of the reach of small children.

Inserting and Replacing the Batteries

An adult must insert and replace the batteries inside the robotic base unit. Here are the instructions for inserting and replacing the batteries. You will need three AA batteries.

1. Push the tab on the battery compartment lid inward and then pull up on the tab to open the battery compartment.
2. Look at the markings inside the compartment to determine the correct battery orientations.
3. Install one AA battery into the lower level of the battery compartment first.
4. Then, install two more AA batteries in the upper level of the compartment.
5. Push the lid back onto the battery compartment.
6. To remove the batteries, you can use the included part separator tool to pry them up.

Safety for Experiments with Batteries

To operate the models, you will need three AA batteries (1.5-volt, type AA/LR6) or three AA rechargeable batteries (1.2-volt, type AA, HR6/KR6), which could not be included in the kit due to their limited shelf life.

The supply terminals are not to be short-circuited. A short circuit can cause the wires to overheat and the batteries to explode.

Different types of batteries or new and used batteries are not to be mixed.

Do not mix old and new batteries.

Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel-cadmium) batteries.

Batteries are to be inserted with the correct polarity. Press them gently into the battery compartment.

Always close battery compartments with the lid.

Non-rechargeable batteries are not to be recharged. They could explode!

Rechargeable batteries are only to be charged under adult supervision.

Rechargeable batteries are to be removed from the toy before being charged.

Exhausted batteries are to be removed from the toy.

Dispose of used batteries in accordance with environmental provisions, not in the household trash.

Be sure not to bring batteries into contact with coins, keys, or other metal objects.

Avoid deforming the batteries.

As all of the experiments use batteries, have an adult check the experiments or models before use to make sure they are assembled properly. Always operate the motorized models under adult supervision.

After you are done experimenting, remove the batteries from the battery compartment. Note the safety information accompanying the individual experiments or models.

Notes on Disposal of Electrical and Electronic Components

The electronic components of this product are recyclable. For the sake of the environment, do not throw them into the household trash at the end of their lifespan. They must be delivered to a collection location for electronic waste, as indicated by the following symbol:

Please contact your local authorities for the appropriate disposal location.

The Computer Science Teachers Association (CSTA) is a membership organization with the mission of empowering, engaging, and advocating for K-12 computer science teachers worldwide. The CSTA has developed the CSTA K–12 Computer Science Standards to “delineate a core set of learning objectives designed to provide the foundation for a complete computer science curriculum and its implementation at the K–12 level.” The following table is Thames & Kosmos’ analysis of how the lessons in this kit correlate to the CSTA standards.

<table>
<thead>
<tr>
<th>Curriculum Identifier</th>
<th>Grades</th>
<th>Standard Description</th>
<th>Concept</th>
<th>Correlation to this Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A-A08</td>
<td>K-2</td>
<td>Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks.</td>
<td>Algorithms</td>
<td>In Lesson 1, children create an algorithm to make a sandwich. In many lessons, children write programs to model the daily activities of the characters described in the stories.</td>
</tr>
<tr>
<td>1A-A09</td>
<td>K-2</td>
<td>Model the way programs store and manipulate data by using numbers or other symbols to represent information.</td>
<td>Variables</td>
<td>Covered in the lessons that use the number cards, especially the math lessons</td>
</tr>
<tr>
<td>1A-CS03</td>
<td>K-2</td>
<td>Develop programs with sequences and simple loops, to express ideas or address a problem.</td>
<td>Control</td>
<td>Covered in all lessons, especially those involving simple loops</td>
</tr>
<tr>
<td>1A-A11</td>
<td>K-2</td>
<td>Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.</td>
<td>Modularity</td>
<td>Covered in all lessons due to the step-by-step nature of the code cards, and especially in the lessons involving subroutines (functions)</td>
</tr>
<tr>
<td>1A-A12</td>
<td>K-2</td>
<td>Develop plans that describe a program’s sequence of events, goals, and expected outcomes.</td>
<td>Program Development</td>
<td>Covered by lessons in which children create programs on their own, especially Lesson 8</td>
</tr>
<tr>
<td>1A-A14</td>
<td>K-2</td>
<td>Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops.</td>
<td>Program Development</td>
<td>This will naturally come up in the course of testing and correcting the arrangement of code and map cards to get the robot to work as expected.</td>
</tr>
<tr>
<td>1A-A15</td>
<td>K-2</td>
<td>Using correct terminology, describe steps taken and choices made during the iterative process of program development.</td>
<td>Program Development</td>
<td>This can happen when parents or teachers engage with the children, asking them to describe their specific programs and how they developed them.</td>
</tr>
<tr>
<td>1B-A08</td>
<td>3-5</td>
<td>Compare and refine multiple algorithms for the same task and determine which is the most appropriate.</td>
<td>Algorithms</td>
<td>There are many lessons in which more than one program is suggested as a solution. For example, Lesson 9 shows four ways to write the code.</td>
</tr>
<tr>
<td>1B-A09</td>
<td>3-5</td>
<td>Create programs that use variables to store and modify data.</td>
<td>Variables</td>
<td>This is modeled in Math Lesson 4.</td>
</tr>
<tr>
<td>1B-A10</td>
<td>3-5</td>
<td>Create programs that include sequences, events, loops, and conditionals.</td>
<td>Control</td>
<td>Covered by any lesson in which a conditional statement is used, starting with Lesson 18.</td>
</tr>
<tr>
<td>1B-A12</td>
<td>3-5</td>
<td>Modify, remix, or incorporate portions of an existing program into one’s own work, to develop something new or add more advanced features.</td>
<td>Modularity</td>
<td>This is inherent to all lessons in which the child first follows the instructions to lay out the code cards as shown in the manual and then makes modifications to the code.</td>
</tr>
</tbody>
</table>

Source: CSTA, https://www.csteachers.org/page/standards