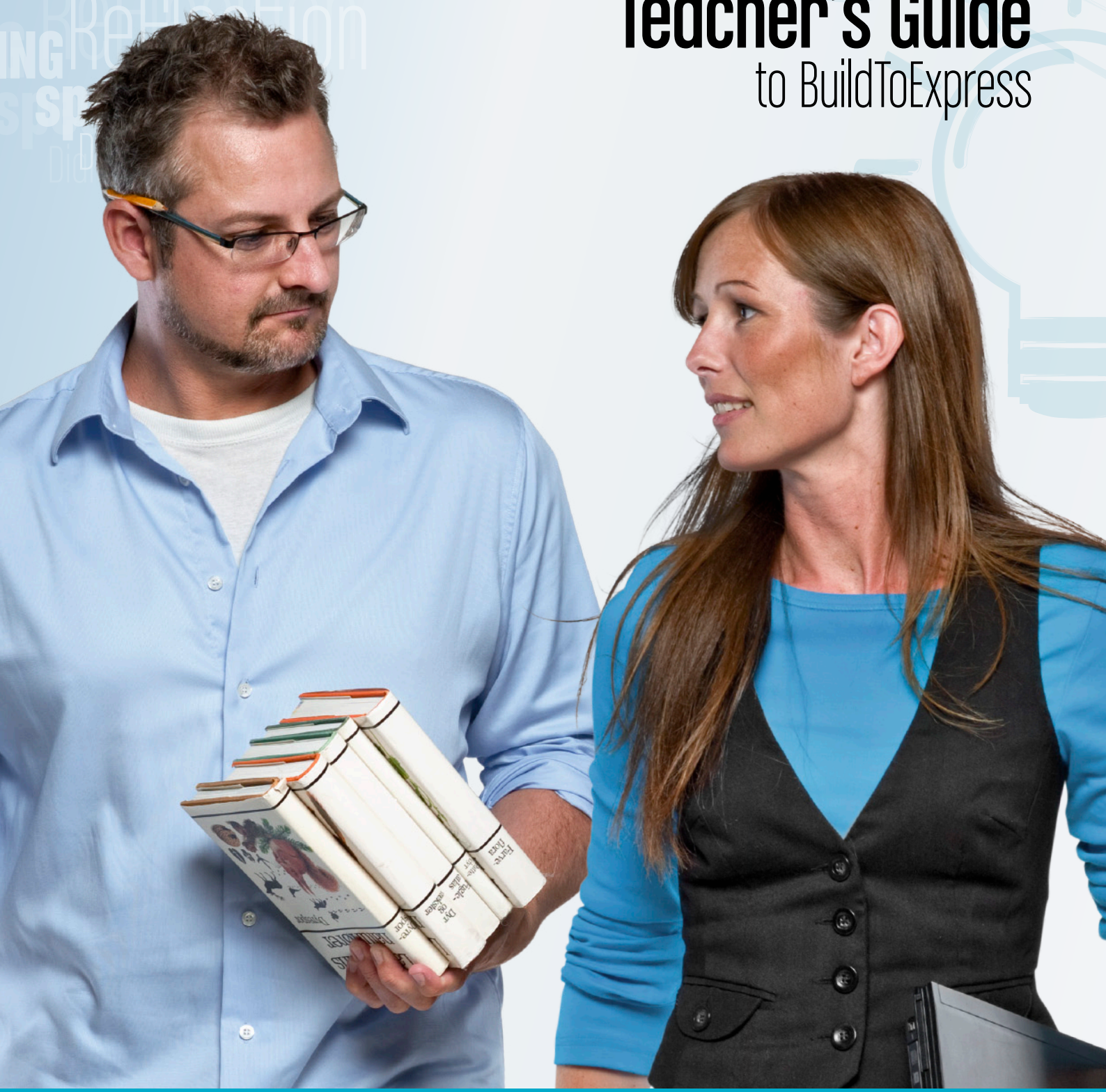


Reflection Speaking  
DIALOGUE Listening

# Teacher's Guide to BuildToExpress



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## Students build their way to better communication

LEGO® Education BuildToExpress can be used for a wide range of topics and themes in teaching where you want to inspire reflection and discussion among the students, and support them in expressing their thoughts and ideas.

With BuildToExpress, you can use the ready-to-use materials to target a number of learning goals connected to the core curriculum, or adapt the materials to meet the specific needs of your class for any topic you wish to teach. BuildToExpress is an excellent tool for topics where there is more than one answer to a question, or where you want many different views to be expressed. With BuildToExpress there are no right or wrong answers, and you will find that BuildToExpress is a tool that encourages creative thinking by the students.

BuildToExpress has been developed by teachers and educational specialists. It is a fully tested teaching tool that can transform the way you teach in certain areas and the way the students express themselves. Studies have shown that the use of BuildToExpress allows students to experience a high level of “flow” during every study session, increases their motivation and engagement, and impacts positively on their problem-solving processes.

In this Teacher’s Guide you will find detailed information about the classroom process and the rules that guide it, and ideas about how to facilitate it.

## The Process

The LEGO® Education BuildToExpress process is always made up of four Building Challenges. Students make their response to these challenges concrete through the use of LEGO bricks. Students work in groups of four to six. Each card describes a Building Challenge, and then invites each student to build a model that expresses his or her response to that challenge. Then, all students share their ideas by talking about the builds within their groups.

The exact time taken for the whole process will depend on the complexity of the topic, the age of the students, and the amount of experience that the students have in using BuildToExpress. Allow students to spend around 3-5 minutes on building and 5-7 minutes on sharing/discussion for each of the four Challenge Cards in the set. Working through a set of four cards will take approximately one to two lessons of 40-45 minutes.

The Building Challenges are described on the Challenge Cards, with one challenge on each card. The four Building Challenges in each set encourage the students to reflect on the chosen theme from various perspectives:

1. **Think About:** Establishing each student's current general view on the topic
2. **Remember:** Giving a retrospective view based on earlier experiences
3. **Imagine:** Looking to the future or something imagined
4. **Conclude:** Summarizing and drawing conclusions



## The LEGO® Education BuildToExpress Sets

Students each work with their own separate LEGO® Education BuildToExpress Set of LEGO bricks, which includes a building plate. Each student answers the Building Challenges individually and uses the building plate to showcase their models during the session.

The LEGO bricks are crucial to the BuildToExpress process because they are used by students to make their thoughts and ideas visible and tangible in 3-D models. The bricks enable the students to fulfill their need to construct something external to themselves in order to learn about it. The LEGO bricks in each BuildToExpress Set have been carefully selected to provide a broad spectrum of “ready-made metaphors”. The range of bricks, colors and Minifigures inspires students and stimulates their creative thinking and imagination, giving them a tool with which to express themselves.

The bricks are not enough on their own, though. It is the entire BuildToExpress process, and the way the bricks are used in that process, that is important.

## The BuildToExpress Challenge Cards

The Challenge Cards are another very important element in the BuildToExpress process. They have been developed and tested in collaboration with experienced BuildToExpress teachers. The cards define the topic and ensure that all the students begin from the same starting point. The Challenge Cards also function as a step-by-step guide to the students that helps the process to flow smoothly and naturally.

To see and print out the Challenge Cards, go to the “Challenge Cards” section on the BuildToExpress Guide and Activity DVD.

## The Rules

The following rules have been created to establish a framework for the successful completion of the BuildToExpress process.

1. Everyone in the group take turns at reading the Challenge Cards aloud. Go clockwise around the group, starting with the youngest student. Alternatively, the teacher may decide to read the next Challenge Card to the whole class.
2. Make sure to complete all four cards in the set. Every time the students take the next card in the set, the entire card must be read aloud. When the group has finished working on the card, put it aside.
3. Whoever reads the card aloud is also responsible for making sure that:
  - A. Everything on the card is read aloud.
  - B. All the instructions on the card are carried out.
  - C. Time limits are used during the building phase.
  - D. Everyone is allowed to explain the models they have built.
  - E. Everyone in the group listens to what is being said.
  - F. The card is put aside once all the instructions have been completed, so that the next student can start with the next card.
4. Each person in the group “builds their thoughts” every time a Building Challenge is read.
5. When building time is up, everyone put the bricks - that are not part of their model - into their BuildToExpress Set and close the lid. Then, everyone is ready to share his or her model.
6. Everyone explain the reasoning behind the model that he or she has built.
7. The only person, who can comment on a model, or the explanation behind it, is the person who built it.



8. Help each other to explain the models by asking open and non-judgmental question about them.
9. Keep control of the individual LEGO bricks and do not loan bricks to each other.
10. Keep the models on the building plate until the teacher say it is time to put them away.

### The first session(s)

We suggest that your first session (or two sessions if more time is required) should consist of six stages. Ideally, all six stages should be completed in one session.

1. Introduce LEGO® Education BuildToExpress. Tell the students that they are going to use the LEGO Education BuildToExpress Sets for thinking and sharing ideas and thoughts.
2. Introduce the BuildToExpress Sets. Let the students try a “free build” or two with the bricks, making anything they like in order to get to know the bricks included in the BuildToExpress Set.
3. Introduce the Challenge Cards. Show the students what is on the cards.
4. Present the “Rules” for the sessions.
5. If desired, go through the introduction exercise “Metaphor Exercises” in the Support Material.
6. Use the “Introduction” set of Challenge Cards for a first practice session.

Every group of students should work from a single shared set of Challenge Cards, working through one card at a time. Students share their thoughts about their models in pairs or groups. You can find tips and tricks from experienced BuildToExpress teachers in the Classroom Examples and on the FAQs list.

In introducing the BuildToExpress process, make sure that the students are aware of the following:

- That this is a process that helps students formulate their own thoughts and ideas and communicate with each other
  - *Emphasize that there is no right or wrong—it is all about discussion, and sharing ideas and thoughts.*
- That the Challenge Cards will tell them what they have to do
  - *If some of the students are not yet able to read, print out the process overview from the Support Material to illustrate the process of working through a set of Challenge Cards.*
- That there is a set of simple rules that will guide them through the process
  - *Make the rules available to the students during the process. Print them out from the Support Material or display them on a screen.*
- That the LEGO bricks can be used to create physical metaphors for their thoughts and ideas
  - *The Metaphor Exercises in the Support Material can be useful in helping students to understand the goal of the building phase.*



## Other Important points to bear in mind

- Read one Challenge Card at a time to the students, or with older students have them read the cards in their groups, and ensure that they carry out the challenge together at the same pace and within the suggested time frame.
- When you have used the "Introduction" Challenge Cards with the students, select any set of theme-based Challenge Cards for subsequent sessions.

Choose relevant sets of Challenge Cards from the selection of existing themes to match your teaching program. Once you have more experience with using the materials, create your own sets using the Challenge Card Creator. Older students can work independently in groups using the Challenge Cards as a guide. Younger students may need more practice and guidance to become familiar with the method. Print out the relevant set of Challenge Cards for each group of students to have in front of them during the session.

- When using LEGO® Education BuildToExpress to reflect on and discuss a topic (once you have taken the students through the Introduction Cards), it is important to be sure that the students understand why BuildToExpress is being used. Put it into context of the topic being taught, and ask students why they think reflection and discussion are important for this specific topic.
- Set your expectations to match the students' age and level of development. The younger the students, the more focus there will be on reflection and on students telling their own stories. Older students will be more able to focus on listening to others, and will benefit from hearing the reflections of their peers.

There should be a careful introduction to each BuildToExpress session. Younger students are likely to require more involvement by the teacher in facilitating the process, including reading the Challenge Cards aloud and time management in the building and discussion processes. For all age-groups, it is important that all students discuss their own models within the group.

- Use the rules as a guideline for the process, and make sure the students implement them.

Pay special attention to the part of the session where the students discuss their own individual models. Reflection and discussion are the key benefits of BuildToExpress, but they can be undermined if the teacher or other students comment on, or criticize a model. If a student's explanation of his or her own model is unclear, you can aid the process by asking open-ended questions. (To learn about open-ended question, see the "Step-By-Step guide to creating your own challenge cards")

- Ending a BuildToExpress session.

It is suggested that you consider in advance, how you would like to follow up on the BuildToExpress session. You may wish to follow up on the students' insights and discussions, and use the students' expressions of their thoughts and ideas in your further teaching around the specific topic. This may affect the way in which you want to conclude the work on the last challenge in the set.

