

**FIRST
LEGO
LEAGUE**

DISCOVER

TEAM MEETING GUIDE

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Welcome!

In *FIRST*® LEGO® League Discover, children are introduced to the fundamentals of STEM while working together to solve fun challenges and building models using LEGO® DUPLO® bricks. Students gain habits of learning, confidence, and teamwork skills along the way.

FIRST LEGO League Discover is one of three divisions by age group of the *FIRST* LEGO League program and serves the youngest children. This program inspires young people to experiment and grow their confidence, critical thinking, and design skills through hands-on STEM learning. *FIRST* LEGO League was created through an alliance between *FIRST*® and LEGO® Education.



FIRST® IN SHOWSM and MASTERPIECESM

Welcome to the *FIRST*® IN SHOWSM season presented by Qualcomm. This year's *FIRST* LEGO League challenge is called MASTERPIECESM. Children will learn about how people's passion for the arts are shared through STEM.

be encouraged to work with their teammates, listen to each other, take turns, and share ideas and pieces.

Children work together in teams using DUPLO pieces from STEAM Park by LEGO Education and the Discover set. Children should



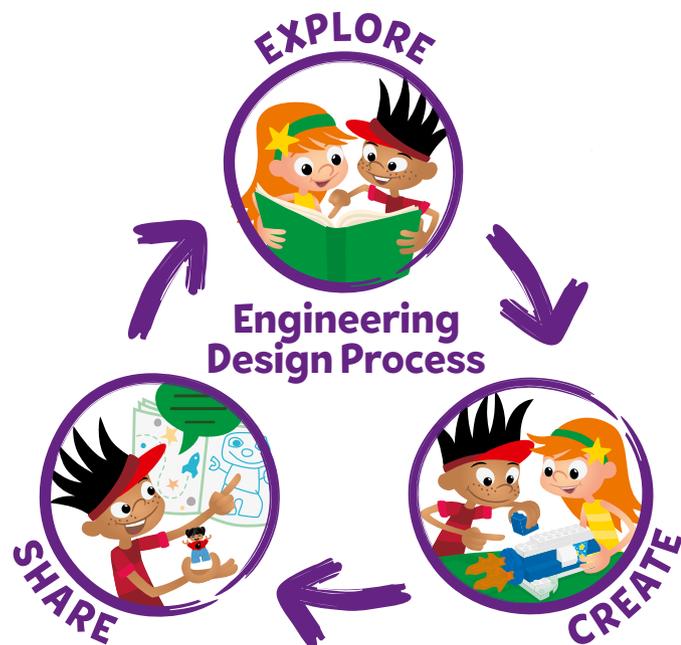
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Program Outcomes

The children will:

- Use and apply the *FIRST* Core Values, habits of learning, and engineering design process to create solutions.
- Explore the season theme and their ideas through collaboration, building, and playful learning.
- Create and test their ideas and solutions.
- Share and communicate what they have learned with each other and others.



Discover Story

Izzy loves the **sounds** and **lights** at the music show.



Izzy thinks it's **fun** to **learn** about art and history at the museum.

Izzy is amazed as the stage **moves** and **turns** at the theater.

Izzy and her friends have some great **ideas** for their own show!

What other fun ideas do you have for putting on a show?



Discover and Explore!

Welcome to MASTERPIECESM! The children will explore how people share what they love to do with others. They will learn about the different places where ideas are shared, who they are shared with, and the people behind the scenes that make experiences happen.

Build and Create!

The children will build a stage that can be used to host a music concert or theatrical performance, or to display an object in a museum. They will use elements from the STEAM Park set to build their ideas. They will create their own place to share their interests and will consider the audience. They will test and improve their designs and creations.

Share!

The children will record their ideas and designs in their *Engineering Notebooks*. They will share their builds and what they learned with others. Finally, they will participate in the celebration event, to which you can invite their families and friends. Most importantly they will...



Playful Learning in Action

Research shows that when young children are engaged in playful STEM experiences, they ignite their natural curiosity, grow their knowledge, and develop habits of learning. When educators nurture these natural-born scientists, they build a bridge between the real world, STEM skills, and literacy.



Habits of Learning

In *FIRST*® *LEGO*® League Discover, children are given meaningful problems to solve. They work together to wonder and question, build and tinker, listen and share. By the end of their experience, children emerge more confident and better equipped to face future challenges.

It is important the children have fun. The more playful the sessions are, the more motivated and excited they will be. Don't worry if you don't know all the answers, and remember, there is no such thing as failure! If something goes wrong, you learn from it and try again.



Playful Learning in Action

FIRST® Core Values

The FIRST® Core Values are the cornerstones of the program. They are among the fundamental elements that distinguish FIRST LEGO® League from other programs of its kind. By embracing the Core Values,

children use discovery and exploration of the theme and learn that helping one another is the foundation of teamwork.



We are stronger when we work together.



We respect each other and embrace our differences.



We apply what we learn to improve our world.



We enjoy and celebrate what we do!



We explore new skills and ideas.



We use creativity and persistence to solve problems.

Early STEM Skills

Children will develop early STEM skills including:

- **Science:** cause and effect, gravity, force, motion, and simple machines
- **Technology:** tools and investigating how things work
- **Engineering:** creating designs, building solutions, and solving problems
- **Math:** abstract and quantitative reasoning, attributes of objects, and shape identification

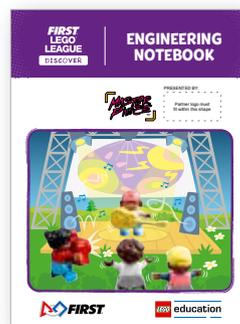


What Do You Need?

Engineering Notebooks (per child)

You will receive a set of *Engineering Notebooks*, which provide a place for children to record ideas and drawings. There

is one page to fill in for every other session. Provide one notebook to each child.



Discover More Set (per child)

The Discover More set is designed for children to take home and keep even after their Discover experience is complete. The set includes two sets of Six Bricks for an adult and child to participate

in the activities and play a game together. Further information can be found on the Family Engagement page.



LEGO® Education STEAM Park Set (serves 8 children)

All teams will use the STEAM Park set to explore STEM concepts and form the basis of their team model. This set will be used throughout sessions, as well as at the celebration.

There is also a *STEAM Park Teacher Guide* that contains lesson plans as well as other ideas and inspiration.

We suggest pre-teaching the following sessions from the teacher guide if the class or students are new to STEAM Park:

1. Functional Elements
2. Welcome to STEAM Park
3. Gears



Tip

STEAM Park comes in a cardboard box. You could store STEAM Park in a plastic storage tub, which might be better with frequent use.



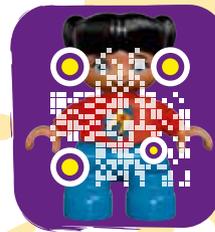
Scan me for more STEAM Park lessons

What Do You Need?

Discover Set (serves 4 children)

The Discover set consists of the Discover model, LEGO® DUPLO® figures, Six Bricks sets, mat, and building cards. The Discover model is intended to help children connect to the theme and provide a starting point for discussions and further building. The mat is used as a collaboration space to bring the models together.

Each Discover set includes five sets of Six Bricks for use in the classroom. There are enough sets to give one to each child, plus one for the teacher. Each child will need one of each of the six colored bricks.



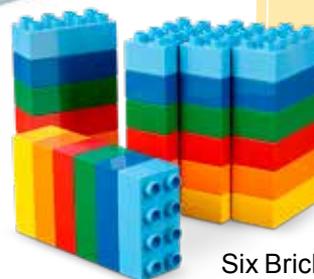
Scan me and view the Discover Set Video



Building Cards



DUPLO Figures



Six Bricks Sets

Tip

You could keep the children's Six Bricks in a separate, smaller container.

Family Engagement

Families who participate together in *FIRST*® LEGO® League discover the power of curiosity, creativity, and problem solving, building the foundation for lifelong confidence in STEM learning.



Scan me and view the Family Engagement Resources



Each child should take home one Discover More set, which contains two sets of Six Bricks. You could send home the Discover More Game along with the Discover More set. The families will keep the Discover More sets, and they don't need to come back to the classroom.



Tip

If possible, hold a meeting with families to introduce *FIRST* LEGO League Discover and the Discover More game.

This meeting could cover:

- What *FIRST* LEGO League Discover is
- What the Habits of Learning are
- What the Core Values are
- The celebration event
- The Discover More set and game
- How to support children at home

If you're not able to hold a meeting, you might use a variety of other ways (letter, video, website, social media) to communicate this information to families.

The Discover More game provides families with all the instructions to play together. To get started, they will need the Discover More Game instructions, a Discover More set, a die, and a token for each player.

Recognizing that these activities have been done helps to build a bridge between home and school and the learning that takes place in both.





WHAT IS THE CELEBRATION EVENT?

At the end of their experience, all teams should participate in a celebration event ([Session 10](#)). The children will love sharing with others what they have built and learned. It could be held in your usual session meeting space, a classroom, a library, or anywhere else that has appropriate room for the teams to spread out, build, and have fun.

BEFORE THE EVENT:

- Choose a good space.
- Invite families, caregivers, teachers, and friends.
- Find volunteer reviewers.
- Print reviewing questions (page [24](#)) and [certificates](#).
- Read through the celebration event session information.

DURING THE EVENT:

- Lay out the mats so two teams can work together.
- Assign at least one reviewer with each pair of teams.
- Get the kids excited for the final challenge.
- Ensure the reviewers talk with the children.
- Hand out certificates at the end.
- Have fun and celebrate children's achievements.

AFTER THE EVENT:

- Teach the other STEAM Park lessons.
- Continue to teach other STEM activities related to the theme.
- Find opportunities to use the vocabulary learned through the experience.
- Have the children use their teamwork skills in other sessions.

Tip

See pages [23-24](#) for more details on the event day.



Pre-Session Checkpoint

Read the student *Engineering Notebook* and this *Team Meeting Guide* before starting the sessions. They are full of very useful information to guide you through this experience. Use this checkpoint to help you get started and guide you toward success.



- Ensure you have received all materials needed to implement the program. See [pages 8-9](#) for what you need.
- Identify the space where you will implement the program and store materials between the sessions.
- Think about the final celebration event. Will you have it in your classroom and invite the children's families? The celebration event is outlined on [page 11](#) with details on [pages 23-24](#).
- Create a plan for how you will use the program. How often during the week will you do it? Will you complete a whole session at once or split the tasks across different times?
- Determine how you will place the children into teams. The recommended team size is four children.
- Be sure the STEAM Park sets are unpacked and organized before starting Session 1.
- Get your children familiar with STEAM Park. Try the lessons noted on [page 8](#).
- Encourage family engagement. Send the Discover More sets home with the children and a link to the Discover More game.



Scan me
for helpful
resources

Sessions At-A-Glance

Warm-Up (Six Bricks) 10 minutes
 Explore Task 10 minutes
 Create Task 25 minutes
 Share Task 15 minutes

Session 1
Let's Discover

Discover Six Bricks I

Setting the Stage

Explore STEAM Park

Share Prompt

Session 2
Music Concert

Discover Six Bricks II

Music Concert

Concert Stage Build

Engineering Notebook Page

Session 3
Museum Exhibit

What Can You Build?

Museum Exhibit

Exhibit Build

Share Prompt

Session 4
Theater Show

Build the Picture

Theater Show

Theater Stage Build

Engineering Notebook Page

Session 5
Your Own Show

Rhythms and Moves

Your Own Show

Your Show with Moving Parts

Share Prompt

Session 6
Behind the Scenes

Back-to-Back

What Do People Do

Jobs and Tools

Engineering Notebook Page

Session 7
The Audience

Build a Bridge

The Audience

Entertaining Everyone

Share Prompt

Session 8
Places of the Future

Future Car

Places in the Future

Build a Future Place

Engineering Notebook Page

Session 9
Dress Rehearsal

It Takes a Team

Reflection

Combine Your Ideas

Share Prompt

Session 10
Let's Celebrate

CELEBRATE!

Session 1: Let's Discover

Each session provides a deeper connection to support you in your teaching.

As you go through these sessions, don't worry if you don't know all the answers – and remember, there is no such thing as failure! Also, know that the children will make mistakes and iterate on their designs.

Outcomes

The children will play with STEAM Park, building creatively and trying new things.

The children will identify LEGO® pieces that relate to what they care about.

What can we build with STEAM Park that helps show what we love to do?

Each session has a big question that can be shared to frame the session.

Six Bricks Warm-Up (10 minutes)

Discover Six Bricks I (see Appendix for full activity)

The children will use the Six Bricks both in the classroom and at home with the Discover More set to learn new skills and explore new ideas.

Explore Task (10 minutes)

Introduce the idea of a **hobby** or an interest. Have a discussion to discover what the children like to do or what they are interested in and how they share it with others.

Imagine there is a school **performance** where the children get to choose what to share with the **audience**.

- What would you perform?
- What would it look like?
- What type of space would you need?
- Who would you like to share with?

Create Task (25 minutes)

Have the children build using the different pieces in STEAM Park. Encourage them to play freely and build anything they want that relates to their hobby or interest and how or where it could be shared with others.

Share Task (15 minutes)

Have the children share and explain what they built and how the pieces they identified relate to their interests. They could share in pairs or in their teams if they aren't comfortable sharing with entire class. All the children's builds will be correct and there is no one right answer to these sessions.

Tips

Send home the Discover More game (see page 10) with the Discover More set with each child.

Check out the Functional Elements lesson for examples.

AZ

Key Vocabulary

hobby, performance, audience

Playful Learning in Action

The children will use **discovery** to explore new ideas with STEAM Park. They will **wonder and question** what the pieces do.



Scan for STEAM Park Functional Elements lesson



Session 2: Music Concert

Look at the discussion points in the Explore Task and see how they require different kinds of input from the children as they answer. Find ways to include different levels of questioning in all activities that lead children on their learning paths.

What do musicians use to help an audience enjoy a show?

Six Bricks Warm-Up (10 minutes)

Discover Six Bricks II (see Appendix for full activity)

Explore Task (10 minutes)

Explain FIRST® LEGO® League Discover to the children. Read the Discover Story to the group. Tell them they will explore how **musicians** make an exciting **concert**.

Locate the music elements found on the mat (i.e., music notes, speakers, etc.). What does a musician need to make an **entertaining** show for the audience?

- Are there special lights on the stage?
- What instruments are used in the performance?
- Does the stage have a video screen?
- Where are the speakers located?

Create Task (25 minutes)

Have each team build the stage from the Discover set, using the building card. They can place the stage on top of the music area on the mat.

Note: If space allows, the stage could remain assembled after this session to be modified in future sessions.

Then, they use the STEAM Park set to build additional effects for their concert or change the type of concert. Have them consider how many performers are on stage, what type of music is playing and where the show is taking place. As with Session 1, encourage them to build freely, using their creativity and imagination to create new amazing designs.

Share Task (15 minutes)

In their *Engineering Notebooks*, have the children write about or draw a picture of their concert. The children could also share and describe what they built.

Outcomes

Teams will describe and build a concert stage.

The children will document features of a concert in their *Engineering Notebooks*.

Tips

 The Discover Story is found in the *Engineering Notebook* and on the mat.

 Building cards in the Discover set provide visual instructions to make the different parts of the Discover model.

Az

Key Vocabulary

musician, concert, entertain

Playful Learning in Action

Teams will apply **teamwork** and **discovery** to explore the season topics.



Session 3: Museum Exhibit

This session introduces problem-solving tasks. Problem-solving is a habit of learning the children should practice. Encourage the teams to persevere in the creation of their solutions. Then the teams can communicate and share their solutions with others.

What do you learn about when visiting a museum?

Six Bricks Warm-Up (10 minutes)

What Can You Build? (see Appendix for full activity)

Explore Task (10 minutes)

Museums are places that collect and display objects that people want to learn about.

Ask the children if they have ever visited a **museum** and have them share what types of **exhibits** they saw.

- Give examples of different kinds of museums (art, history, science).
- Give examples of different kinds of exhibits (paintings, sculptures, fossils, **artifacts**).

Locate the museum elements found on the mat (i.e., dinosaur bones, lights, speakers).

Create Task (25 minutes)

Have each team build a place to display an object that is important to them and place the display on the mat. They can use the building card to help them get started. Use the Discover set and allow them to add pieces from the STEAM Park set.

Museums often create exhibit spaces that are fun, interesting, and interactive (i.e., touch screens, objects to touch, videos, and sound effects). Have the children consider how they might make their exhibit interactive and think about how it will help people learn.

Share Task (15 minutes)

Have each team share what they chose to put on display. They could explain why the object is important, what people should learn about it, and what technology might be needed to help teach people.

Outcomes

Teams will explore how museums display objects to teach visitors.

Teams will build a display for something that is important to them.

Tips

Children may be inspired to create their own designs different than what's on the building cards.

Encourage the teams to talk about how they chose to display the object and how it helps engage people.



Key Vocabulary

museum, exhibit, artifact

Playful Learning in Action

Teams will use **teamwork** and **problem-solving** to build their solutions.



Session 4: Theater Show

Provide real-world examples, including photos and videos, when introducing the tasks. Set expectations for use of voice when sharing ideas. Expect productive talk, movement, and interactions between children. Circulate and redirect children to the task as needed.

Can you create a play that tells an interesting story?

Six Bricks Warm-Up (10 minutes)

Build the Picture (see Appendix for full activity)

Explore Task (10 minutes)

Have the children think about a time they have seen or have participated in a play in a **theater**. What things does a play have to help tell a story? Locate the theater elements on the mat (i.e., masks, lights, speakers).

You could ask the teams to discuss some of the things below:

- The roles of actors and director
- The scenes and set pieces
- Effects (lighting, sound, **special effects**)
- **Props** (objects used by the actor in the story)

Create Task (25 minutes)

Have each team build a stage using the Discover set. Have them create their own play. They can use the building cards and STEAM Park pieces to help get started.

The children should work together to tell a short story using their stage and extra STEAM Park pieces. Ask the children to think about the kinds of technology that might be needed to help make something special happen on stage. They can change the background or props to create a new scene.

Share Task (15 minutes)

In their *Engineering Notebooks*, have the children write or draw a picture of different technology or moving pieces that their stage uses.

Outcomes

Teams will identify items needed to put on a play.

The children will document their uses of technology or moving pieces in their *Engineering Notebooks*.

Tips

-  Allow the children to be creative and use any elements that will help share an interesting story.
-  Each team can perform their story and talk about what they added to their stage.

AZ

Key Vocabulary

theater, special effects, props

Playful Learning in Action

 The children will **listen** and begin to **empathize** about each other's ideas. The team will listen to everyone's ideas, demonstrating **inclusion**.



Session 5: Your Own Show

Take what the teams have learned and challenge them one stage further. Take notice in this session how they can apply prior knowledge of the functional elements in STEAM Park. Check out the Functional Elements lesson for more guidance.



Scan for STEAM Park Functional Elements lesson

Can you create an innovative place to share your interests?

Six Bricks Warm-Up (10 minutes)

Rhythms and Moves (see Appendix for full activity)

Explore Task (10 minutes)

Have the children recall some of the different types of shows and places where people share their interests, talents, or hobbies. Identify different places that haven't previously been discussed.

You could ask the teams:

- Do you display any of your art in your home?
- What places have you watched a movie (i.e., theater, drive-in, your television)?
- Have you seen a show at a fair or carnival?
- Where would you perform your show, concert, play, or display your exhibit?

Create Task (25 minutes)

Have the children build their own place using the Discover set. The place should use technology or **innovation** to showcase a hobby, special object, talent, or piece of art, in a different way than in previous sessions.

Have each team pick out the **functional** pieces in STEAM Park and show how they move. They should use them to create the place where their interests can be shared. They can use gears to help move an object or performer. The place can be assembled on the area of the mat that relates to what is being shared.

Share Task (15 minutes)

Have the teams describe the **movement** in their builds. The teams could share together to give them more confidence in talking in front of people. They can talk about what is being shared but should focus on the place where the sharing is happening. Ask them to use the word innovative where possible.

Outcomes

Teams will use imagination and creativity to create an innovative place to share their interests.

Teams will apply knowledge of functional pieces to create a model with moving parts.

Tips

- The children could identify what places they have in their community.
- Each child on the team could design a different area of their innovative space.



Key Vocabulary

innovation, functional, movement

Playful Learning in Action

- Teams will **apply knowledge** from previous sessions and use **innovation** to creatively build their designs.



Example model that a child might build

Session 6: Behind the Scenes

Provide real-world examples, including photos and videos, of people who have jobs related to performing both on stage and behind the scenes. Include examples of the technology, tools and vehicles used in their jobs. You could connect this to your social studies/global studies lessons on community helpers.

Who are the people that make a show happen?

Six Bricks Warm-Up (10 minutes)

Back-to-Back (see Appendix for full activity)

Explore Task (10 minutes)

Have the children think about the different jobs people have when they work in a theater, a museum or a music hall. Have some children act out (mime) the different jobs and select others to guess what they are miming. Then repeat, swapping the children miming and guessing.

You could ask the children:

- What does a **stage manager** do in a theater?
- How does a **curator** select items to display in a museum?
- What do performers need to do to prepare for their concert or play?
- Who operates the **projector** in a movie theater?
- What tools do these people use in their jobs?

Create Task (25 minutes)

Have each team build objects, tools, or vehicles that would help someone be successful in a job that was discussed in the Explore Task. They should think about people who are working on stage and behind the scenes.

The teams could use pieces from the Discover set and STEAM Park and the various LEGO® DUPLO® figures to represent different workers, their tools, and equipment.

Share Task (15 minutes)

In their *Engineering Notebooks*, have the children write or draw a picture of a person in a job previously discussed. They can also draw a picture of the tools, objects or vehicles needed for the job.

Outcomes

Teams will identify different jobs in the arts.

Teams will identify tools, objects or vehicles used in jobs related the arts.

Tips

Giving examples of unique objects used in concerts, museums and theaters can help children identify more jobs.

Teams could place the objects they build on the corresponding area of the Discover mat.



Key Vocabulary

stage manager, curator, projector

Core Values Connection

Using **teamwork**, the team will think about the **impact** of different energy jobs in their communities.



Session 7: The Audience

Think about how the STEM content is explored in this lesson. When the children ask a question, prompt them with a question back to guide their learning instead of giving them the answer.



Scan for STEAM Park Ramps lessons

How do we make sure the audience is having fun?

Six Bricks Warm-Up (10 minutes)

Build a Bridge (see Appendix for full activity)

Explore Task (10 minutes)

Have a discussion about how an **audience** at a music show might be different from an audience for a museum exhibit. Help the children recognize that people have different interests and needs. The children could share where they would like to be an audience member.

You could ask the children:

- If you were at a concert, what would make you more excited?
- What would make a theater show more **interesting** for you (i.e., colorful costumes, special effects, etc.)?
- What kind of museum would your friends like to visit?

Create Task (25 minutes)

Create a place where there would be a stage or something on display. Ask the children to think about who would be in the audience for their show. Think about how the audience would get in and out of the place safely. You could use ramps from the STEAM Park set to make it easier and more **accessible** for people to enter.

Ask the children what they would do to make sure everyone would be interested and entertained in the place. Have the children think about the entire place, including where the audience will be. They could think about lighting a room with fun colors, playing sounds, or using other special effects.

Share Task (15 minutes)

Have the teams share their solution and show what they have built to engage and entertain the people in the audience. Each team should also share how their audience will enter and exit the space they created.

Outcomes

Teams will explore how people have different interests and needs.

Teams will explore how to create a place that can safely allow for an audience to enter and exit.

Tips

- Think about how the audience would get in and out of the place safely.
- Have the children create a space before prompting them with addition questions.



Key Vocabulary

audience, interesting, accessible

Playful Learning in Action

Teams will have **fun** building and testing their vehicles on the ramp. They will use **communication** to share their ideas and designs.



Session 8: Places of the Future

This session is entirely devoted to iterating and improving ideas. Encourage children to focus on what they're creating instead of putting limits on what they build.

How can we combine our ideas to make a cool place to share what we love?

Six Bricks Warm-Up (10 minutes)

Future Car (see Appendix for full activity)

Explore Task (10 minutes)

Discuss the different types of places where people share their interests. Have the children think about what kinds of places they want to be built in the **future**. Examples could include a concert arena on the moon, a museum on top of a skyscraper, or a theater under the sea.

Ask the children:

- How would a future place use technology in a creative way (i.e., virtual reality, 3D printing, surround sound)?
- Who is the audience at these different places?
- What kind of jobs do people have in these places?

Tell the children they will work to **combine** their ideas into a new space.

Create Task (25 minutes)

Before building, have each team decide who will build each part of their place. Each child should build their idea within their team and then combine them for what you imagine a future place could look like. Have the children think about who the space is for. Use pieces from the Discover and STEAM Park sets to create more possibilities.

Their place can be somewhere hobbies or interests are performed or displayed and shared with others. They should use their imagination and be as creative as possible when finding innovative ways to connect the parts together. They can **iterate** on their designs to combine each other's builds.

Share Task (15 minutes)

In their *Engineering Notebooks*, have the children write or draw their future space where hobbies or interests are shared. Ask them to explain how they combined their ideas to create an awesome solution.

Outcomes

The teams will apply knowledge and experience from the previous sessions to solve a problem.

The teams will work together to combine ideas to create a cohesive solution.

Tips

-  Teams are improving their ideas not necessarily their actual models from past sessions.
-  You could assign each child part of the place for which they can create a future design.

Az

Key Vocabulary

future, combine, iterate

Playful Learning in Action

Teams create solutions while considering the **impact** on their community. By improving their designs, children will show **confidence** in their ability to build and iterate.



Session 9: Dress Rehearsal

It is time to reinforce the use of teamwork skills such as sharing, discussing, and compromising. Observe how the teams talk to each other and evaluate how this has changed over the course of the program.

How do we create a space to share our interests in our community?

Six Bricks Warm-Up (10 minutes)

It Takes a Team (see Appendix for full activity)

Explore Task (10 minutes)

Ask the children to reflect on their experiences throughout the sessions.

Discuss the different needs of your community. What things would people in the community like to share?

Remind the children of the different people in their community they have been building for.

You could ask the children to:

- Think about different kinds of music styles and dances.
- How can they **improve** a theater in their community?
- **Reflect** on their solutions from previous sessions.
- How could they **iterate** and improve on their previous ideas?

Create Task (25 minutes)

Tell the teams to put everything they have learned about together and build a place as a team where everyone can share what they love doing with an audience. They should think about the audience that will be in the place, the people that work there, and what creative ways they will use to entertain everyone.

The teams can use pieces from the Discover set and STEAM Park. Have them decide where their model should go on the mat. They should discuss who will say what about their solution in the Explore Task.

Share Task (15 minutes)

Have the children share what they have built with the whole class. Have them explain their place and what the audience will experience. Have teams reflect on which ideas they chose, why, and how they worked together in this session.

Outcomes

Teams will reflect on their experiences throughout the sessions.

Teams will build their improved solution to their space where hobbies or interests are shared.

Tips

 Encourage children to think about and choose the best idea they had in the previous sessions.

 It is important for teams to work together to combine their ideas into a cohesive solution.



Key Vocabulary

improve, reflect, iterate

Playful Learning in Action

The teams will **persist** to create a team build and use **teamwork** to join their builds together.



Session 10: Let's Celebrate

Preparing the Teams (10 minutes)

Welcome the children to the event and tell them what they will do during the session. They will use their ideas to build a model together during the special challenge and share their *Engineering Notebooks*. The reviewing questions will help ensure teams can relate what they do at the event to the sessions they have completed..

Challenge 1 and Challenge 2 (20 minutes)

At the event, challenge the teams to build their team model on the Discover mat in 10 minutes or less.

- They should build the place they created in Session 9 to share an interest and include all parts from the Discover set.
- Use STEAM Park pieces to improve the space to make it more exciting and accessible to an audience.

After 10 minutes, introduce a special challenge and have them update their team model. The challenge for this year is to:

- Create a stage where a skateboarding show could take place.
- Modify your team model so that it includes one or more functional pieces.
- Build a space to entertain a group of alien visitors from another planet.

Create Task (10+ minutes)

Have each team talk about how they updated their team model for the special challenge. They can describe their favorite parts of the model and explain how they came up with their ideas.

If time allows, you can ask teams to iterate on their build after hearing ideas from other teams. Another optional activity could be to ask two or more teams to combine their team models into a larger place.

Reviewing the Teams (during the event)

The reviewers should visit the teams during the final challenge, talking with them, asking questions and seeing their *Engineering Notebooks*. Encourage the adults to interact with the children. They should ask about what the teams have done throughout the program.

Celebrate (10+ minutes)

While the building, problem-solving, and reviewing are the most important part of how the event works, you should allow plenty of time to celebrate each team's achievements in front of everyone at the event. You could extend this time and allow time for the children to share and present what they learned.

Tips

-  It is important teams can relate what they do at the event to the sessions they have completed.
-  If possible, assign at least one adult to each pair of teams. They can help the teams stay on task and talk with them. The reviewers will decide on awards for each team. Reviewing questions are on page [24](#).
-  For the celebration, print certificates for every child. Have the children come up one at a time, or in their team, to be recognized and applauded. A great *FIRST® LEGO® League Discover* event always ends in a celebration.



Reviewing Prompts

These prompts are designed for adults to start conversations with the children at the celebration event.

Reviewers could ask the teams:

Team Model Prompts

Tell me about...

- Your design and build.
- Why you built it that way.
- What you included in your place to share an interest or hobby.
- How you decided what you wanted to build.
- How it works.
- The STEAM Park pieces you used to make something move.

Special Challenge

Tell me about...

- How you solved the special challenge.
- How you decided how to change your team models after hearing other ideas.
- What you built to connect the two team models.

Working as a Team

Tell me about...

- How you worked together.
- The job you had on your team.
- How you shared ideas in your team.
- How you worked as a team.



Awards

Every team should win an award, and more than one team can win the same award.

Choose from this list of official Discover awards:

- Cooperative Builders
- Super Problem-Solvers
- Expert Explainers
- Creative Designers
- Amazing Inventors

Scan me to find certificates



Six Bricks Activities

In addition to the Six Bricks activities listed in this *Team Meeting Guide*, you can find more activities on legofoundation.com.



Scan me to find more activities

Discover Six Bricks I

Base Activity

1. Each child separates his or her bricks and spreads them out.
2. With closed eyes, they shuffle their bricks around.
3. Keeping their eyes closed, each child picks any brick and holds it up high.
4. Now they open their eyes and see what color they hold.

Part 2

5. Let them pick any brick, look at it carefully, and turn it around and over in their hands.

Guiding Questions:

- *What color brick do you have?*
- *Can you name all the different colors?*
- *Can you sort the bricks into warm and cold colors?*
- *Can you create a rainbow with your bricks?*
- *What color is your brick? How does it feel (rough, smooth, hard, soft, shiny, dull, etc.)?*
- *What spaces and shapes can you see on your brick? How many studs does each brick have?*

Children learn to:

- Play and become familiar with the bricks.
- Listen and respond to questions.
- Use descriptive language.



Discover Six Bricks II

Base Activity

1. Children lay out their bricks in any order (see the picture).
2. Then they put a finger on the red brick and move it left.
3. They turn the dark blue brick upside down (or on its side).
4. Children click the green brick on the red and cover all studs.

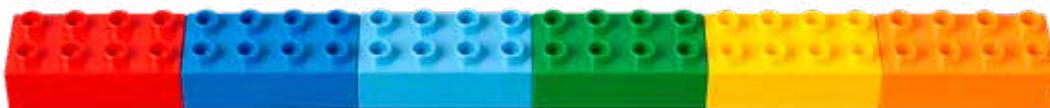
Vary the instructions you give such as colors, moving bricks left/right, and positions.

Guiding Questions:

- *How did you keep attention? (encourage some of the children to explain in turn)*
- *How can we make this activity harder? (Give more instructions, say them faster...?)*

Children learn to:

- Use spatial skills to orient themselves.
- Keep attention and resist distraction.
- Initiate activities.



Six Bricks Activities

What Can You Build?

Base Activity

1. In groups of 4, children mix their bricks together.
2. Have the children use their bricks build a model that represents a special object that will be displayed in a museum.
3. Then have them take turns and describe where the object came from and why it is important.

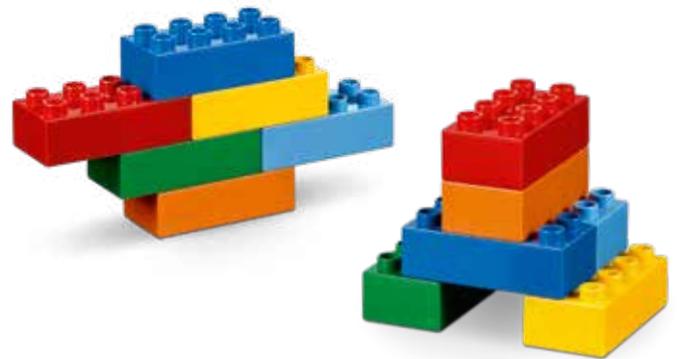
This activity can also be linked to a theme, story, or book.

Guiding Questions:

- *Does your object need special protection?*
- *Who do you want to see the object?*
- *How does the object help to tell a story?*

Children learn to:

- Invent and describe characters (for stories).
- Create stories in groups.
- Ask questions and suggest answers.



Build The Picture

Base Activity

1. In groups of 4, children mix their bricks together and choose a leader.
2. The adult whispers a word related to a theater (e.g., stage, actor, light, speakers) to the leader.
3. Back with their group, the leader quickly builds a representation of that word for the others to guess.
4. The group may not ask questions but can call out words. The leader can say when they get it right.

Part 2

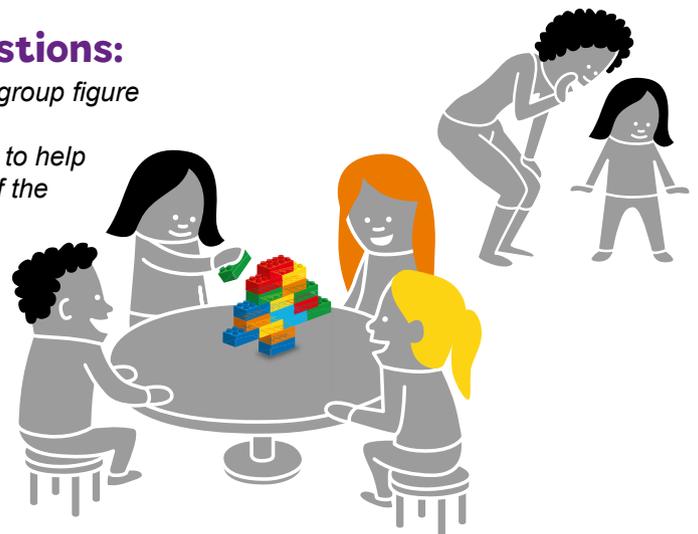
5. Choose a new leader and repeat the activity with a new word.
6. Continue until all children in the group have been a leader.

Guiding Questions:

- *How did the first group figure out the word?*
- *What can you do to help the next leader of the group?*

Children learn to:

- Engage in creative problem-solving.
- Develop their own ways of carrying tasks.
- Use strategies learned earlier (representing).



Six Bricks Activities

Rhythms and Moves

Base Activity

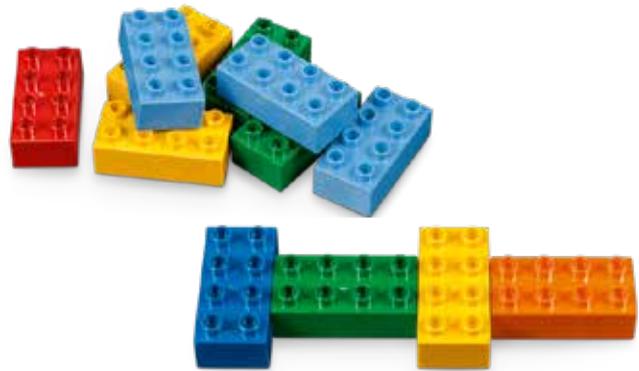
1. Children will work together in teams to create a repeating pattern using the bricks.
2. Now assign a sound, clap, or dance move to each different colored brick. Practice a few times to see if they can consistently repeat the pattern.
3. Now change the pattern of the bricks but keep the same sound, clap, or dance move assigned to each color.
4. The children will understand how performers rehearse to perfect their performance.

Guiding Questions:

- *How is your pattern different from other groups?*
- *Can you make your pattern more challenging?*

Children learn to:

- Notice and follow patterns.
- Engage in physical movement.
- Experiment with creative ideas.



Back-to-Back

Base Activity

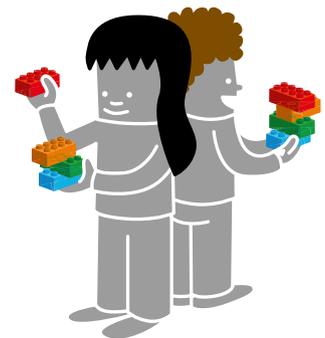
1. Children sit or stand in pairs with the same four bricks.
2. One child builds a model and then explains to the partner how to build the same model.
3. The partner builds without looking or asking questions.
4. The pairs compare their models and discuss how it went.
5. Children then swap roles and repeat the activity.

Guiding Questions:

- *How did you explain how to build the model?*
- *What instructions were the most helpful?*
- *How does this activity relate to an actor who is waiting to go on stage?*

Children learn to:

- Use descriptive language.
- Think from another person's perspective.
- Speak about their own and others' behavior and consequences.



Six Bricks Activities

Build a Bridge

Base Activity

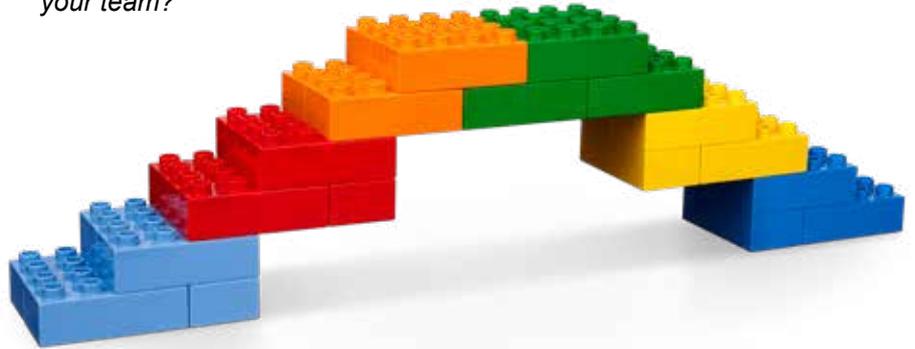
1. In groups of 4, children combine their bricks and think of ways to build a bridge. The bridge can be built on the Discover Mat to connect two areas.
2. Give the children time to discuss and plan which areas they will connect and how they will connect them.

Guiding Questions:

- *Why did you choose to connect the two areas of the Discover Mat?*
- *Is your bridge for an audience to move around your new place?*
- *Did your original plan work? What ideas did you change?*
- *How did you work together with your team?*

Children learn to:

- Engage in creative problem-solving.
- Negotiate when and how to carry out tasks.
- Make reasoned choices and decisions.



Future Car

Base Activity

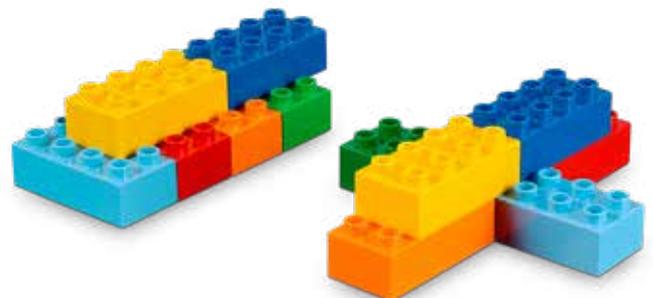
1. Children use their six bricks to build a vehicle of the future that might be used in a theater play or performance.
2. Then, they take turns describing their vehicle. They can explain who uses the vehicle and what purpose it serves to help share an interest.

Guiding Questions:

- *How will your vehicle be used in a show?*
- *How does your vehicle move?*
- *Who is the person that operates the vehicle?*
- *Do you have any questions to ask your friends about their model?*

Children learn to:

- Engage in creative problem-solving.
- Imagine and tell stories.
- Use strategies learned earlier (representing).



Six Bricks Activities

It Takes a Team

Base Activity

1. In groups of 4, have the children mix their bricks together.
2. The children should work together to build a long line of connected blocks to represent a person that is part of a team and how they support each other to achieve success.
3. The children should think about what happens if a brick is missing from the line.

Guiding Questions:

- *What job does each brick represent?*
- *How do the different jobs work together?*
- *What would happen if there was a break in the line?*

Children learn to:

- Use strategies learned earlier (patterns).
- Negotiate when and how to carry out a task.
- Imagine and tell stories.



Supporting Activities

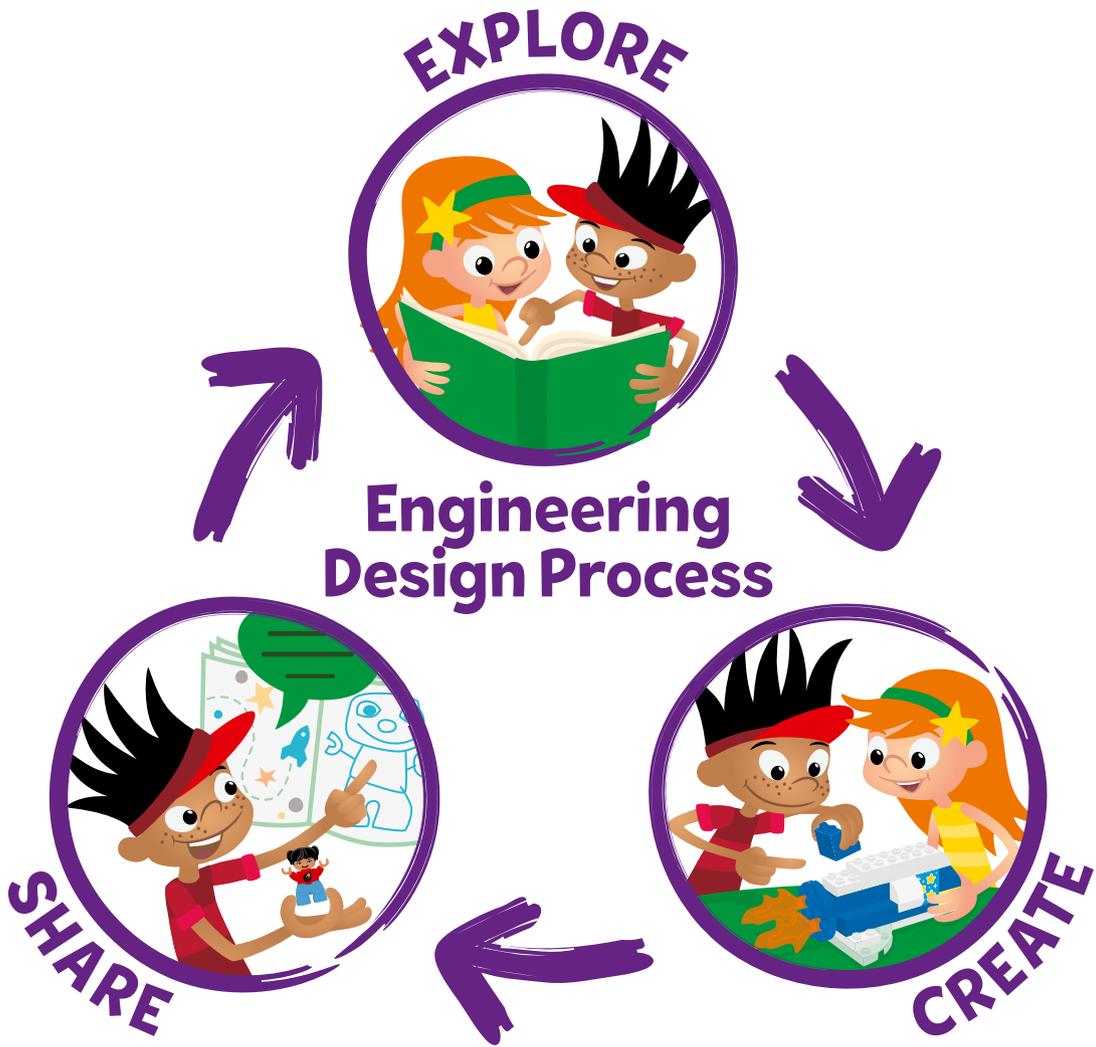
- Using a camera, smartphone, or tablet, children could take photographs of their creations, which can then be displayed in future sessions.
- Give children a collection of relevant words, each word fixed to a separate LEGO® DUPLO® brick. Children can then create their own poems about their interests by locking the bricks together in a poetry tower.
- Have the children continue to think about what they would like to share with a group. Invite

them to showcase a talent, hobby or special object during a show and tell day.

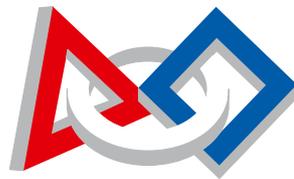
- Ask the children to create short animated films of their models or play. This could be done using a tablet and an animation app.
- Ask children to create a simple pop-up book about a special place in their community where new ideas and talents are shared – there are websites that give advice about creating such books.

During each session, we recommend that children be encouraged to rebuild their models and play with them after they're built. Ask children to create a short role-play scene with their models or figures.

If you have additional time in a session or want to challenge the children further, you could use these supporting activities.



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