

# Explore Rigamajig

## Overview

This lesson plan introduces collaboration, abstract thinking, and problem solving

**Level: Beginner**

**Age Group: K-2**

**Time to Complete: 35-45 minutes**

**Main Goal: Exploring a kit of parts without directions, named items, etc. to determine what to do and how to use it.**

## Guiding and supporting play:

- Observe, observe, observe!
- Allow children to explore their own Rigamajig play ideas. There is no set formula for “right” or “wrong” outcomes.
- Children may produce a variety of Rigamajig ideas to meet the basic objectives of the lesson plan. No two creations or play sessions are alike. Be comfortable with letting children’s play evolve.
- There are no mistakes, let them explore and problem solve.
- Resist the urge to “fix” things for children and to show or tell children how to do things. Observe, and pay attention to children’s ideas and actions. Support play in ways that focus children on their own ideas. Ask about what students are planning to do, what they are making, and what they can change to make their Rigamajig work better?
- Discover insights into children’s creative thinking, and foster creativity!

## Materials needed:

- Rigamajig Basic Builder Kit

## Getting started:

Students and teacher unpack Rigamajig and investigate all of the different parts together before any play. Begin by looking at all the parts as a group and ask children to describe what they see, where have they seen these kinds of shapes in real life etc.? The initial discussion can also go in the

direction of creative and more abstract ideas as well. Followed by the unpacking, teacher and students establish the ground rules for positive cooperative play.

### **While play is underway:**

Observe with an interested and supportive attitude and, as needed, encourage problem solving thinking, creativity, collaboration, discussion, and questions.

### **Possible comments:**

- Creating a collaborative building culture:
  - Part 1:
    - As a whole group on large chart paper, ask children to name the shapes that they see. For example, the wing nut could be labeled as "butterfly." Develop a common language as a class. Name them and draw them on large chart paper as a group. This can later be used as the classes' reference page, which can be taken out when the toy comes out for a lesson or free play.
  - Part 2:
    - Teacher and students establish the ground rules and group norms for positive cooperative play. This is also to be recorded on chart paper and made visible during work with Rigamajig.
    - Brainstorm ideas of using the materials safely. Refer to other building materials that they may have used in the classroom in the past. Talk about what works while using those materials and what may also work with Rigamajig. Talk about basic rules of cooperation and sharing.
    - How do we ask for something that we need?
    - How do we ask for a turn and say, "I'm using this right now, but you can use it when I'm done."
    - How do we suggest other pieces or other configurations of pieces to one another if the one we first wanted wasn't available?
- These are all simple steps that will support children while they are interacting with the toy and one another. Children need to be reminded of their amazing skills, and these conversations will be something for all to refer back to while using Rigamajig in the future with great success.

## Vocabulary

Post some of the following words on a White Board, SmartBoard, sheet of chart paper or have the students make their vocabulary lists or posters of the key words. Encourage children's use of these words as they design and build. Encourage children to label the physical components of their creations.

- Goal
- Design
- Evaluate
- Teamwork

## What to look for:

- Watch for children's collaborations in their thinking and construction. Offer encouraging words about working together to build something.
- Pay particular attention to how children go about their construction process. Do they seem to have a specific goal? Or, do they seem more focused on learning about the properties of the materials and different things they can do with them?
- Pay attention to the language. What do their words reveal about their knowledge of objects, physical processes, design, and/or social collaboration?
- When children indicate they accomplished something, give them a chance to demonstrate their construction and how it works, and share with other children.

## What if the children "stall"?

- Sit with the group and ask them to discuss their ideas for what to build. Can they agree on something?
- Reinforce that any kind of construction is OK, it's whatever they want to do!
- Pick up a few pieces and put them together for children to see. Don't be afraid to model taking a risk, exploring, or changing an initial idea.

## Wrapping up & reflecting:

- What makes a good collaborator?
- Tell us about a problem you encountered and how you solved it?
- Create drawings and descriptions or photographs and descriptions of work, including step by step as preferred

- Share and present work, include discuss about how and why construction decisions were made

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With the help our Captain of Play and Learning Ngina Johnson, we've put together a few project plans to get you started.