

Curated Resources for Early Childhood Makerspace Curriculum Development

These are just a few of the resources available to help you organize your makerspace lessons, provocations, and activities for young children.

- The [Early Childhood Robotics Network](#) has several [robotics curricula](#) available for free download
- [The Youth Maker Playbook](#) from MakerEd is a great resource for shaping your teaching goals
- [Makerspace for Education](#) is a teacher blog that posts current resources, reviews, and activity plans about makerspaces

Additionally, below are two sample week-long makerspace activity schedules developed by DevTech researches. These schedules have been used effectively in DevTech's Summer Programs for children ages 4-8 years.

Week of Movie Engineering:

| Monday: Introduction to storytelling | Tuesday: Props and Set Design | Wednesday: Exploring Animations | Thursday: Filming and Editing | Friday: Rehearsal and Movie Premier |
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| <p>10 min- "Get to know you" game</p> <p>20 min- Learn about Storyboards. Make our own individual stories using storyboards.</p> <p>30 min- Use storyboards to create stories on ScratchJr iPad application</p> <p>30 min- Snack</p> <p>40 min- Guest Visit from Drama Educator! Learn about dramatic arts and play some acting warm-up games.</p> <p>10 min- Read <u>Rosie Revere, Engineer</u> by Andrea Beaty</p> | <p>20 min- Review acting concepts, learn about props and sets. Watch video clip on the making of a stop-motion movie</p> <p>40 min- Guest Visit from Engineer! Learn about Carvey tool. Draw and cut our own foam props</p> <p>30 min- Snack</p> <p>40 min- Learn about sets and backdrops. Begin to create movie sets out of foam flooring, blocks, and cloth.</p> <p>10 min- Read <u>If I Built a Car</u> by Chris van Dusen</p> | <p>60 min- Learn about Foley Arts and sound creation through videos and sound activity. Create Foley Art for a video clip of children's choice.</p> <p>30 min- Snack</p> <p>40 min- Create Storyboards in groups ("movie crews") and begin setting up props and set. Learn about Stop motion using iPad applications and iMovie</p> <p>10 min- Read <u>If I Built a House</u> by Chris van Dusen</p> | <p>60 min- Film Stop Motion movies. Each child takes 5 minutes whenever they want to be interviewed for a Documentary Film about the making of their stop motion movies.</p> <p>30 min- Snack</p> <p>50 min- Guest Visit from Videographer! Learn about Editing by watching videographer use iMovie to edit their documentary film. Begin to edit stop motion movies.</p> | <p>40 min- Finish editing as a group. Children can also make trailers, movie posters, or tickets for their movies.</p> <p>20 min- Rehearsal! Children practice what they will say about their films during the Premier for Friends and Family.</p> <p>50 min- Movie Party with Snacks! Take silly photos with props, decorate a "red carpet" for families to walk in on, play charades and other acting-themed games while eating popcorn</p> <p>30 min- Premier for Friends and Family! Children give explanations of their films. Families view Stop Motion Movies and Documentary on how they made them.</p> |

Week of Science Experimentation:

| Monday: Introduction to Scientific Method | Tuesday: Experimentation | Wednesday: Introduction to Engineering | Thursday: Electricity and Circuitry | Friday: Science Fair Day! |
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| <p>20 min- “Get to know you” game. Learn about Science and the Scientific method.</p> <p>40 min- Practice making observations when we mix milk, dish soap, and food coloring</p> <p>30 min- Snack</p> <p>40 min- Guest Visit from Social Scientist! Learn about how scientists and engineers worked together to create the KIBO Robot.</p> <p>10 min- Read <u>Ada Twist, Scientist</u> by Andrea Beaty</p> | <p>20 min- Review scientific method. Learn about experiments, variables, and hypotheses.</p> <p>40 min- Experiment with Ice: What materials will melt Ice the fastest?</p> <p>30 min- Snack</p> <p>40 min- Observe and record our ice-melt findings. Use our results to imagine “ice melting machines.” Learn about the Engineering Design Process</p> <p>10 min- Read <u>11 Experiments That Failed</u> by Jenny Offill</p> | <p>30 min- Guest Visit from a Chemist! Learn about properties of materials, why ice melts, and different ways to melt ice.</p> <p>30 min- Review Engineering Design Process. Use what we learned from the Chemist to design and build ice-melting machines</p> <p>30 min- Snack</p> <p>40 min- Experiment with our ice-melting machines!</p> <p>10 min- Read <u>Rosie Revere, Engineer</u> by Andrea Beaty</p> | <p>60 min- Robotics Stations! Explore electricity and engineering using technological tools in the makerspace</p> <p>30 min- Snack</p> <p>30 min- Play trivia game about science and engineering.</p> <p>20 min- Plan how we will share our findings and what we learned about the scientific method to our families.</p> <p>10 min- Make ice popsicles in ice-cube trays</p> | <p>30 min- Rehearse science fair presentations in small groups</p> <p>30 min- Rehearse science fair presentations with other groups of kids</p> <p>50 min- Science Party with Snacks! Stickers and tattoos, trivia games, kids create and explode a baking soda and vinegar volcano!</p> <p>30 min- Science Fair for Friends and Family! Children give rehearsed explanations of the scientific method and how engineers and scientists work together. Families view documentation of science experiments and creations from the week.</p> |