Learning Points:

- Children will be able to have fun and innovate with found objects around the house.
- Children will need to think critically about their challenge and come up with a solution to the prompt that is given to them.
- Children will able to be creative, both artistically and practically, with their inventions.
- Children will have the opportunity to come up with creative solutions and critically think about their own lives in a fun and engaging context.

Materials:

- Collection of recyclables and found objects from around the house
- Any scissors, tape, glue, or other ways of attachment (Zip ties, brads, rubber bands, etc.) that you have
- Other art supplies that foster creativity
- 10 Makerspace Challenge Prompts – Printed and cut into individual cards

Activity:

Step 1:

Depending on the number of siblings, you can have each child do a challenge or have the children get into any number of groups to tackle the challenges together, or both!

Step 2:

Take this opportunity to kill two birds with one stone: Spend some time, as a family, doing some spring cleaning around the house. Collect any recyclables (clean plastic containers, egg cartons, plastic bottles, cardboard, etc.) or cool found objects that can be taken apart or re-purposed and gather these things together in a place where the kids can spread out and create safely.

*Hint:* Make sure that you gather age appropriate materials and/or have adult supervision for safety purposes.
Step 3:

Explain to the kids that they get to use all of these miscellaneous items to invent creative and useful things to solve some challenges.

Have the kids pick one of the Makerspace challenges and use that challenge as a launching pad to create whatever they would like of the Makerspace items. Make sure to give the children enough time to be able to problem solve and have fun with the challenge. You can use these challenges to create a fun, structured, Makerspace hour each day or every weekend to develop a habit of innovation.

**Extended Learning Tips:**

Look for the following “in the moment” learning opportunities:

- **Collaboration:** Having the siblings work together in groups can help them to learn effective communication and conflict resolution. Monitor this time for any teaching moments and/or to help them work out their differences if they come to an impasse.

- **Creative Thinking:** Maker challenges are all about creating something out of nothing and getting to explore interests in a new, creative way. The children get to repurpose everyday items and practice out-of-the-box thinking while problem solving. This type of hands-on learning exercises help with critical thinking skills and even boost self-confidence.

- **Deeper Thinking:** “We know that students learn at a deeper level and they retain more when they’re engaged in creative thinking connected to the subject, right? So to begin with, just within the content area, (making is) going to allow for deeper learning.” – John Spencer, co-author of the book *Launch: Using Design Thinking to Boost Creativity and Bring Out the Maker in Every Student*

- **Maker Mindset:** “Because of the complex global economy, creative economy, and the information economy, our students are going to have to navigate a maze... They need to be able to engage in iterative thinking, creative thinking, critical thinking, they need to know how to pivot, how to change, how to revise, how to persevere. They need to solve complex problems. They need to think divergently. All of those are involved in that maker mindset.” – John Spencer

- **Setbacks:** If your kid ever gets frustrated during a challenge or if their invention breaks and they have to start over, try to encourage them that overcoming adversity and even mistakes is a part of everyone’s experience. Sometimes a strategy does not work and learning from those mistakes and starting again is all part of the creative process.
THE BEST INVENTIONS
SOLVE A PROBLEM OR
ADDRESS AN UNMET NEED

WHAT IS A PROBLEM YOU ENCOUNTER OR
SOMETHING THAT ANNOYS YOU IN EVERYDAY LIFE?

MAKE IT
PERSONAL!

YOU ARE A MAKER - IF YOU WERE A THING,
WHAT WOULD YOU BE? MAKE THAT!
INVENT SOMETHING THAT HELPS YOU WITH HOMEWORK OR SCHOOLWORK

WE COULD ALL USE HELP WITH SCHOOLWORK. WHAT WOULD MAKE IT EASIER FOR YOU?

INVENT SOMETHING THAT HELPS YOU TO BE MORE ORGANIZED

ARE YOU MESSY OR DO YOU JUST NOT HAVE ENOUGH SPACE FOR ALL YOUR IMPORTANT STUFF?
INVENT SOMETHING TO MAKE YOUR PET’S DAY BETTER

Is your pet alone all day while you are at school? Is your pet having trouble doing something because they are getting older?

INVENT SOMETHING THAT HELPS YOU WITH ONE OF YOUR CHORES

Do you have a chore that you don’t like to do that you can make easier or even more fun?
INVENT SOMETHING THAT MOVES THINGS FROM ONE PLACE TO ANOTHER

WILL THIS INVENTION HELP JUST YOU OR CAN A WHOLE OTHER GROUP OF PEOPLE BENEFIT?

MAKERS CREATE SOUND FROM THINGS THAT DON'T MAKE SOUND BY THEMSELVES

CREATE A MUSICAL INSTRUMENT FROM FOUND OBJECTS, ONE YOU KNOW OR INVENT A NEW ONE!
CHALLENGE YOURSELF!

“THE SKY’S THE LIMIT” (AND THE MATERIALS ON HAND)
CREATE YOUR OWN CHALLENGE
AND YOU MAKE THE SOLUTION

YES, MAKERS INVENT...
MAKERS ALSO CREATE BEAUTY
OUT OF FOUND OBJECTS

CREATE ART- SOMETHING BEAUTIFUL & REMEMBER:
“BEAUTY IS IN THE EYE OF THE BEHOLDER”