RUBE GOLDBERG MACHINES

THE ADVENTURE:
A Rube Goldberg machine uses many steps to solve a simple problem. Roll a ball into a row of dominoes that will collapse onto a lever that will flip the switch and turn on a lightbulb!
With your Lair or Pack, create a complex machine that will solve a simple problem.

PLAN:
• What do you know about Rube Goldberg machines? The Mouse Trap board game is one example.
• What do you know about simple machines? How can they work together to build a larger machine?
• What simple problem do you want to solve? This could be something like turning the page of a book or lighting a fire.
• How many steps will your machine have?
• What will you use to build your machine?
• How much time do you want to build your machines?
• How will you form your groups?

DO:
• Use everyday objects such as books, marbles, dominoes or balloons to build a Rube Goldberg machine!
• Draw a plan to help guide your group.
• It can be easier to start at the end and work towards the beginning.
• When everything is in place, set your machine in motion!

REVIEW:
• What do you know now that you did not know before?
• How did you work together as a team?
• How useful was the machine you made?
• How did the simple machines work together to make a bigger machine?
• What did you like about this activity? What did you not like about it? How would you do this adventure differently?
**MATERIALS:**
Building materials can include (but are not limited to):
- Rubber bouncy balls
- Paper cup
- Paper clips
- String
- Cardboard and construction paper
- Straws
- Books
- Marbles
- Rubber bands
- Balloons
- Tape
- Dominoes
- Mousetraps (use under adult supervision)

**ONLINE RESOURCES:**
- The Essence of Simple Machines cosi.org/downloads/activities/simplemachines/sm1.html
- Life-sized Mouse Trap Game youtube.com/watch?v=D-0vMRAX6Tk
- Melvin the Mixed Media Machine vimeo.com/24504225
- OK GO This Too Shall Pass youtube.com/watch?v=qybUfnY7Y8w

**SAFETY TIP:**
- Wear safety goggles to protect your eyes.
- Avoid using hazardous elements such as chemicals or flames.