**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?
RUBE GOLDBERG MACHINES

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:
• Simple Machines idahoptv.org/sciencetrek/topics/simple_machines/facts.cfm
• The Essence of Simple Machines www.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
• Goldburger to Go pbskids.org/zoom/games/goldburgertogo/rubegame.html
• 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.