



VOLUNTEER ROLE DESCRIPTION

SCIENCE, ENGINEERING & TECHNOLOGY

Title	RUBE GOLDBERG COACH/ ADVISOR
Purpose	To encourage youth to engage in critical thinking, creativity, problem solving in a non-traditional learning environment while having fun in the process. Guide youth in inventing a complex contraption to complete a simple task.
Responsibilities	<ul style="list-style-type: none">• Guide a team of 2-10 youth to help them create a complex contraption to complete a simple task, eg. water a plant.• Make sure the team meets periodically to practice and build various designs and to keep a record of progress in their team journal.• Review the rules for the competition and ensure they are followed.• Make sure the team is registered for county and state events on time.• Help youth problem solve, generate ideas, test and redesign as needed.• Attend NDSU Extension 4-H volunteer trainings related to role.• Assure safety of all participants.
Time Required	Meet at least three times before the competitive event. However, it will take more than three meetings to complete the machine. Meetings: 2 hours per time Competitive Event: 4-5 hours
Resources Available	<ul style="list-style-type: none">• 4-H Rube Goldberg Website:<ul style="list-style-type: none">○ 2020 Rube Goldberg Handbook○ Simple Machine Lessons○ Transfers of Energy Lessons <p>Web: The official Rube Goldberg site: https://www.rubegoldberg.com/</p> <p>Intro to simple machines: https://www.teachengineering.org/lessons/view/cub_simple_lesson01 (be sure to check out student worksheets)</p> <p>Lesson: Pyramid Building: How to Use a Wedge: https://www.teachengineering.org/lessons/view/cub_simple_lesson02</p> <p>Lesson: Let's Move It! (wheels, axles and levers) https://www.teachengineering.org/lessons/view/cub_simple_lesson03</p> <p>Lesson: Slide Right on By Using an Inclined Plane https://www.teachengineering.org/lessons/view/cub_simple_lesson04</p> <p>Lesson: Powerful Pulleys https://www.teachengineering.org/lessons/view/cub_simple_lesson05</p> <p>Videos for examples. After watching videos, ask youth what simple machines they noticed in the videos. What types of simple tasks did each Rube Goldberg</p>

	<p>machine accomplish? Youth should record their observations in their journal. When they finish their journal, they may turn to a partner and compare observations in a brief discussion.</p> <p>Potential Video Examples:</p> <p>https://www.teachingchannel.org/videos/rube-goldberg-contraptions</p> <p>https://www.youtube.com/watch?v=GOMIBdM6N7Q&feature=youtu.be</p> <p>https://www.youtube.com/watch?v=qybUFnY7Y8w&feature=youtu.be</p> <p>https://www.youtube.com/watch?v=cv5WLLYo-fk&feature=youtu.be – ART (very good example)</p>
Qualifications	<ol style="list-style-type: none"> 1. Enthusiasm and experience in working with youth 2. Interest in science, technology and experimentation 3. Ability to communicate effectively with youth and adults 4. Commitment to ND 4-H program mission and core values 5. Time management skills 6. Able to drive to events
Benefits to Volunteer	<ul style="list-style-type: none"> • Satisfaction of significant contribution to growth of 4-H youth. • Satisfaction of working as a team to reach goals. • Respect and gratitude of parents/guardians and community. • Recognition of accomplishments by unit and county. • Opportunity for continued personal growth. • Opportunity for increasingly responsible leadership roles.
Contact Person	<p>Lindsey Leker, Center for 4-H 1400 Centennial Blvd, FLC 219, Fargo, ND 58108 (701) 231-7039 Email: lindsey.leker@ndsu.edu</p>
Date	
Signatures	<p>_____</p> <p>Volunteer</p> <p>_____</p> <p>Extension Agent</p>

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