



Washington County 4-H Project Kits



- **4-H Project Kits contain fun, hands-on learning activities to use with 4-H'ers at project workshops or at club meetings.**
- **Activities are based on the Experiential Learning Model and fall within a 4-H project area.**
- **Project Kits contain most of the supplies needed for the activity and directions or curriculum to facilitate the activity. You are responsible for providing any supplies not included.**

How to Check Out a Project Kit

- Contact the Extension Office at mnext-washington@umn.edu or 651-430-6800 to see what kits are currently available and schedule a time to pick it up.
- Please do not take more than 2 kits at a time unless you have approved it with 4-H staff.

Returning the Kit

- Please return within two weeks unless otherwise specified with Program Coordinator.
- Please be sure to inform the office if there are any missing or a low quantity materials in the kits (such as supplies we say we provided), handouts, or if a project kit is in bad shape.

* Clubs and project groups are welcomed to develop kits to add to our project kit library! If you are interested in donating a kit, revamping, or adding an activity to an existing kit, please contact the Extension Office at mnext-washington@umn.edu or 651-430-6800.

Washington County 4-H Project Kit Descriptions

Balloon Powered Cars

In this engineering challenge, youth are given a variety of everyday items to build air-powered cars. The lesson includes an introduction to the Engineering Design Process (10 min) along with time to build cars (approx. 30 min) and time to reflect upon what youth have learned (approx. 20 min). The full lesson will take 60-75 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Items you need to supply: scissors (1 per group), tape measure, items for car ramp-10-15 thick books and long piece of cardboard

Balls and Tracks

Participants will design and build their own ski jumps and hilly roller coasters. The lesson includes an introduction to the Engineering Design Process (10 min) along with time to build ski jumps and roller coasters (approx. 30-40 min) and time to reflect upon what youth have learned (approx. 20 min). The full lesson will take 60-75 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Items you need to supply: 40-50 thick books

Birds/Birding

Choose from multiple lessons covering bird identification, food webs, and bird migration. Each lesson includes an introduction to the concepts in the activity (10 min), a hands-on activity (20-30 min), and reflection (10 min). Each full lesson will take about 60 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Bird banding activity (15-20 min)
 - *This lesson does not include an introduction or reflection.*
- Bird identification (30-60 min)
- Create your own food web (15-20 min)
- Great Migration Challenge (15-20 min)
- Migration Headache (15-20 min)

- Items you need to supply: Tablets or phones, birding field guides (can be checked out at libraries), binoculars (optional), scissors, tape, writing utensils

Bridge Building

Youth will design, build, and test multiple types of paper bridges. The lesson includes an introduction to the Engineering Design Process (10 min) along with time to build multiple bridges (approx. 30-40 min) and time to reflect upon what youth have learned (approx. 20 min). The full lesson will take 60-75 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Items you need to supply: 20-30 thick books

Incredible Wearables

From watches and eyewear to fashion and virtual reality headsets, wearable technologies are fast becoming the must-have accessory for people around the world. This National Youth Science Day challenge kit will have youth build a prototype wearable technology that will gather data to help solve a real-world problem. The lesson includes an introduction to the healthy living (5 min), how wearables work (10 min) along with time to build the device (20-30 min), and time to collect data (10-15 min). The full lesson will take 60-75 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Items you need to supply: activity equipment like jump ropes, hula hoops, athletic balls

Rubber Band Powered Cars

Youth get hands-on to design and build rubber band powered cars using everyday items. The lesson includes an introduction to the Engineering Design Process (10 min) along with time to build cars (approx. 30 min) and time to reflect upon what youth have learned (approx. 20 min). The full lesson will take 60-75 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Items you need to supply: scissors (1 per group), tape measure, items for car ramp-10-15 thick books and long piece of cardboard

Straw Rockets

This fun activity teaches about the basic principles of flight by creating and testing a rocket made from simple drinking straws and other every day supplies. The lesson includes an introduction to the Engineering Design Process (10 min) along with time to build two straw rocket designs (approx. 30-40 min) and time to reflect upon what youth have learned (approx. 20 min). The full lesson will take 60-75 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Items you need to supply: scissors (1 per group), tape measure, empty cardboard boxes (1 per group), 2 books per group

Water/Watersheds

Choose from multiple lessons covering watersheds, how pollution impacts our water ways, how weather and natural landscapes impact our rivers, and aquatic invasive species. Each lesson includes an introduction to the concepts in the activity (10 min), a hands-on activity (20-30 min), and reflection (10 min). Each full lesson will take about 60 minutes to complete however groups can modify the lesson activities to fit the time and interests of their group.

- Water Memory (10-15 min)
 - *This lesson does not include an introduction or reflection.*
- Seeing Watersheds (20-30 min)
- Blue River (20-30 min)
- Just Passing Through (20-30 min)
- Sum of the Part (20-30 min)
- A-Maze-ing Water (20-30 min)
- Invaders (20-30 min)

- Items you need to supply: Water, paper cups (1 per participant), markers, paper towels, access to chairs, masking tape, 6 chart paper or poster paper