

DICKINSON COUNTY NATURE CENTER

GRADE K — “THE 3RS”

Core expectations

K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

Activity Time

One 30 minute session

Contact

Environmental
education coordinator
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Program Alignment with Iowa Core Curriculum

Disciplinary Core Ideas

- **ESS3.C Human impacts on Earth Systems:** Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.
- **ETS1.B Developing Possible Solutions:** Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solution to other people.

Investigative questions

- Where does your trash go after it is thrown away?
- What will happen if we continue to throw trash in landfills?
- How does our waste affect the world around us?
- What can you do to reduce how much trash you produce?

Investigative phenomena

- Students will be shown a bag of trash and given the opportunity to guess how much it weighs. We will weigh the bag with the class and explain that this is how much trash an average American produces per a day.

Practices (SEPs)

- Evaluate different types of trash and categorize items into groups.
- Communicate solutions to trash management problems with others in oral and/or written forms using models and/or drawings that provide detail about scientific data.

Cross Cutting Concepts students will identify

- Human actions related to trash management create observable effects on the local environment.
- The cause and effect relationship regarding trash we produce and landfills. Students will understand this relationship and come up with possible solutions.



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SIDE 2

Supplies

All supplies brought by the nature center unless otherwise arranged.

- Bag of trash
- Scale
- 2 bins labeled “landfill” and “recycle”
- White board and markers
- Paper and markers to draw ideas or glue, scissors and other craft supplies to create recycled art.

Background

As humans, we do things to make our lives easier and more convenient such as buying drinks in plastic bottles, using plastic bags at grocery stores or throwing away paper when we are done using it. Every human produces waste, and every community must figure out ways to deal with waste management. It is estimated that the average American produces 1,600 pounds of solid waste per a year. That’s about 4.5 pounds per a day! All this waste must go somewhere and how we chose to dispose of our waste impacts our land, water, air and other living creatures in our local environment. As populations continue to increase it is becoming more and more important that we practice responsible waste management practices in order to reduce our impact on the world we live in.

There are many actions people may take to deal with their waste responsibly, and many of these can be described by the 3Rs: Reduce, reuse, recycle. The best way to manage trash is to not produce it in the first place. We can **reduce** our consumption of products by doing things such as choosing reusable containers over disposable ones and buying the amount of food that can be eaten before it spoils. Reusing items instead of tossing them helps save natural resource and cut down on the amount of waste produced. People can **reuse** by donating hand-me-down clothes or reusing a lunch or grocery bag. **Recycling** is the process of recovering materials such as paper, plastic and glass for remanufacture into new products or containers.

Program outline

- 1) A naturalist will start off by asking students to say some of their favorite superheroes. The students can be superheroes too — nature superheroes!
- 2) Students will be shown a bag of trash and given the opportunity to guess how much it weighs. We will weigh the bag with the class and explain that this is how much trash an average American produces per a day. The students will then be asked a series of questions to get them thinking about trash. What happens to the trash we produce? Where does it go after we throw it away? Does our trash affect anyone else? Is there anything we can do?
- 3) Nature superheroes have a very important job — they protect and preserve the world we live in by practicing the 3Rs. The naturalist will explain the 3Rs to students.
- 4) The naturalist will introduce the activity by telling students they are going to practice being nature superheroes. One by one students will take out a piece of trash from the trash bag and determine if it belongs in a landfill or if it can be recycled. Students will continue the activity until all the trash has been sorted.
- 5) At the end of the activity we will go through the recycle items and ask the students to brainstorm ideas of how we can reduce or reuse these items. We will record their ideas on a white board or have students draw, sketch or create their ideas to share with the class.