# Goal-directed Instructional Design Plan – Natural Resources

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1. **A problem or a need** – there must be a problem of practice or an educational need that should be addressed during the lesson.

The educational need of this lesson is that students need to be able to understand natural resources and the ways that they can conserve them. Students will conduct research, using the internet and the library to learn about different types of natural resources, how they can be conserved and why this is important. As students conduct research they will gather facts about how humans use research to share during their presentation. Students will research where our natural resources come from and what they can do to conserve them. Each group of students will come up with a plan on ways they can conserve natural resources. The lesson goal is to provide students with the opportunity to understand natural resources and how we need to conserve them to protect our future.

2. **A real-world performance** – how the learning objectives fit into a real-world activity or need.

Students will learn about different types of natural resources. They will learn how we use these resources and that there is a finite number. Students will be able to see the importance of conservation. Not only is conservation of natural resources important for the saving the environment and insuring we have these resources in the future, but by conserving natural resources and finding ways to use less of them they could also save money. This is something that they could take home and share with their families. They would be able to draw conclusions based on their research about different ways natural resources are used and the technology and processes that go into things like recycling. Students will better understand and be able to protect the world they live on.

3. **An instructional objective** – the objectives are based on the final outcome, activity or test. These objectives will each be different for the four types of knowledge; **performing skills, recalling facts, identifying examples of concepts**, and **applying principles**.

   a. **Performing skills** – Create a natural resource conservation plan and present it to the class.

   b. **Recalling Facts** – Identify different natural resources and their uses through pictorial representation. Identify conservation symbols found on different materials (i.e. the recycling symbol on plastics)

   c. **Identifying examples of concepts** – Research natural resources using the internet and library resources

   d. **Applying principles** – Show peers their plan for conserving natural resources. Share that plan with their families and discuss how they could cut down on natural
resource use at home and how that could potentially save money.

GLCE’s:

**E.ES.03.41** Identify natural resources (metals, fuels, fresh water, fertile soil, and forests).

**E.ES.03.43** Describe ways humans are protecting, extending, and restoring resources (recycle, reuse, reduce, renewal).

**E.ES.03.44** Recognize that paper, metal, glass, and some plastics can be recycled.

**NETS-S standards**

1. Creativity and Innovation – apply existing knowledge to generate new ideas, products, or processes. Identify trends and forecast possibilities

3. Research and Information Fluency – students apply digital tools to gather, evaluate and use information.

4. Critical Thinking, Problem Solving, and Decision Making – Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

4. **A set of essential content** – the basic ideas and skills that will allow the learner to complete the task or understand the content.

Students will be responsible for researching and finding information about different natural resources and ways to conserve them. Students will use the internet to find out how different natural resources are used and where they can be found in daily life. They will also use the internet to research different conservation techniques. Students will be given time in the library to do research on these areas. Before doing research students will learn what different natural resources are and be able to identify them.

5. **An evaluation consisting of a test or observation** – an assessment, observation or product showing that the objectives can be accomplished in the real-world setting.

Students will earn points for their presentation of the plan they constructed to conserve natural resources. Students will be expected to include the following information: Type of natural resource, how it is used, everyday items it can be found in, facts about its use, and how we can help to conserve this resource. Students will earn 1-3 points for each of these areas based on the thoroughness of their presentation.

6. **A method to help participants learn** – the method to deliver the content; a lesson.

Introduction – Hold up a recycling bin and ask students to tell me what it is and what goes in it. What does recycling mean? Why do we recycle? What do we recycle? Find out what students know about recycling and other forms of conservation. Show students natural resources. Ask students where these resources come from. Start having students generate ideas and get them thinking about natural resources and conservation.

Instruction – Discuss in class the different types of natural resources. Discuss where they come from and the difference between finite and infinite resources. Allow students to generate
questions like how much of a resource do we use in a year? Etc.

Explanation – Explain that each student will be doing research on different natural resources, finding answers to the questions we just generated as a class. We will go over conservation and ways to conserve these natural resources.

Demonstration – Give an example of a natural resource, a fact about it and how it can be conserved to give students an idea of what to do

Practice – Students will have the opportunity to present different ways to conserve natural resources to the class.

Feedback – Students will be provided feedback through the grading rubric based on their presentations as well as the research they did.

Conclusion – It will be clear from the presentations what students have learned about this topic.

● **Motivation:**
  ○ Meaningfullness – content and activities must have meaning for the learner
    • Students will understand where the resources come from that are found in everyday items
    • Students will know that there are a limited number of these materials
    • Students will know how to conserve these resources
    • Students will be able to save money and help the environment by limiting the materials they use
  ○ Pleasant consequences – the effects that achieving the goal will have on the learner
    • Students will learn about the materials their everyday items are made out of
    • Students will learn how to conserve these materials to help the Earth
    • Students will learn how to use less potentially saving their families money
  ○ Novelty – an attention-getting, humorous or curious manner that relates to the useful information in your lesson
    • Taking a recycling bin and other objects they have seen for nearly their entire lives and asking the questions about where these things came from. Where do these materials come from? An important question yet one that none of them have most likely thought of

● **Socialization** - a strong motivator for student learning

Students will want to know about how the things they see everyday are made and where it all comes from. They will also be very interested in something that they could bring back
home and teach their parents about.

- **Audience** – For what audience are you designing this lesson? Consider the following:
  - 3rd grade elementary
  - Elementary skills and understanding
  - Students will have to know how to
    - Read
    - Follow instructions
    - Basic computer skills (typing)
    - Internet use

- **Technology Needs** – the computers, software, programs (such as Angel or other CMS’s) printers, equipment, Internet access, time in the computer lab will be needed to successfully complete your technology-rich lesson.

  - Computers
  - Internet
  - Websites to find information
  - Computer lab use