**Understanding by Design**

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**Title:** Abstract Art

**Topic:** Earth Science

**Subject:** Science

Stage 1- Desired Results

Next Generation Science Standards

Earth Science

Students will discover the four basics forms of reusable energy and create abstracts representations of it. During this project students will use concepts of circuits such as switch, power, voltage, electrons,

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| Benchmarks: |
| A. Discover that there are living things, non-living things and pretend things, and describe the basic  needs of living things. |
| B. Explain how organisms function and interact with their physical environment. |
| C. Describe similarities and differences that exist among individuals of the same kind of plants and  animals. |

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| Grade Level Indicators: |
| Life Science |
| 1. Explore that organisms, including people, have basic needs which include air, water, food, living  space and shelter. |
| 2. Explore that humans and other animals have body parts that help to seek, find and take in food  when they are hungry. |
| 3. Investigate that animals eat plants and/or other animals for food and may also use plants or other  animals for shelter and nesting. |
| 4. Recognize that seasonal changes can influence the health, survival or activities of organisms. |

Enduring Understanding:

People and animals have basic needs.

An organism’s body parts and environment determine how their basic needs are met.

Essential Questions:

How do you determine the basic needs of a person, animal or plant?

What different body parts do people and animals have to help them obtain food? How do people and animals use their environment to meet their needs?

How do the seasons impact people and animals.

Knowledge

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| Students will know |
| • The four basic needs (food, water, shelter, air) of people, animals, and plants |
| • The importance and relationship of a person or animal’s body parts to their environment |
| • Factual information about different environments |
| • Plants play a key role in an animal’s environment |
| • The impact of seasonal changes on a person or animal’s environment |

**Skills**

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| Students will be able to: |
| • List the four basic needs of people, animals, and plants |
| • Identify the body parts that animals use specific to eating |
| • Compare and contrast a variety of animals by body parts and environment in regards to eating, |
| • Identify Ohio’s four seasons |
| • Classify basic needs by season |

Stage 2- Assessment Evidence

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| Performance Tasks | Other Evidence |
| • Create or illustrate an animal in its  environment and label its four basic needs | • Classroom discussions |
| • Using an animal picture- list special body  parts and describe their purpose for eating | • Whole class charting |
| • Sort animals by the foods and plants  they eat | • Written and oral observations |
| • label the four seasons and complete a  season circle for a plants/animal | • Picture sorts |
| • Research three different animals in  three different environments and create a trioroma (labeling the basic needs in each) | • research |

**Stage 3- Sequence of Teaching and Learning**

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| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| **Take class outside and chart**  **living and nonliving things outside.**  **Read Big book A11-15. Share results from outside.**  **Do Transparency 1- living and non-living sort.** | **Use Transparency A3-1**  **Look at picture and describe what they observe. Circle what they mention but only write down the ones that match the four needs.**  **WB 20** | **Look at big book A43-47**  **Intro to four basic needs Make a chart of the needs and together come up with the “why”**  **Draw an animal and label the four needs. WB34** | **Read A44-45 to review body**  **parts.**  **Pass out a variety of animal pictures or books. Search for body parts and their purpose.**  **Do WB 33**  **Transparency A3** | **Read Catch Me if You Can**  **Focus on dinosaur teeth for plant and meat.**  **Show a book on different dinosaurs and by teeth/body parts.**  **Draw favorite dinosaur and label body parts.** |
| **Read B2 and B9…plants and**  **animals**  **Make web of how animals need plants** | **Play Catch Me if you Can**  **Transparency B1-1 as assessment or WB37 or WB36** | **Squirrels**  **Read Flying Squirrel at Acorn**  **Place**  **Venn diagram the difference between a squirrel and flying squirrel.** | **Read Squirrels by Brian**  **Wildsmith**  **Season wheel of the squirrel**  **WB101** | **Read D35-53**  **Brainstorm what you wear each season.**  **Have each table, individually, make an outfit for each season.**  **Display on a season timeline** |
| **Read The Seasons of Arnold’s**  **Apple Tree**  **Discuss each season for the tree.**  **Make a season wheel of a**  **tree.** | **Research three different**  **animals in three different environments.**  **B34-40**  **Make a trioroma labeling the animals needs and a special body part in each environment** | **Research** | **research** | **research** |