Core Skills Analysis

Science

- Learned about the natural source of DNA by physically picking strawberries, making the concept of genetics tangible and relatable.
- Observed the extraction process of DNA, gaining firsthand understanding of how organisms contain genetic material that can be isolated and seen.
- Connected the scientific concept of DNA structure to a concrete, creative model by making candy DNA strands, enhancing comprehension of the double helix shape.
- Developed vocabulary related to genetics, such as 'DNA', 'extraction', 'genes', and 'molecules' through hands-on experience.

Fine Motor Skills and Art

- Enhanced fine motor skills through manipulation of small candy pieces to assemble a DNA model accurately.
- Applied spatial awareness and sequencing by arranging candies in specific patterns representing nucleotide pairs.
- Stimulated creativity by designing colorful and visually appealing candy DNA strands, integrating art into a science lesson.
- Practiced patience and precision, important skills when completing step-by-step assembly projects.

Math

- Engaged in pattern recognition by pairing complementary candy colors to represent nucleotide bases.
- Introduced concepts of sequencing and order, foundational for understanding biological sequences and mathematical patterns.
- Practiced counting and categorizing candy pieces, reinforcing early math skills in a playful, meaningful context.
- Understood symmetry and repetition through the replication of the double helix’s structure using candies.

Tips

Encourage deeper exploration by extending this activity with a simple experiment growing strawberries or other plants to observe how traits vary. Invite the child to create a story or comic about 'The Journey of a Strawberry's DNA' to build narrative skills. Integrate a lesson on healthy eating and how fruits provide nutrients and genetic material. For added complexity, introduce basic concepts of heredity by talking about how traits can be passed down in families or between plants.

Book Recommendations

- The Magic School Bus Inside the Human Body by Joanna Cole: An engaging exploration of the human body that introduces children to cells and DNA in a fun and approachable way.
- DNA Is Here to Stay by Franklyn M. Branley: A clear and simple introduction to DNA, its role in living organisms, and how scientists study it.
- Eating the Alphabet by Lois Ehlert: A colorful book presenting fruits and vegetables from A to Z, linking nutrition and natural living things.

Learning Standards

- CCSS.ELA-LITERACY.RI.K.3: With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text (linked to vocabulary and concept

learning about DNA).
- CCSS.MATH.CONTENT.K.CC.A.1: Count to 100 by ones and tens (practiced in counting candy pieces).
- NGSS K-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive (connected to learning about the strawberry plant and its DNA).
- CCSS.MATH.CONTENT.K.G.A.2: Correctly name shapes regardless of their orientations or overall size (applied when recognizing symmetry in the candy DNA model).

Try This Next

- Worksheet: Label the parts of the DNA model with simple terms and color-coded keys.
- Drawing Prompt: Draw your own candy DNA strand using different colors and explain your choices.
- Experiment: Test extracting DNA from other fruits like bananas or kiwis and compare results.

Growth Beyond Academics

This activity fosters curiosity and excitement toward science through tactile and visual engagement, offering a sense of accomplishment as the child creates a visible DNA model. It can build confidence by making complex concepts accessible and encourages patience and attention to detail during extraction and candy assembly.