TROPICAL UNDERWATER DREAMS

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I. GOALS AND OBJECTIVES

GOALS

- **Student achievement in science will be reinforced through teaching inter-disciplinary lessons that create a context for science content and produce repeated learning opportunities.**

- **Science content will be made accessible to a student population diverse socio-economically, linguistically, and in cognitive development.**

- **Teaching strategies will be implemented that actively engage the student with science lesson content, whatever their disability or prior experience, and connect the student to a community of science learners.**

- **Student motivation to progress through the instructional sequence will be encouraged through the anticipation of culminating events at the end of the program.**

- **Teachers will collaborate their lessons to reinforce science content for the student.**

- **Students will use critical thinking skills to create an art/performance installation that communicates a relationship between the student and the science lesson content.**

- **Students will successfully communicate their science learning achievement through a variety of assessment evidence including artwork, writing, and performance.**

OBJECTIVES

- **This program is based on the Competency based Curriculum (CBC) of Miami-Dade Public Schools.**
- **This program was developed for second through fourth grade students.**
- **Subject areas are science, language arts, music, art, and theatre arts.**

SCIENCE

- **Second Grade**
  - **After using the science process skills, the student will classify animals according to their physical characteristics.**
- **Third Grade**
  - **After using the science process skills, the student will classify animals according to their physical and behavioral characteristics.**
- **Fourth Grade**
  - **After using the science process skills and participating in field studies, the student will discuss how an organism's environment determines its survival and therefore the continuation of its species.**

LANGUAGE ARTS

- **Second Grade**
  - **After viewing a film or production, the student will, in a cooperative setting, analyze ideas by independently evaluating the film or production by writing a paragraph or thorough other means.**
  - **The student will demonstrate effective speaking, viewing, and listening skills by developing and delivering oral reports and presentations including reports.**
- **Third Grade**
  - **Working in a cooperative group, or individually, the student will demonstrate the ability to access and use information by drawings.**

. Fourth Grade

. After selecting a topic, the student will demonstrate application of reading skills by writing at least three paragraphs on the topic.

. The student will demonstrate effective speaking , viewing, and listening skills by delivering oral presentations.

. Working in a cooperative group, or individually, the student will demonstrate ability to access and use information by selecting and presenting to an audience beyond the classroom.

MUSIC

. Second Grade

. Demonstrate effective vocal production by using appropriate singing posture and breath support.

. Maintain tonal accuracy when singing unison songs as a member of a group with an accompaniment.

. Accurately sing from memory a repertoire of unison songs learned by rote.

. Sing and listen to a variety of songs perform body motions to demonstrate same or different phrases.

. Participate in music class activities through singing.

. Third Grade

. Read and follow an assigned part on a music score.

. Sing songs by reading a leaders hand signs.

. Maintain tonal accuracy when singing unison songs as a member of a group without an accompaniment.

. Accurately sing from memory a repertoire of partner, verse against chorus and unison songs learned by rote.

. Sing and listen to a variety of music.

. Participate in music class activities through singing.

. Fourth Grade

. Read and follow an assigned part on a music score.

. Maintain tonal accuracy when singing partner and verse against chorus songs as a member of a small group without an accompaniment.

. Accurately sing from memory, a repertoire of rounds, canons, partner, verse against chorus and unison songs learned by rote.

. Sing and listen to a variety of music.

. Communicate through expressive singing, the ides of the lyrics, rhythmic and melodic patterns of a song.

ART

. Second Grade

. Through the critique process, the student can understand that works of art can be rendered realistically, symbolically, or abstractly.

. The student can develop fine and gross motor skills.

. Third Grade

. Through the critique process, the student uses analytical vocabulary in verbal and written form to identify a variety of media and describe various techniques.

. The student can produce a minimum of twelve works of original art through the interpretation of themes through imagination and personal ideas.

. Fourth Grade

. Through the critique process, the student uses analytical vocabulary in verbal and written form to identify, describe, and interpret the elements

of art and analyze the principles of design.

- **The student can understand how artists have used visual languages and symbol systems through time and across cultures.**

- **through the practice of art the student can develop more complex and detailed imagery through a variety of techniques and selected materials.**

THEATRE ARTS

. Second, Third, and Fourth Grade

- **Demonstrates awareness of imaginary environments in dramatic activities.**

- **Demonstrates the ability to perform non-verbally using gestures.**

- **Creates and maintains a character through pantomime.**

- **Uses and understands spoken language appropriate to a group improvised scene.**

- **Uses available clothing and fabric to serve as costumes in dramatic activities.**

- **Identifies characters by describing their behavior and relating to personal experiences.**

- **Create a character by using and applying the components of an outside (non-human: fish) element: traits, sound, movement**

II. COURSE OVERVIEW/ OUTLINE

OVERVIEW

CURRICULUM AREAS: Science, Art, Language Arts, Music, and Drama.

QUOTE: "Tropical Underwater Dreams" makes the dream of elementary students applying their science learning to a real situation, in this case through visual art, language arts, music, and drama, a reality. This experience creates a foundation of skills the students will need in the workforce and in everyday living". Mrs. Thalya Watkins, Assistant Principal, Charles D. Wyche Jr. Elementary School

TITLE OF PROJECT: Tropical Underwater Dreams

THE PROJECT:

The overarching goal for "Tropical Underwater Dreams" is for students to use critical thinking skills by producing evidence of science content learning.

Interdisciplinary teaching and teacher collaboration are the strategies used to reach this goal. Second through fifth graders, produce a variety show illustrating their learning about aquaculture (the science of tropical fish). Using art concepts and materials they created an underwater environment of tropical fish illustrating water and fish characteristics through drawing and painting. Students researched a specific tropical fish for a written report. Students wrote their own fantasy story after being inspired by the African American fish folktale. Through teacher collaboration in music and drama, the students sang and acted dramatically illustrating the tropical fish theme.

THE STUDENTS:

Approximately 300 students participated from second through fifth grades, 7- 10 years old, of diverse ethnicity, demographics, and learning abilities. All students achieved success in one or more aspects of the project. Students met with the music, art, and drama teachers once a week for several months. This project can be adapted to any age, class size, or achievement level.

THE STAFF:

Mark Rosenkrantz has been teaching elementary art for five years in Miami-Dade County Public Schools. He has recently achieved National Board Certification in Elementary Art. He has received four Education Fund grant awards for interdisciplinary art projects. Teacher collaboration in interdisciplinary lesson planning and implementation was essential to the success of this project. This project was implemented for one school year.

MATERIALS AND FACILITIES:

The "Dream" encompasses a variety of related activities. All of the projects can be done in the classroom. Art supplies and music will need to be supplied by the adapting teacher. Aquaculture science curriculum is provided in the grade level science text, library, and a condensed curriculum provided in the Idea Packet. The project can be tailored from a single class to a school wide production.

RESOURCES:

Students primarily found their information through in class research from teacher provided text. Parents provided assistance in sewing costumes.

OVERALL VALUE:

Students are almost "swimming" in fish. Science content is made accessible to all the students by providing experiences that create for the student a personal relationship to the subject matter. In "Tropical Underwater Dreams" the variety show context provided students with motivation, multiple opportunities for active interaction with subject area content, and a variety of means to communicate learning.

OUTLINE

- **This program can be customized to any time frame.**
- **The level of depth and number of activities depends on the implementing teacher.**
- **September- November: Research, lesson planning, ordering materials.**
  December-March: Implementing lessons, learning artifact production.
  April: Presentation / Assessment.

III. LESSON PLANS

SCIENCE

. CREATING A KNOWLEDGE BASE FOR THE STUDENT

- **Students observe water and fish using actual aquariums, videos, and science textbooks, Internet, and library as resources.**
- **Students identify characteristics observed in water and fish.**
- **Student access information through presentation, inquiry discussion, and research.**

. CURRICULUM (Courtesy Curriculum Committee, Charles D. Wyche Jr. Elementary, and Mrs. Nury Gonzalez, ESE Faculty)

- **Students learn characteristics of water.**
  - **Concepts/Vocabulary (example):**
    - **water, salt, fresh, habitat, ocean, river, lake, pond, sea, underwater, environment, tide pool, liquid, flow, oxygen, gas, frozen, reflection, saltwater**
    - **Refer to grade level science textbook**

- **Students learn characteristics of fish.**
  - **Concepts/Vocabulary (example):**
    - **fish, top, bottom, swim, huge, tiny, eat, plants, animals, live, food, freshwater, breathe, school of fish, air, oxygen, shape, color, size, grow, lay, eggs, head, body, coral, reef, , under, above, near, deep, extinct, bones, fins, gills, scales, tail, dorsal, hatch, pectoral, nostril, mouth, eye. lateral line, streamlined, camouflage, transparent, fry, young, cartilage, vertebrates, shape.**
  - **Physical : Body parts, body part functions, fish in environment.**
  - **Social behavior: Behavior with other fish, other animals, with man.**
  - **Reproduction: Types of fish reproduction.**
  - **Refer to grade level science textbook.**

- **Students will produce learning artifacts: written report, illustrations, dioramas.**

  - **Students will research and present findings in written form.**
    - **Writing vocabulary/concept definitions.**
    - **Creating sentences and essays using vocabulary/concepts.**
    - **Role-playing "I am a fish".**
    - **Students write poems about fish.**
  - **Students will illustrate concepts through drawing and dioramas.**
    - **Plate aquarium**
      - **Cut hole in center of paper plate.**
      - **Line hole with blue cellophane.**
      - **Line another plate with fish/underwater cutouts, drawings.**
      - **Glue two plates edge to edge together.**

LANGUAGE ARTS

. CREATING A KNOWLEDGE BASE FOR THE STUDENT

. Read the story "Marie and The Redfish" from Her Stories, African American Folktales.

. CURRICULUM

. Identify images of fish in the story. List on board.
. Identify images of magic in the story. List on board.
. Give students title of story: "My Magic Fish Story"
. Students generate images of magic and fish. List on board.
. Format of story: Paragraph one: Who, what, where
Paragraph two: Magic events and action.
Paragraph three: Ending
. Students write story.
. Students read story in class/on stage.

ART

. CREATING A KNOWLEDGE BASE FOR THE STUDENT

- **Observation of fish images.**
  - **Students view Eyewitness "Fish" Video.**
  - **Students write notes during video.**
    - **Students are given specifications for number of lines in notes.**
  - **View actual fish (Siamese Fighting Fish)**
  - **View images of fish artwork: Mola design, vest design, Native American design, Henri Matisse images, Cary Chen images, photogaphic images**
  - **Identify characteristics of water and fish.**

. CURRICULUM

- **Concepts/Vocabulary: fish, anatomy, fins, tail, gills, scales, tail, streamlined, paper, pattern, stencil template, overlap, contour line, shape, area, water, reflection, transparent, flow, wet.**
  - **Students write concepts and definitions on the back of their artwork.**

- **Art materials: white drawing paper, colored drawing paper, watercolor paint, paintbrushes, sponges, tempera paint, glue, scissors, oil pastels, stencil template: fish shape and scale shape, heavy paper(tagboard) border strips, skinny colored markers, fat watercolor markers, pencil**

- **Second grade project: Stuffed fish with scales**

  - **Watercolor painting of two sheets of paper.**
  - **Cut painted paper into small squares.**
  - **Draw fish body shape/contour line with stencil template, twice on two sheets of paper.**
  - **Cut out shapes**
  - **Drawing glue guideline border on one fish shape, except at mouth.**
  - **Apply glue.**
  - **Glue two shapes together, except mouth.**
  - **Identify and draw areas of fish fins, tail, and head.**
  - **Use pattern to decorate areas, both sides.**
  - **Identify scale purposes and how pattern reflects these purposes.**
  - **Draw scale circle shape on watercolor paper square using a stencil template.**
  - **Cut out circles.**
  - **Apply scale circles in overlapping pattern, both sides.**
  - **Stuff fish with tissue pieces.**
  - **Glue mouth closed.**

- **Third grade project: Construction paper collage**

  - **Sponge paint background paper (square).**
  - **Draw an enlarged contour line of a fish body on colored paper in pencil.**
  - **Copy from fish drawing.**
  - **Each student given a different fish.**
  - **Identify shapes of fish body parts.**
  - **Draw fish body shapes on small pieces of colored paper.**
  - **Cut out fish body shapes.**
  - **Identify location of shape on fish body.**
  - **Cut out shape.**
  - **Glue shape in correct location on fish body.**
  - **Continue till all shapes done.**
  - **Outline shapes with marker.**
  - **Draw any missing shapes in.**
  - **Draw water pattern on border strips.**
  - **Glue border strips in place on sponge painted square.**
  - **Cut out fish body from colored paper.**
  - **Draw glue guideline border on back of fish shape.**
  - **Apply glue.**
  - **Place fish in position and glue down.**

- **Fourth grade project: Mixed media collage**

  - **Sponge paint background paper (square).**
  - **Draw four different fish on four pieces of paper in oil pastel, four colors.**
  - **Watercolor paint the same fish in four colors.**
  - **Draw water pattern on border strips in oil pastel, four colors.**
  - **Watercolor paint strips in four colors.**
  - **Draw Matisse-like plant shapes on cellophane (transparent) and metallic (reflection) paper.**
  - **Cut shapes out.**
  - **Cut fish out.**
  - **Arrange fish and plant shapes on square.**
  - **Glue all shapes.**
  - **Glue border strips in place on sponge painted square.**

. **Fourth grade project: Vest costumes**

. **Order three rolls of white muslin**
. **Parent/seamstress cuts and sews vest design.**
. **Tie dye fabric in several colors.**
. **Draw fish body shapes on colored felt.**
. **Draw fish body parts on colored felt.**
. **Draw plant shapes on colored felt.**
. **Cut out felt shapes.**
. **Attach felt fish body parts with glue to body.**
. **Attach fish to vest with iron on fabric adhesive.**
. **Attach sequin bubbles with glue.**

. **Fourth grade project: Fin hats**

. **Draw a fin shape.**
. **Draw enlarged fin shapes on heavy paper (tagboard) (4X) with an added tab for attachment to the headband .**
. **Cut out shapes.**
. **Decorate shapes with colored marker and glitter.**
. **Draw water pattern on headband.**
. **Glue two fins back to back (2X).**
. **Glue fins in each side of headband symmetrically.**

. **Fourth grade project: Paper mache fish**
. **Paper mache balloons.**
. **Cover paper mache with colored tissue.**
. **Cut out fish fins and tail.**
. **Cover fins and tail with colored tissue.**
. **Attach fins and tail with paper mache tissue.**

MUSIC

. CREATING A KNOWLEDGE BASE FOR THE STUDENT

- **Build background knowledge of the music and songs by playing the fish themed music and demonstrating the singing of the songs.**

. CURRICULUM (Courtesy of Mrs. Cecilia Vaillant Yanes, Music Faculty)

- **Students will develop aural skills through:**

  . Echo clapping measures of music.
  . Echo singing phrases of the songs.

- **Students develop visual skills in identifying music symbols through:**

  - **Students will identify music symbols in the music score: treble clef, time signature, first and second endings, repeat sign, bars of instrumental music, tie, D.S. al Coda and their symbols.**
  - **Identify the Form: ABA.**
  - **Use supplementary materials for signs and symbols or matching games.**
  - **Use hand signs to perform phrases of the songs using solfege syllables.**

- **Students develop reading skills through:**

  - **Number the students 1 through 16.**
  - **Assign the narration parts found at the beginning of each song. Students listen first to the demonstration of reading than read themselves.**
  - **Using solfege symbols, students read short phrases and performs reading the hand signs.**
  - **Identify the phrase being performed by the teacher while looking at the score.**

- **Students develop movement skills through:**

  . Choreography designed by the teacher and students through improvisation.
  . Students implement choreography with songs.

- **Students develop performance skills through:**

  . Students perform weekly in class.
  . Students perform before an audience.

THEATRE ARTS

. CREATING A KNOWLEDGE BASE FOR THE STUDENT

. Build background knowledge of fishes and other underwater animals depicted in the play to be presented. Use books, movies, picture, and technology-generated information in order to acquaint the students on the behavior and different their typical habitats and environments. Students will practice movements using various dramatic exercises previously used in class.

. CURRICULUM (Courtesy Mrs. Kelly Gonzalez and Mrs. Christina Garcia Jones, Theatre Faculty)

. Two collaborating teachers wrote their own play " The Coral Family"

. Allow the students to become acquainted with the play by reading through the entire play. From this reading, the students will choose the characters they wish to audition for and practice the lines.

. Students will go through the audition process. The teacher(s) will choose two or three of the best candidates for final auditions to be held on the third week. During the audition process, students will learn the different stage areas and positions throughout the actual performance.

. Final auditions will be held and characters chosen. The remaining students will be responsible for making props, painting backdrops, setting props on stage, costumes, etc. All students are included in some activity.

. Students will rehearse at least twice a week. Rehearsals should be held onstage to acquaint the students with their positions on stage. Final rehearsals should take place on stage with costumes.

. Present play before a small audience for an initial performance.

ADVICE

. Discuss project goals/ timeline with collaborating teacher.

. Give collaborating teacher plenty of time to prepare and implement lesson plans.

. Ask teacher for copy of lesson plan.

. Periodically monitor teacher progress.

. Costume vest sizes were determined by the music teacher in small, medium, or large sizes

. Student hats and vests were matched to the characters by the theatre arts faculty.

. Student artwork was produced in squares for the stage backdrop to easily assemble into a larger grid.

. The backdrops were assembled from 2" wood lattice strips cut 5" lengths.

. Monofilament was attached to the strips for hanging.

. Safety pins attached to the monofilament for hanging were attached to heavy curtains.

. Artwork was attached to the lattice with paper packing tape.

. Artwork was returned to the student undamaged after the performance.

. Completed costumes were rehearsed prior to the performance.

. Videotape the performance and take still photographs for documentation.

. Review the specific fish and water characteristic with the student before the activity to reinforce student learning connections.

. Find a parent who sews.

. Adult attaches paper fins and tail to paper mache balloon body of fish.

IV. RESOURCE LIST

. Books

Elderfield, John. The Cut-outs of Henri Matisse. 1978. George Braziller, Inc. New York.

Hamilton, Virginia. Dillon, Leo and Diane. Her Stories. African American Folktales, Fairy Tales, and True Tales. 1995. The Blue Sky Press. New York.

Heller, Ruth.The Tropical Fish Coloring Book. 1972. Price/Stern/Sloan. Los Angeles.

Sagar, Keith and Swain, Jack. The Love of Tropical Fish Freshwater and Marine, 1976. Octopus Books Limited. London (photos)

. Internet Sites

. Audio Visuals

Eyewitness Video Series. Fish. 1995. BBC Wildivision, BBC Lionheart Television, Darling Kindersley Vision, and Oregon Public Broadcasting

Amorosia, Donna and Weidermann, Lori. We Sing Under The Sea. Music and Teacher Handbook. Clarus Music.

. **Supplemental Materials**

Charles D. Wyche Jr. Elementary Curriculum Guide: Aquaculture

Garcia, Cristina and Gonzalez, Kelly. The Coral Family. A Play. 2002. Charles D. Wyche Jr. Elementary School Faculty.

Art historical fish images: Mola design, vest design, Native American design, Henri Matisse images, Cary Chen images (gift of artist), photographic images

. **Organizations**

. **Museums**

Miami Seaquarium, Rickenbacker Causeway, Miami, Florida

. **Speakers**

. **MORE INFORMATION**

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V. BIBLIOGRAPHY

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VI. STUDENT WORK SAMPLES

VII. ADAPTER APPLICATION