



Raising Brain Microschool

## January 2026 - Marine Biology Unit Study

This month, our learners explored Marine Biology through science research, art, and collaborative projects. They investigated the extreme conditions of the deep ocean, learning about pressure, temperature, darkness, and the unique adaptations of deep-sea animals such as the anglerfish. They studied the different ocean zones and explored career pathways in marine science, including marine photography, conservation, research, and animal rescue.

Learners combined creativity and scientific thinking through hands-on projects. They worked in teams to research real deep-sea animals and design imaginary species, including scientific names, labeled anatomy, habitats, and adaptations. They also studied ocean conservation artist Wyland and created mural designs inspired by endangered marine life. Additional projects included researching one of the world's oceans and creating travel-style presentations or brochures.

To connect their learning to real-world exploration, students designed entries for the 2026 Nautilus Exploration Crew Patch Contest, a national competition in which the winning design will be worn by the Nautilus exploration crew throughout the year. Alongside these studies, students enjoyed collaborative art, outdoor time before a winter snowstorm, weather prediction activities, and a shared Taco Thursday, weaving together science, creativity, and community.

We do not teach to standards, however, here are standard connections we made in this unit:

### **Virginia SOL Connections:**

Science: 3.4, 3.5, 4.5, 4.9, 5.1, 5.6, 6.1

Mathematics: 3.14, 4.12

History/Social Science: VS.1, CE.1

Fine Arts: Music & Visual Arts Standards

Computer Science: K–8 Computer Science Standards

World Languages: Spanish Standards

English: 3.7, 4.7, 5.7

Health/PE: Physical activity, safety, and collaboration

### **Marine Biology & Ocean Science**

- Studied the ocean zones and the environmental challenges of the deep sea.
- Learned about deep-sea creatures such as anglerfish and their unique adaptations.
- Explored how marine animals survive extreme pressure, darkness, and cold.
- Investigated different career pathways in marine biology and ocean research.



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### Research & Scientific Inquiry

- Completed partner projects researching real and imaginary deep-sea animals.
- Practiced scientific naming, labeling anatomical features, and identifying adaptations.
- Presented research and evaluated evidence to determine real vs. fictional species.
- Created ocean research presentations and travel brochures based on the world's oceans.

### Art & Ocean Conservation

- Studied ocean muralist Wyland and discussed art as environmental advocacy.
- Designed building-scale mural concepts featuring endangered marine species.
- Created artwork inspired by ocean life and conservation themes.
- Designed entries for the 2026 Nautilus Exploration Crew Patch Contest.

### Creative & Hands-On Learning

- Participated in collaborative research and presentation activities.
- Practiced creative design through contest artwork and mural concepts.
- Shared ideas through class discussions, guessing games, and presentations.

### Seasonal & Community Activities

- Enjoyed outdoor play before a winter snowstorm and observed weather predictions.
- Compared U.S. and European weather models to make snowfall forecasts.
- Cooked and shared a Taco Thursday meal together while discussing ocean topics.
- Strengthened teamwork, creativity, and confidence through collaborative learning.

*Two of our students were honorable mentions in the NautilusDeep Sea Explorer Patch Design Contest. [Here is the link to the site.](#)*