Dolphin Research Center

Distance Learning: Research for Kids

Just how smart are dolphins? Explore what scientists are learning about marine mammals through their research at Dolphin Research Center and play your own research games just like the dolphins.

Grade Levels: 2-5

Program Description:

Students will participate in an interactive studio based program with Dolphin Research Center Staff to learn about the current research taking place with dolphins at Dolphin Research Center. Learn about the history of research at the center as well as what researchers have discovered in terms of imitation, and number concepts. See how research plays an important role in the care of marine mammals.

Concepts Addressed:

- Students will:
  - Explore the concepts of dolphin behavior and cognition and the nature of science
  - Hear about and observe research projects at Dolphin Research Center investigating:
    - Can dolphins compare quantities and choose the lesser amount?
    - What do dolphins understand about hidden objects?
    - How flexible is dolphins' ability to imitate?
  - Play research games with the instructor, just like the dolphins do!
  - Learn About Ocean Conservation
    - Natural & human caused threats in the wild
    - Conservation efforts you can do at home to help dolphins and your environment

Program Format:

- This program begins with an overview of Dolphin Research Center and the members of the dolphin and sea lion families.
- The instructor will very briefly discuss the research history of the center, and an overview of the types of research that are conducted by staff members.
- The students will have an opportunity to hear about recently published research and see video/ hear sound clips from some of those projects.
- The students will get to model and participate in research games that are similar to those of the dolphins.
- Discussion of the value of the types of research being conducted at Dolphin Research Center.
- Time is allowed for questions and answers.

Program Logistics

Program Length: 30-45 minutes

Minimum # of participants: 1

Maximum # of participants: For groups over 100 please contact us

Program Cost: $95.00 (CILC premium members: $85)

- Discounts may be available for bulk programming

Program Fee Notes: Payment of associated fees must be received 72 hours before the program date. If payment is not received by this time the program is subject to cancellation.

Cancellation Policy: We will not charge for programs canceled due to nature i.e. snow days. The full fee will be charged to sites which cancel with less than 48 hours notice. Payment is due 72 hours before the program. If payment is not received by this time the program is subject to cancellation. Dolphin Research Center reserves the right to cancel programs at anytime. If Dolphin Research Center cancels a program than it will contact the requester to discuss rescheduling options. If a program does not occur because of an error in communication between the requester and Dolphin Research Center, requesters will still be changed the full price of the programs. Sites need to participate in a tech run with Dolphin Research Center staff members. This will be scheduled to occur prior to your program date. If the tech run does not occur the full fee will be charged to sites that cannot connect at program time.

Program Delivery Mode: Google Hangouts, ZOOM, CILC One-Click-Connect (for H323)

Recording of any type during a Dolphin Research Center distance learning program is prohibited.

Standards

Florida

Florida Next Generation Science Standards met or supported:

- **SC.2.N.1.1** Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.

- **SC.2.N.1.4** Explain how particular scientific investigations should yield similar conclusions when repeated.
- **SC.2.N.1.6** Explain how scientists alone or in groups are always investigating new ways to solve problems.
- **SC.3.N.1.1** Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
- **SC.3.N.1.4** Recognize the importance of communication among scientists.
- **SC.3.N.1.5** Recognize that scientists question, discuss, and check each other's evidence and explanations.
- **SC.N.1.3.6** Infer based on observation
- **SC.4.L.16.3** Recognize that animal behaviors may be shaped by heredity and learning.
- **SC.4.L.17.4** Recognize ways plants and animals, including humans, can impact the environment.
- **SC.4.N.1.1** Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
- **SC.4.N.1.3** Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.
- **SC.4.N.1.7** Recognize and explain that scientists base their explanations on evidence.
- **SC.4.N.1.8** Recognize that science involves creativity in designing experiments.
- **SC.5.N.1.2** Explain the difference between an experiment and other types of scientific investigation.
- **SC.5.N.1.3** Recognize and explain the need for repeated experimental trials
- **SC.5.N.1.4** Identify a control group and explain its importance in an experiment.
- **SC.5.N.1.5** Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."
- **SC.5.N.2.1** Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.
- **SC.5.N.2.2** Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.

Language Arts Florida Standards met or supported:

- **LAFS.2.SL.1.1** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by linking their comments to the remarks of others. C. Ask for clarification and further explanation as needed about the topics and texts under discussion.
- **LAFS.3.SL.1.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 *topics and texts*, building on others' ideas and expressing their own clearly. A. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). C. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others. D. Explain their own ideas and understanding in light of the discussion.
- **LAFS.4.SL.1.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade *4 topics and texts*, building on others' ideas and expressing their own clearly. A. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others. D. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.
- **LAFS.5.SL.1.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly. A. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others. D. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.

National

Next Generation Science Standards met or supported:

- **4-ESS3-2** Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans

- **5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- **Nature of Science:**
    - Scientist use different ways to study the world.
    - Scientists look for patterns and order when making observations about the world.
    - Science knowledge can change when new information is found.
    - Science methods are determined by questions. Science investigations use a variety of methods, tools, and techniques.
    - Science findings are based on recognizing patterns. Scientists use tools and technologies to make accurate measurements and observations.
    - Science explanations can change based on new evidence.
    - Science knowledge helps us know about the world
    - Men and women from all cultures and backgrounds choose careers as scientists and engineers. Most scientists and engineers work in teams. Science affects everyday life. Creativity and imagination are important to science.
    - Science findings are limited to what can be answered with empirical evidence.

Common Core for English Language Arts met or supported:

- **CCSS.ELA-Literacy.SL.2.1** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by linking their comments to the remarks of others. C. Ask for clarification and further explanation as needed about the topics and texts under discussion.
- **CCSS.ELA-Literacy.SL.3.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. A. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). C. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others. D. Explain their own ideas and understanding in light of the discussion.
- **CCSS.ELA-Literacy.SL.5.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. A. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other

information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others. D. Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.

Ocean Literacy Principles

- **5A** Ocean life ranges in size from the smallest living things, microbes, to the largest animal on Earth, blue whales.
- **5D** Ocean biology provides many unique examples of life cycles, adaptations, and important relationships among organisms (symbiosis, predator-prey dynamics, and energy transfer) that do not occur on land.
- **5E** The ocean provides a vast living space with diverse and unique ecosystems from the surface through the water column and down to, and below, the seafloor. Most of the living space on Earth is in the ocean.
- **6D** Humans affect the ocean in a variety of ways. Laws, regulations, and resource management affect what is taken out and put into the ocean. Human development and activity leads to pollution (point source, nonpoint source, and noise pollution), changes to ocean chemistry (ocean acidification), and physical modifications (changes to beaches, shores, and rivers). In addition, humans have removed most of the large vertebrates from the ocean.
- **6G** Everyone is responsible for caring for the ocean. The ocean sustains life on Earth and humans must live in ways that sustain the ocean. Individual and collective actions are needed to effectively manage ocean resources for all.

Recommended Materials and Preparation