MINECRAFT

EDUCATION EDITION

AQUATIC ADVENTURES

education.minecraft.net

LANGUAGE ARTS

Aquatic Activities

Shipwreck Narrative

CCSS.ELA-Literacy.W.5.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Have students find a shipwreck in Minecraft (/locate shipwreck), observe the details and take notes on what they notice. Now ask students to write a narrative about how this ship ended up in this condition in this location. Who might have been on this ship? Where might the ship have been headed? Encourage students to use camera and portfolio to add details and evidence to their narrative.

Saving the Coral Reefs

CCSS.ELA-Literacy.RI.5.3: Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Did you and your students know that coral reefs represent 0.1 percent of the world's ocean floor, but help support approximately 25 percent of all marine species? Climate change and increasing amount of acid in the oceans is destroying coral. Ask your students to investigate further behind the causes and effects of coral dying around the world. As a culmination of this research, ask students to propose solutions to help coral survive and thrive.

Preserve a Monument

CCSS.ELA-Literacy.CCRA.SL.4: Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

Have students find an underwater monument, have them observe the details and take notes on what they notice. Now ask students to further build out this monument adding details and features that they'd like to see. Now it is time to present. Ask students to prepare a 3-5 minute presentation that argues for preserving this monument.

Set a Story

CCSS.ELA-Literacy.RL.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

There are countless stories that are set on a ship or an island, think of titles such as *Robison Crusoe, Treasure Island, Twenty Thousand Leagues Under the Sea, and Life of Pi.* Ask your students to recreate the setting and main action of any title of their choice within Minecraft. Additionally, ask them use camera and portfolio and book and quill to present their work to a peer.

SOCIAL STUDIES

Aquatic Activities

Submarine Model

[CCSS.ELA-Literacy.RH.6-8.1](#): *Cite specific textual evidence to support analysis of primary and secondary sources.*

Invite your students to build a submarine based on a famous local or national historical event in which the submarine played a crucial role. Ask students that they research, read, primary and secondary sources to learn about the submarine and build the replica with Minecraft: Education Edition. Extension: Allow students to create a fictional submarine based on their imagination.

Overfishing in your Community

[CCSS.ELA-Literacy.RH.6-8.8](#): *Distinguish among fact, opinion, and reasoned judgment in a text.*

Here is an alarming fact, according to [National Geographic](#), "A study of catch data published in 2006 in the journal Science grimly predicted that if fishing rates continue apace, *all* the world's fisheries will have collapsed by the year 2048." Offer up the opportunity for your students to research about the local fishing industry in their community. Your students can also interview a local expert to learn more about the supply and demand for fish in your area. Now, ask your students to create an advertisement in Minecraft for wider variety of fish locally available so handful of species like tuna and salmon are not affect by overfishing.

Naval Expedition

[CCSS.ELA-Literacy.RH.6-8.1:](#) *Cite specific textual evidence to support analysis of primary and secondary sources.*

Vasco da Gama, John Cabot, Ferdinand Magellan are all famous men who led naval expeditions that changed the world. Invite your students to research a famous naval expedition from past and illustrate a key scene from their research in Minecraft: Education Edition. Ask students to provide context about their scene and explain it using boards, signs, and NPCs.

MATHEMATICS
Aquatic Activities

Gone Fishing

CCSS.MATH.CONTENT.6.SP.A.2: Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.

Grab your fishing rod and head out onto the water. Have your class track their fishing successes. Record what they caught, then combine the students' numbers to determine the probability of catching fish, junk, or treasure. Extend the activity by having students develop and test their own hypothesis. Does the weather affect fishing? Does the type of biome change what you'll catch?

Monumental Problem

CCSS.MATH.CONTENT.3.MD. C.7.B: Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems and represent whole-number products as rectangular areas in mathematical reasoning.

In a grass blocks world, have pairs of students take turns creating quadrilaterals, and having their partner determine the area and volume. Once students understand the concept, have them find an underwater monument. Students can work in teams to measure the length of each side of the base and use the collected data to determine the area and perimeter.

Charting the Depths

CCSS.MATH.CONTENT.5.MD. B.2: Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.

There are plenty of new mobs in Update Aquatic like Dolphins and Tropical fish. In a real ocean habitat, certain animals thrive only at certain depths. Do the same rules apply in Minecraft? Make sure you have your coordinates turned on in settings, and search for mobs in the ocean. What is your Y coordinate? Create a line plot showing frequency of these mobs at certain depths.

SCIENCE

Aquatic Activities
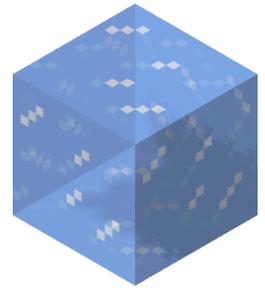
Dolphin Biology Diagrams

NGSS 4-LS1-1 Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction.

Start the class with a short game. Present to your students two amazing real-life facts about dolphins and one convincing myth. Have them pick which they think is true, then reveal the answer. Have students watch videos and research dolphins. They can use the spawn egg to observe dolphins in Minecraft. Have student work in a team to make a large-scale build of a dolphin in Minecraft and label the parts of their body, fins, nose, fluke, blowhole, etc.

Dolphin Rescue

NGSS 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

Building on their knowledge and study of dolphins, students build a wild animal rescue facility in Minecraft. Focused around meeting the needs of dolphins in the wild, students will need to make observations about what dolphins need to thrive in in their natural habitat. Students might build multiple tanks with water, supplies of food, enrichment toys, etc.

Crafting Underwater Torches

NGSS MS-PS1-2 Analyse and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.

What happens when Magnesium burns? Investigate: What is the minimum activation energy required to begin the reaction? How is this reaction different than wood burning in a fire? What types of energy are produced in this reaction? Have students use the chemistry features of Minecraft to create underwater torches (http://aka.ms/labjournal) to light up an underwater display. As a challenge, students could be asked to find magnesium in the world around them in survival mode and use the Material Reducer to obtain the element. Hint: magnesium can be reduced from: clay, dirt, cobblestone, terracotta, magma, lava.

Sonar Mapping

NGSS 4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.

Look at examples of topographic maps and learn about how sonar is used to create maps of the ocean floor. Students will make a model of the ocean floor within a shoe box. Measure the floor of the box and lid and create a grid. Locate a shipwreck in Minecraft (/locate shipwreck). Use this as the basis to build the ocean floor out of blocks. For a challenge, you could use a structure block to export and 3D print a model of the ship and surrounding ocean floor. Punch a hole in each block of grid and use a dowel to measure the depth. Work in teams to create a sounding box and have another team test your box to make a map.

VISUAL ARTS
Aquatic Activities

Undersea City
VA:Cr1.1.6a Combine concepts collaboratively to generate innovative ideas for creating art

Work collaboratively as a class to create an original undersea monument or city. Create a new world and share your IP address with the class to have them join a Minecraft world together. Brainstorm necessary elements then assign each person or team a project to complete. Use the in-game camera to document the city. Use the project as a writing prompt for the class.

Book Covers
VA:Cr1.2.7a Develop criteria to guide making a work of art or design to meet an identified goal.

Have students create a book cover in Minecraft. Students should consider the scene they would like to convey. Is it exciting? Does it should the main characters? Does it convey an important moment to the story? Students can create a cover for their won original story, a favourite title, or a book the class is reading.

Phases of the Moon
NGSS MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.
VA:Cn10.1.3a Develop a work of art based on observations of surroundings.

Have students create a Moon journal from a small notebook. Use the notebook to record observations about the moon each night for a month. Within Minecraft, build each phase of the moon as they see it. After a month, they should have a record of the moon phases to review and make additional observations about the cyclic pattern of the moon and its relationship to Earth.