



Eye Wonder



Hospitality & Tourism

*Careers in **Hospitality & Tourism** include working at a restaurant, resort, sports arena, theme park, museum, or hotel. Meet professionals and go behind the scenes on **Eye Wonder**.*



Eye Wonder

About the Series

[Eye Wonder](#) excites students with interesting facts and just plain fun! The series explores science and integrates technology, while focusing on various careers. The videos are less than 10 minutes and are filmed through the eyes of the cameraman, D.V.

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VIDEO LISTING: <http://media.knowitall.org/series/hospitality-tourism-0>

Aquarium (7:42)

*The **Eye Wonder** team learns more about Aquariums. D.V. visits an aquarium where he learns how much water is in aquarium tanks and how it is filtered, as well as the types of fish in aquariums, how they are obtained and how they are cared for.*

Chef (7:38)

*The **Eye Wonder** team learns what it takes to be a chef. D.V. visits the Culinary Institute where he learns that being a chef is much more than cooking, with courses in math for purchasing, food service sanitation and even chemistry.*

Doughnuts (7:38)



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*The **Eye Wonder** team learns how doughnuts are made. D.V. visits Krispy Kreme and watches doughnuts as they change from a mix to dough, then go into the fryers, and then are glazed and filled. The doughnuts are then distributed to stores and restaurants.*

Fair Food (5:37)

The Eye Wonder team goes behind the scenes of a fair food stand.

Food Bank (7:28)

*The **Eye Wonder** team explores a food bank. D.V. learns that food banks take food from manufacturers, wholesalers, retailers and community members and distribute it to groups who are helping to feed hungry people.*

Movie Theater (7:56)

*The **Eye Wonder** team investigates a movie theater. D.V. goes behind the scenes to see how film is loaded and rolled, and all of the different equipment that brings a movie to the screen.*

Pit Crew (7:34)

*The **Eye Wonder** team spends the day with a pit crew. D.V. learns about the physical challenges of working on a pit crew. He even gets to see a crew in action.*

Zamboni (8:14)

*The **Eye Wonder** team learns how an ice skating rink is kept in good*



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condition. D.V. learns how the Zamboni is used to keep the ice smooth and in perfect shape for skaters and hockey players.

NOTE : S.C. Standards and Classroom Activities are in a separate document for [Eye Wonder: Zamboni](#) (PDF)

Standards & Classroom Activities

Aquariums

Grade 5 and 7

Standard: II.B.2.a-b. (5th), II.D.2.a-c. (7th)

Distinguish among the roles organisms serve in a food web (B.2.a.).

Describe an organism by its niche in an ecosystem (B.2.b.).

Analyze the role of producers, consumers, and decomposers in an ecosystem (D.2.a.)

Identify kinds of relationships organisms have with each other (D.2.b.)

Analyze energy flow in a food chain and its relationship to a food web (D.2.c.)



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Type of Activities: Long-term post-video project

Introduction- This is a long-term project involving setting up a fish tank and analyzing its components in terms of comparing it to a genuine ecosystem. This project will require funds to establish your fish tank.

Background: An ecosystem is a balance between several different factors, both biotic and abiotic. It involves producers such as plants that produce food via photosynthesis. These are usually eaten by herbivore consumers who are then eaten by carnivore consumers. When they die, their body decomposes, aided by decomposing organisms, and recycles nutrients back into the ecosystem to provide for the producers. Water, air, and inorganic nutrients are also necessary factors in an ecosystem. Each animal and plant fills an important role, without which the ecosystem would be forced to change or possibly break down. This could happen if a group dies out, if a newcomer species is introduced, or if one group increases to the point of overpopulation. In the long term, other animals would eventually evolve to fill open ecological niches (mammals taking the places that were left empty when the dinosaurs went extinct). In an aquatic ecosystem, inorganic nutrients are often provided by wind and runoff from land, as well as the decomposition of marine animals and plants. This helps both plants and animals, both in the water and on the sea floor. As plants and algae photosynthesize, they draw up CO_2 from the water and release O_2 that the fish need to breathe through their gills. These plants are also eaten by some of the fish for food. These fish, in turn, might be eaten by others. They also excrete waste, which recycles valuable inorganic nutrients back into the water for use by the plants.



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Activity: Long-term aquarium set-up project. Students will first analyze what they will need to get in order to begin their aquarium, what role each plant and animal will fill, and then to set up the aquarium and observe the relationships.

Materials: List of plants and fish from a local aquarium shop (must have information about each species), aquarium starter kit (usually includes the tank, filter, pump, gravel), plants, fish, gravel, salt, fish food, tank cleaning scrub, siphon, and anything else the aquarium shop recommends.

Procedures:

1. Using the list from the store, students should determine what plants and animals they will need. Be sure to take into consideration how each fish acts, what each plant does, and what the fish might need to feed off of. Have students identify each member of the ecosystem that you are setting up. Make sure to fill every niche that is possible (i.e. some sort of algae eater, some sort of bottom feeders, etc.).
2. Purchase the items the class agrees upon for the tank.
3. As the tank is established, periodically have students observe and record the relationships between the different plants and animals in the tank. Compare it with a real marine ecosystem. Which is similar, which is different?



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Modifications: Instead of actually purchasing, if funds are not available, at least get the list of plants and animals and make the analysis.



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Describe an organism by its niche in an ecosystem (B.2.b.).

Analyze the role of producers, consumers, and decomposers in an ecosystem (D.2.a.)

Identify kinds of relationships organisms have with each other (D.2.b.)

Analyze energy flow in a food chain and its relationship to a food web (D.2.c.)

Type of Activities: Post video analysis and comparison.

Introduction- This analysis is best done after the class has already learned about a marine ecosystem.

Background: An ecosystem is a balance between several different factors, both biotic and abiotic. It involves producers such as plants that produce food via photosynthesis. These are usually eaten by herbivore consumers who are then eaten by carnivore consumers. When they die, their body decomposes, aided by decomposing organisms, and recycle nutrients back into the ecosystem to provide for the producers. Water, air, and inorganic



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Activity: This is a post video discussion involving comparing the Great Ocean Tank at the Riverbanks Zoo with a real marine ecosystem.

Materials: None

Procedures:

1. After watching the video, break the students into small groups.
2. Each group needs to compare the different parts of the Great Ocean Aquarium with a modern marine ecosystem in terms of



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what would take the place of the filter, what takes the place of the cleaning, the feeding, etc...

Modifications: Students could also compare the Great Ocean Tank with a small classroom tank in terms of equipment and organisms.



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Doughnuts

Grade 7

Standard: II.A.1.d. and II.A.2.b.

Analyze the use of single-celled organisms in industry and in the production of food and problems single-celled organisms can cause for humans (1.d.)

Describe the processes of respiration, growth and reproduction, removal of wastes, and cellular transport in cells (2.b.)

Type of Activities: Follow-up Lab

Introduction- This activity is designed to demonstrate that single-celled yeast organisms give off gas as a by-product of respiration. Following the lab, students should discuss what effect the presence of yeast has on how bread appears as it rises. Relate this to what yeast does for the doughnuts.

Background: Yeast is a single-celled microscopic organism that requires water and sugar in order to thrive. During respiration, the processes by which cells convert food into energy, the yeast releases carbon dioxide gas. This is similar to how our own bodies take in food, break it down during digestion, use the stored energy, and release carbon dioxide gas as we exhale. Yeast is used in baking to cause baked goods to rise. As the yeast



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feeds off of the sugar, it releases the CO_2 gas bubbles. As the gas escapes, it creates pockets of gas in the dough. This is what gives baked goods their light, airy texture. The holes in bread are the result of the gas escaping from the yeast. In making yeast doughnuts, the yeast serves to expand the doughnut just as it does in baking bread. Yeast is also used in fermentation and the making of alcohol. In addition to CO_2 , respiration also produces alcohol from the sugars upon which it feeds. By converting the sugar in grapes this way, wine is fermented.

Activity: Yeast, respiration, and doughnuts

This can be used as a pre-video lab and then referred to during the video when the yeast is introduced to the doughnut mixture. Or it can be used after the lab to demonstrate what the video shows.

Materials: Clear glass bottle, balloon, yeast, sugar, water, straw

Procedures:

1. Stretch the balloon to ensure that it expands easily.
2. Fill the bottle half full with warm water.
3. Pour 20 ml of sugar into the bottle.
4. Add 2 ml of yeast through the straw into the bottle.
5. Quickly stretch the balloon over the bottle's opening.
6. Place in a warm area and observe what happens both in the bottle and to the balloon.



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Modifications: Use different amounts of yeast and sugar, as well as different temperatures and settings for the bottle, to determine the effect these might have on the respiration of the yeast.



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Food Bank

Character Education lesson

This video would make an excellent addition to a unit on character education, specifically if a school or class is about to start a food drive.

Introduction: In addition to beginning a foods drive at the school, the instructor could have the students write letters to the people at the food bank, telling them what they think of the work they are doing, as well as offering a commitment to help in any way that they can. This will allow the students to understand what is done with all the food that is brought in, as well as the need to people to work such places. Students can also gain an understanding of what it must be like for families that need to depend upon the food bank.

Materials: Paper and pens.

Procedure:

1. After watching the video, students are to draft letters to the food bank, tell them what they think of the work that they do. They should include why they think it is important to have an organization such as the food bank, as well as why it is important to want to help those who are without.



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Credits

An instructional television series produced by Instructional Television, South Carolina Department of Education and ETV in SC (*Equal Opportunity Employers*)

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Visit scetv.org/education for more educational resources.