

Virtual Research Cruise Student Syllabus – Part 1
(Track your progress during the 2-week research cruise.)

MEDIA	TITLE: Description	COMPLETED
Virtual Research Cruise: Days 1 – 7 Aboard the R/V Oceanus		
Video #1	View <i>Live from the R/V Oceanus!</i> (A glimpse into life onboard a research vessel before heading out to sea)	
PUPCYCLE Log Day 1	<ul style="list-style-type: none"> Read <i>Heading to the California Upwelling Zone - CUZ that's where the plankton are!</i> (Explore the location of the research cruise and the parameters affecting the ocean currents in this region. Answer the Challenge Question based on the information and images provided in the log.) 	
Video #2	View <i>Live Feed Friday from Newport, Oregon. Bon voyage, Y'all!</i> Observe some of the challenges researchers might face during the 2-week expedition at sea.	
Video #4	(Optional) View <i>Live Feed from the R/V Oceanus – Bringing another scientist onboard.</i> This video provides a 2 nd look at Yaquina Bay, Newport, OR as the R/V Oceanus returns to port and boards another scientist for the expedition.	
PUPCYCLE Log Day 2	<ul style="list-style-type: none"> Read <i>Phytoplankton Chillin' with the UBCB</i> to learn more about the Upwelling Conveyor Belt Cycle (UCBC) and the equipment being used on the ship. Answer the Challenge Question based on the information and images provided in the log. 	
Video #3, Video #5, Video #6, & Video #7	<ul style="list-style-type: none"> View <i>PUPCYCLE 2019 1st CTD cast/retrieval for samples;</i> View <i>Live Feed from the R/V Oceanus;</i> View <i>Live Feed (Round 2: CTD Retrieval) from the R/V Oceanus;</i> and View <i>Live Feed from the R/V Oceanus (Round 3: Sample collection from the CTD).</i> Observe the procedures and safety precautions followed by the researchers to collect their study samples. 	
PUPCYCLE Log Day 3	<ul style="list-style-type: none"> Read <i>The Phytoplankton Players</i> to explore the various types of phytoplankton being investigated during the cruise. Answer the Challenge Question based on the information and images provided in the log. 	
Video #8	View <i>Live Feed from the R/V Oceanus (Round 4: Sample collection from the GoFlo)</i> to observe another method used to collect water samples.	
PUPCYCLE Log Day 4, Day 5, & Day 6	<ul style="list-style-type: none"> Read <i>Express Yourself, Bacteria;</i> Read <i>Insights into PUPCYCLE 2019;</i> and Read <i>On the Cutting Edge of Metabolomics.</i> Explore and discuss the various topics being researched by each of the scientists highlighted in the logs. Answer the Challenge Questions for each day's log based on the information and images provided. 	
Video #11	View <i>PUPCYCLE 2019 Live Feed Update: What happens to the water once it reaches the lab?</i> Observe the pathways the water samples follow from the CTD to the various labs set up on the ship by the different research teams.	
PUPCYCLE Log Day 7	<ul style="list-style-type: none"> Read <i>The Bubble Lab</i> to discover how scientists “inside the bubble” address the unique challenges presented by their research topic. Answer the Challenge Question based on the information and images provided in the log. 	
Virtual Research Cruise: Day 8 Aboard the R/V Oceanus (Progress Assessment)		
Read PUPCYCLE Log Day 8: Halftime at PUPCYCLE 2019. Review the knowledge you have gained and assessed your progress by completing the Halftime Assessment posted in the log.		



Virtual Research Cruise Student Syllabus – Part 2
(Track your progress during the 2-week research cruise.)

MEDIA	TITLE: Description	COMPLETED
Virtual Research Cruise: Days 9 – 14 Aboard the R/V Oceanus		
Video #9	View <i>PUPCYCLE Log Update – Cellular service returns to the R/V Oceanus</i> . Observe and discuss some of the lifestyle challenges that face scientists who research at sea.	
Video #10	View <i>R/V Oceanus takes on the heavy seas near Cape Mendocino, CA</i> . Observe and discuss some of the environmental challenges that face scientists who research at sea.	
PUPCYCLE Log Day 9	<ul style="list-style-type: none"> Read <i>Micrometers, Nanometers, Picometers, Oh My</i> to gain a better perspective on the size of the organisms being investigated by the scientists. Answer the Challenge Question based on the information and images provided in the log. 	
PUPCYCLE Log Day 10	<ul style="list-style-type: none"> Read <i>Game of Iron</i>. Explore the relationship between iron (Fe) and diatoms. Answer the Challenge Question based on the information and images provided in the log. 	
PUPCYCLE Log Day 11	<ul style="list-style-type: none"> Read <i>Heavy Seas, Anyone?</i> Observe the technology used to photograph microscopic plankton. Answer the Challenge Question based on the information and images provided in the log. 	
Video #12	<ul style="list-style-type: none"> View <i>This is the visible “line” in the ocean where today’s active upwelling was occurring</i> to observe the changes formed on the ocean’s surface by an active upwelling zone. Compare and contrast the ocean’s surface in this video with the ocean action displayed in Video #10. 	
PUPCYCLE Log Day 12	<ul style="list-style-type: none"> Read <i>Building Glass Houses</i> and explore how researchers are using the diatoms’ physiology to track their reproductive cycles under various environmental conditions. Answer the Challenge Question based on the information and images provided in the log. 	
PUPCYCLE Log Day 13	<ul style="list-style-type: none"> Read <i>Going with the Flow</i> and review the importance of upwelling to the phytoplankton and the aquatic food web. Answer the Challenge Question based on the information and images provided in the log. 	
PUPCYCLE Log Day 14	Read <i>PUPCYCLE 2019 Returns to Port</i> and discuss the various skills and collaborative efforts required to conduct scientific research at sea.	
PUPCYCLE Certification - Follow the link to the PUPCYCLE Certification Google Form and complete the form to receive your certificate.		

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