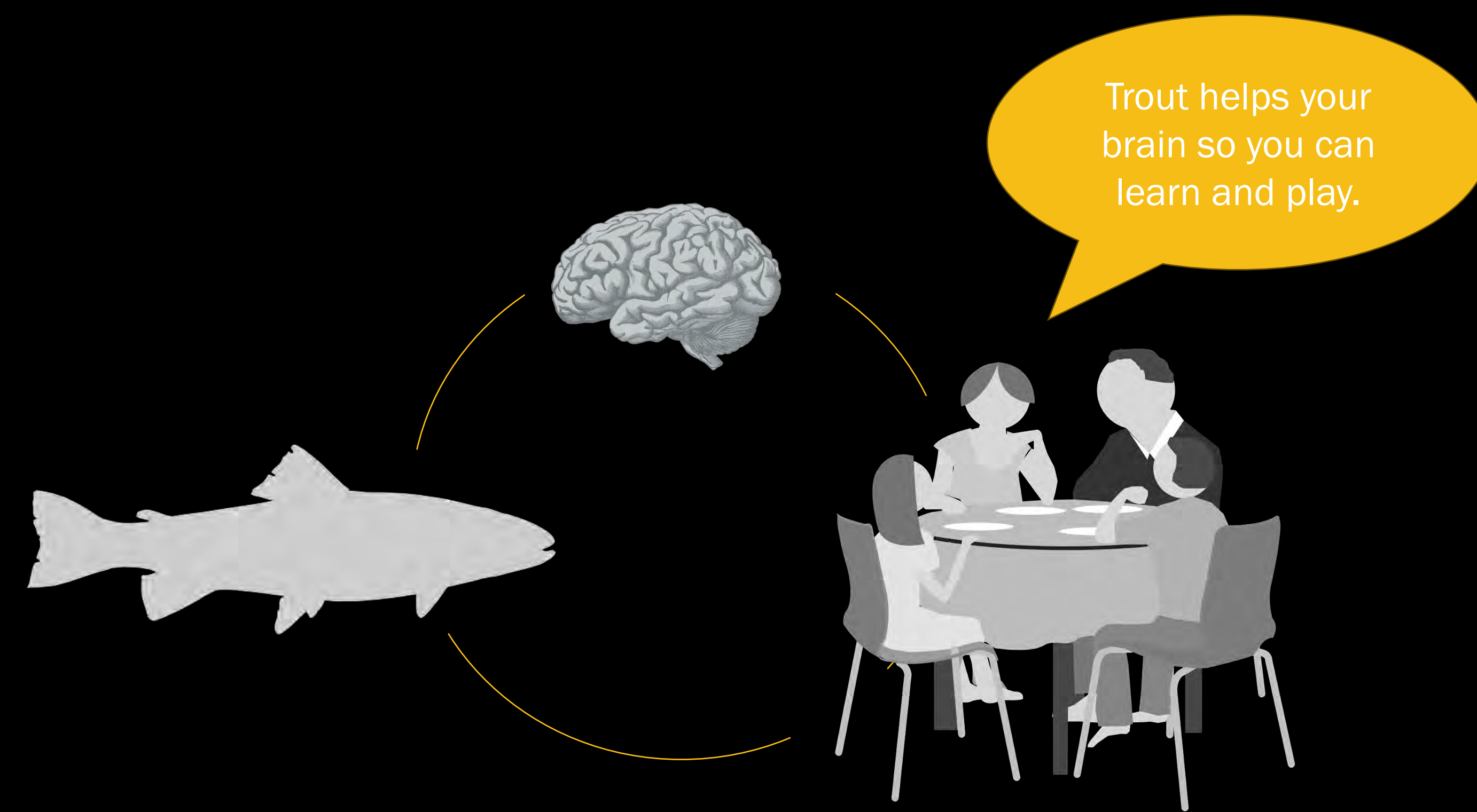


Increasing Trout Consumption in Young Children and Families for Cognitive and Mental Health Benefit: Year One

Objective

The long-term goal of this integrated research, extension, and education project is to increase trout consumption in young children and families, while assessing effects of trout consumption on cognitive and emotional wellbeing.



Description

Research objectives and activities include, (1) adult and child consumer panels to assess sensory properties and liking of three strains of trout, (2) effects of repeated exposure (RE) and child-centered nutrition phrases (CCNP) on eating behaviors and brain health determined using one control and two treatment groups of children in a childcare setting, (3) effects of nutrition education, incorporating CCNP, fish preparation techniques, and RE targeting family meals on eating behaviors of children while assessing brain health of adults and children using four treatment groups in the home setting. Extension objectives and activities include developing and marketing About Trout! Pond to Plate, a 12-lesson video-based nutrition education series incorporating CCNP and fish preparation techniques. Education objectives and activities will provide students with experiential learning opportunities in curriculum development, evaluation, data collection, and analysis.

Conclusions and Implications

Results from this project will provide foundational scientific evidence demonstrating successful approaches for facilitating adult and children's liking and consumption of fish to support cognitive and mental health.



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RESEARCH

In year 1, research activities focused on protocol finalization and researcher training. Across institution Institutional Review Board reliance agreements and data use agreements were approved. Recruitment sites were identified and prioritized. Subject recruitment began in May 2024. To date, 17 youth have been enrolled in objective 2 and baseline data collection is underway. Recruitment and data collection for objective 1 is scheduled to begin mid-June 2024.



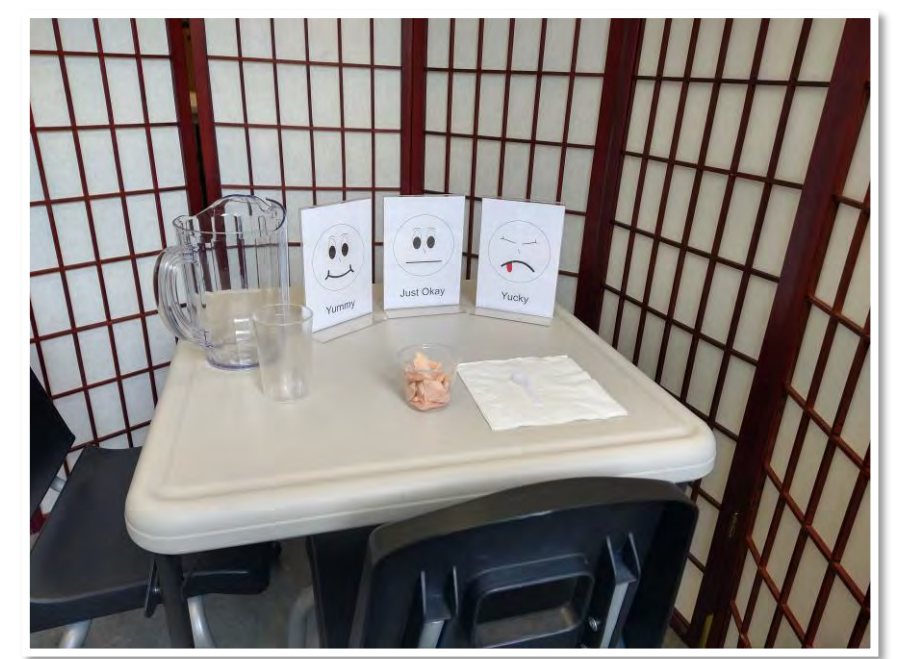
Trout is vacuum sealed and cooked using sous vide for repeated exposure.



"Hunger Dolls" help children rate their feeling of hunger before playing the "Tasting Game."



In the "Tasting Game" children are taught what the rating scale faces mean, and understanding is confirmed by pointing to the correct faces.



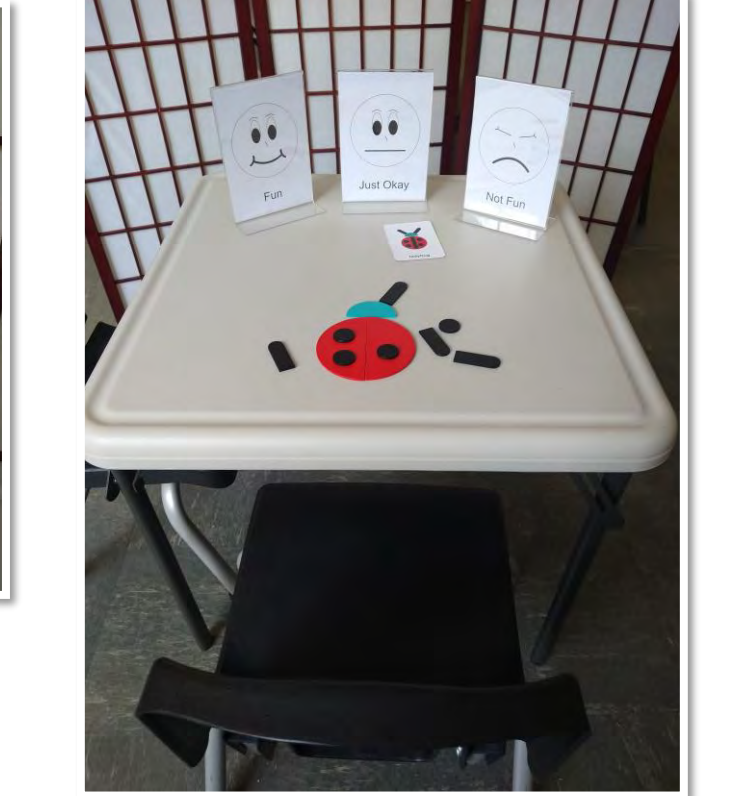
Children are asked to try the trout and use the faces to tell us how it tastes. They are allowed to eat as much of the 2oz portion as they would like.



Bones were removed and trout was portioned into 10g portions for sensory evaluation.

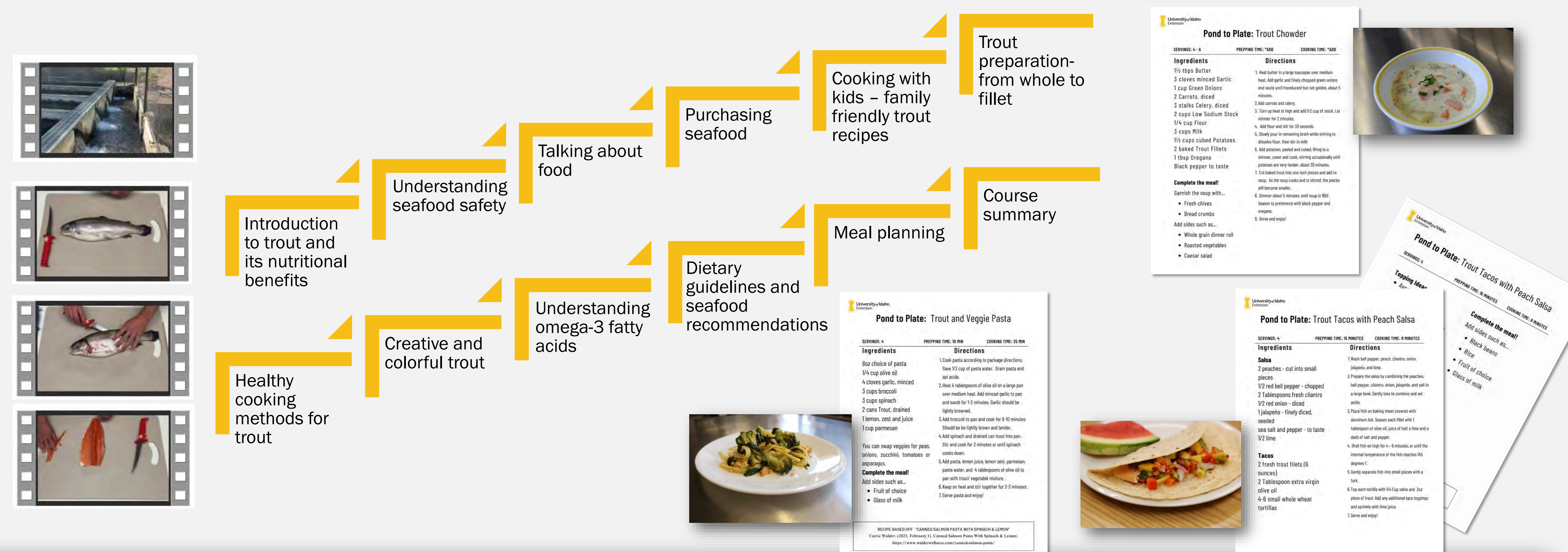


Children in the control group rate their energy level and then play a puzzle game and rate how fun it is to them.



EXTENSION

Extension activities in year 1 included progress on curriculum content development for *About Trout! Pond to Plate*. All 12 module outlines, including storyboards and recipe development are on track to complete in year 1. The team is working closely with University of Idaho Extension publishing to format content for the appropriate online platform and facilitate curriculum peer review. Recipe testing is occurring in May/June. Video production has begun and will continue in July.



Pond to Plate: Trout Chowder

Ingredients: 1/2 cup butter, 1/2 cup onion (diced), 1/2 cup carrot (diced), 1/2 cup celery (diced), 1/2 cup leek (diced), 1/2 cup flour, 1/2 cup milk, 1/2 cup chicken broth, 1/2 cup trout fillets, 1/2 cup cheddar cheese, 1/2 cup parmesan cheese, 1/2 cup black pepper to taste.

Directions: 1. Heat butter in a large pot over medium heat. 2. Add onion, carrot, celery, and leek. 3. Cook until softened. 4. Add flour and whisk. 5. Add milk and whisk. 6. Add chicken broth and whisk. 7. Add trout fillets and whisk. 8. Add cheddar and parmesan cheese. 9. Add black pepper to taste. 10. Simmer for 10 minutes.

Complete the meal! Add your own vegetables, fruits, and grains.

Pond to Plate: Trout Tacos with Peach Salsa

Ingredients: 1/2 cup peach salsa, 1/2 cup trout fillets, 1/2 cup tortillas, 1/2 cup cheese, 1/2 cup onions, 1/2 cup tomatoes, 1/2 cup cilantro, 1/2 cup lime juice, 1/2 cup salt.

Directions: 1. Heat oil in a large pan over medium heat. 2. Add trout fillets and cook. 3. Add peach salsa and cook. 4. Add tortillas and cook. 5. Add cheese and cook. 6. Add onions, tomatoes, and cilantro. 7. Add lime juice and salt. 8. Simmer for 10 minutes.

Complete the meal! Add your own vegetables, fruits, and grains.

EDUCATION

Year 1 education activities included recruiting three graduate students to assist with research objective 2. All three students successfully defended their thesis proposals, which will focus on different aspects of the larger grant. A fourth graduate student is assisting with research objective 1, a portion of which may be included in the student's dissertation. A research specialist was also hired to assist with overall project management and four summer interns were hired to assist with data collection and videos. We held a successful and very productive advisory board meeting in January 2024.



Repeated Exposure and Child Centered Nutrition Phrases Impact on the Liking of Trout in Children Aged 4-6 years

Jolene Whiteley

