

EDUCATOR'S GUIDE

Cook for a Crew

Preparation

Overview and Objectives

This lesson is geared toward families.

Participants will learn about the food served on *Intrepid* during its time of service and the math needed by mess cooks to prepare appropriate amounts of food for a crew of more than 3000 men. Participants will apply their knowledge of proportions in order to calculate the total amount of different ingredients required to serve naval crews of various sizes over various periods of time. Participants will discuss the methods that they used, the challenges they faced, and will compare their findings with those of other groups that were given similar assignments.

This lesson includes a [slideshow](#) in which an instructor can lead participants through the jobs of mess cooks and lead them through the skills needed to follow recipes on their own.

Instructional Modalities

This activity was designed for both synchronous or asynchronous instruction.

For **synchronous instruction**, we recommend a platform that allows both for whole class discussion and for students to interact in small groups.

For **asynchronous adaptations**, we provide suggestions for teachers to provide additional support for the activities and for students to share their work with each other.

Materials

- [Cook for a Crew Slideshow](#)
- [Cook for Your Crew worksheets](#) (p. 5 - 8)
- **Blank Piece of Paper**
- **Pencil**
- **Calculator (optional)**

Discussion

Questions

- What materials do you need to make a cake?
- How could you make a recipe to feed more people?.

Lesson

Introductory Activity

- Participants will watch [three-minute video](#) on feeding *Intrepid's* crew and answer these questions:
 - **Have you ever prepared a meal before? What makes cooking challenging?**
 - **What might be difficult in feeding a crew of 3000 sailors?**
- Introduce students to idea of meal planning. Make connection to planning meals for a family – buying ingredients at grocery store, altering recipe to accommodate certain numbers of people, etc.
- Explain that the same needs to be done on naval ships and in other places (school cafeterias, restaurants, etc.).

Core Activity

- Explain how cooks on board *Intrepid* would work together to prepare meals to feed the entire crew. Recipes typically yield 100 servings, but not every crew is exactly 100 people. Recipes must be scaled up or down accordingly. Also when planning to make a recipe, cooks had to think about what ingredients they needed and how much of each ingredient was necessary.
- Review the process of scaling a recipe with participants
- Plan a meal to prepare for a group. Have participants look through a cookbook and select which recipes they want to prepare for their crew.
- Have participants go through the Cook for Your Crew! Worksheet to plan and prepare a meal.
- Once participants have completed the activity on the worksheet discuss the following questions:
 - **What was your favorite part of cooking for your crew?**
 - **What was easiest for you? What was the most challenging?**
- Share the responses with the whole group

Asynchronous Adaptation

Have participants go through the [slideshow](#) on their own. Discuss with participants if they would need to scale the recipes up or down to feed different groups (family, school group, etc.) Look through cookbooks to find other recipes and discuss.

Extension Activities

To deepen student engagement with this content, you may choose to add the following activities :

Additional Recipe Scaling

Have participants look through any of the additional recipes in the [slideshow](#) and discuss if they would need to scale the recipe up or down for their family or another group. Find a recipe in a cookbook. Would you need to scale that recipe up or down to feed your family? To feed the crew on Intrepid?

Try Out a Recipe!

Have participants look through any of the recipes in the [slideshow](#) and then find a similar recipe in a cookbook. Have them try cooking the recipe with their family and share how it tasted!

Additional Resources/ References

Background Information on scaling

Scaling involves using proportions and fraction multiplication to adjust a given amount.

For example, to yield 100 servings a recipe for cookies requires –

- 2 ½ cups of sugar
- 2 ¾ quarts of flour

But we want the recipe to yield 200 servings. This is done using fraction multiplication.

To begin, convert both amounts from mixed numbers to improper fractions by multiplying the whole number by the denominator of the fraction and then adding the value of the numerator. Once this is done the whole number of the fraction is dropped and this new number becomes the numerator:

$$\text{Whole number} \rightarrow 2 \frac{1}{2} \begin{array}{l} \leftarrow \text{numerator} \\ \leftarrow \text{denominator} \end{array}$$

$$2 \frac{1}{2} \text{ cups sugar} = \frac{5}{2} \text{ cups sugar}$$

$$2 \frac{3}{4} \text{ quarts flour} = \frac{11}{4} \text{ quarts flour}$$

Next, we need to figure out the proportion to get the number of servings we want. Do this by putting the desired number of servings in

$$\frac{\text{Desired servings} \rightarrow 200}{\text{Recipe yield} \rightarrow 100} = \frac{2}{1}$$

the numerator and the recipe yield in the denominator of a fraction. Then simplify-

Now multiply the improper fraction of the ingredient amount by the proportion for the desired number of servings to figure out how much of each ingredient you need. Remember, to multiply fractions simplify numbers diagonal to each other and then multiply across-

Sugar

$$\frac{5}{2} \times \frac{2}{1} = \frac{5}{\cancel{2}} \times \frac{\cancel{2}1}{1} = \frac{5}{1} \times \frac{1}{1} = \frac{5}{1} = 5 \text{ cups of sugar}$$

Flour

$$\frac{11}{4} \times \frac{2}{1} = \frac{11}{\cancel{2}4} \times \frac{\cancel{2}1}{1} = \frac{11}{2} \times \frac{1}{1} = \frac{11}{2} = 5\frac{1}{2} \text{ quarts of flour}$$

In order for this recipe to yield 200 servings we need-

- 5 cups of sugar
- 5 ½ cups of flour

The Museum is deeply grateful to the funders that make our education programs possible:



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ACTIVITY: COOK FOR YOUR CREW!

Cooks on Intrepid had to plan to feed 3,000 men every day for months. It took planning to ensure that there were enough ingredients, and enough cooks to make sure the job got done. Look at the bill of fare below to see what recipes would be prepared for a week of feeding the crew.

NAV. S. and A. Form No. 333
(Revised May 1945)

BILL OF FARE FOR THE GENERAL MESS

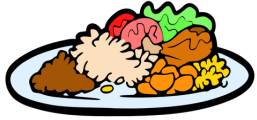
U.S.S. N.A.S. MEMPHIS, TENNESSEE

Week beginning 12 November 1951, 1951

	BREAKFAST	DINNER	SUPPER
MONDAY	Chilled Fresh Fruit Assorted Cereal Fresh Milk-Sugar Grilled Bacon Fried Eggs Bread Butter Coffee	Veg. Soup-Crackers Grilled Choice Rib Steaks Brown Gravy-Mashed Potatoes Buttered FF Lima Beans Braised FF Brussel Sprouts Combination Salad-May. Coconut Cream Pie-Dinner Rolls Bread-Butter-Coffee	Oyster Stew-Crackers Ass't. Cold Cuts of Meat Potato Salad-Slic. Cheese Tuna Fish Salad Cold Baked Beans Cottage Cheese-Pear Sal. Fr.Veg. Tray-Supper Rolls Orange Cake-B.B.J.-Coffee
TUESDAY	Chilled Fresh Fruit Assorted Cereal Fresh Milk-Sugar Navy Baked Beans/W Bacon Strips-Tomato Catsup Iced Cinnamon Rolls Bread Butter Coffee	Split Pea Soup-Crackers Roast Fresh pork Ham-Brown Gravy-Mashed Potatoes Buttered FF Corn-applesauce Buttered FF Cauliflower Fresh Veg. Salad-May. Peach Pie-Dinner Rolls Bread-Butter Coffee	Hot Soup-Crackers Steamed Frankfurters Parsley Boiled Potatoes Braised Sauerkraut Steamed Spinach-Chopped Onions-Prep. Mustard Fresh Veg. Salad-May. Spice Cake-Frankfurter Rolls-Br. But. Jam-Hot Cocoa
WEDNESDAY	Chilled Fresh Fruit Boiled Hot Cereal Fresh Milk-Sugar Corn Beef Hash Soft Boiled Eggs Fruit Stollen Bread Butter Coffee	Navy Bean Soup-Crackers Pot Roast of Beef-Veg. Gravy Roast Brown Potatoes Braised FF String Beans Buttered asparagus Lettuce Tomato Salad-F.D. Chocolate Cake-Ice Cream Dinner Rolls Bread-Butter-Coffee	Hot Soup-Crackers Grilled Salisbury Steaks Onion Gravy-Mashed Potat. Buttered FF Mixed Veggies. Fresh Veg. Salad-May. Coconut Cake Hamburger Rolls Bread-Butter Jam-Coffee
THURSDAY	Chilled Fresh Fruit (Bans) Assorted Cereal Fresh Milk-Sugar Baked Pork Sausage Home Fried Potatoes Creamed Gravy Iced Coffee Cake Bread Butter-Coffee	Veg. Soup-Crackers Breadcrd Veal Cutlets Tomato Gravy-Mashed Potatoes Buttered FF Lima Beans Buttered FF Brussel Sprouts Combination Salad-May. Apple Pie Dinner Rolls Bread-Butter-Coffee	Hot Soup-Crackers Pork & Veal Chop Suicy/W Chinese Veggies. Steamed Rice Chow Mein Noodles Braised FF String Beans Fresh Veg. Tray Supper Rolls-FF Peaches Bread-But. Jam-Hot Tea
FRIDAY	Chilled Td. Prunes Assorted Cereal Fresh Milk-Sugar Grilled Bacon-Scrambled Eggs-Streusel Cake Bread Butter Coffee	Cream of Tomato Soup-Crackers Fried Oysters-Tartar Sauce Au-Gratin Potatoes-Tomato Catsup-But. FF Mixed Veggies. Buttered FF Cauliflower Fresh Veg. Salad-May. Dinner Rolls Pound Cake-Ice Cream Bread-Butter-Coffee	Hot Soup-Crackers Grilled Pork Chops Brown Gravy Hash Brown Potatoes Buttered FF Peas Braised Spinach Chef's Salad-May. Supper Rolls-Fruit Jello-Sugar Cookies-Br. But. Jam-Cocoa
SATURDAY	Chilled Fresh Fruit Assorted Cereal Fresh Milk-Sugar Creamed mincemeat on Toast Cottage Fried Potatoes French Coffee Cake Bread Butter Coffee	Veg. Soup-Crackers Boiled Fresh Corn Beef Boiled Buttered Potatoes Steamed Cabbage Buttered Fresh Carrots Fresh Veg. Salad-May. Pickle Relish-Prep. Mustard Mixed Fruit Pie-Dinner Rolls Rye Bread-Butter-Coffee	Hot Soup-Crackers Veal Fricassee Washed Potatoes Buttered FF Mixed Veggies. Harvard Beets Fresh Veg. Tray Supper Rolls Apricot Cobbler Bread-Butter-Jam-Coffee
SUNDAY	Chilled Fresh Fruit Assorted Cereal Fresh Milk-Sugar Grilled Bacon Fried Eggs Bread Butter Coffee	Noodle Soup-Crackers Southern Fried Chicken Giblet Gravy-Candied Sweet Potatoes-Braised FF String Beans-But. FF Cauliflower Quartered Lettuce-F.D. Cherry Pie-Ice Cream Parkerhouse Rolls Bread-Butter-Coffee	Hot Soup-Crackers Baked Salmon Loaf Egg Sauce Hash Brown Potatoes But. FF Lima Beans But. FF Brussel Sprouts Fresh Veg. Tray Supper Rolls-Lemon Cake Bread-Butter-Jam-Coffee

Directions: Today you are going to plan and cook a meal to feed your crew! Use this worksheet to help you. Let's start cooking!

1. Pick what meal you will be serving (breakfast, dinner, supper).



- We are cooking _____.
- We are cooking for _____ people.

2. Look through a cookbook and find recipes to prepare for the meal. Pick recipes for the main course, sides, and dessert. Use this space to create a bill of fare for your meal.

3. As you prepare each recipe, you will need to determine if it needs to be scaled to feed your crew.

- Recipe Name _____
- How many servings does the recipe make? _____
- Do you need to scale the recipe to feed your crew? Use a separate sheet of paper to do any recipe scaling math necessary. See the [Recipe Scaling Math video](#) if you need help!



4. Gather ingredients and materials! List the amount of each ingredient you will need and any other materials you will need to prepare the recipe.

5. Intrepid cooks would work together to prepare the meals. Different people in the galley would have different jobs. As you prepare your recipes, divide up the tasks - gather ingredients, chop, mix, etc. Make sure you have an adult help you if you are using knives or the stove/oven.

- My job is _____.



6. Enjoy your meal! Take a picture of your crew enjoying the meal and share it using #IntrepidLearningLab. Answer the following questions as you reflect and get ready to prepare your next meal together!
- What was your favorite part of cooking for your crew?
 - What was the easiest part for you? What was the most challenging?

