

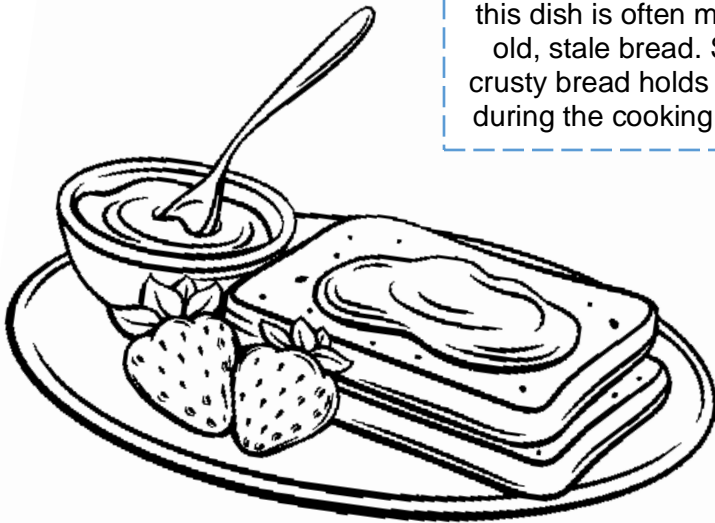


Carry Out Science: Pain Perdu (French Toast)



Description: Make a yummy breakfast dish and experiment with science!

In French, *Pain Perdu* means “lost bread” because this dish is often made with old, stale bread. Stale or crusty bread holds its shape during the cooking process!



Grades: 5 and up
Ability Level: Medium
Time: 15-20 minutes
Servings: 4 slices of toast

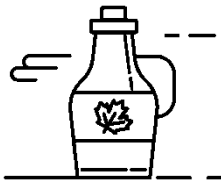
Tools:

- Wide and shallow bowl
- Whisk or fork
- Spatula
- Wide pan
- Stove

Instructions:

Ingredients:

- 2 medium eggs
- 1/4 cup milk
- 4 slices of bread
- 1 teaspoon cooking oil or butter
- **Optional spices:** cinnamon, nutmeg, ginger, vanilla, brown sugar



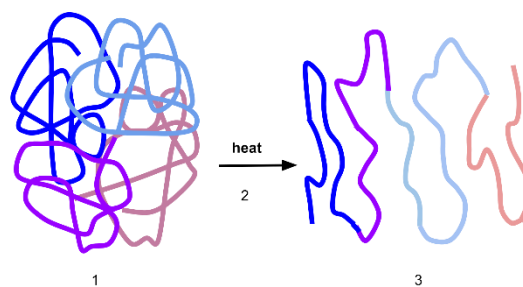
Play with your Food!

What are your favorite French toast toppings? Try some of these, or come up with your own! Strawberries, bananas, peanut butter, honey, powdered sugar, chocolate chips, syrup.

1. Begin by cracking the eggs in the shallow bowl.
2. Add milk.
3. Whisk until the two parts of the egg and milk are well mixed.
4. Optional: Add 1 teaspoon of your favorite spices, such as cinnamon or nutmeg.
5. Add 1 teaspoon cooking oil or butter to the pan over medium heat on the stove.
6. Dip each slice of bread in the egg and milk mixture and allow the excess to drip back into the bowl. The bread should be evenly covered in the mixture.
7. Once both sides of the bread are coated, add to the pan. Add more than one slice if you have the space.
8. Cook until the outside of the bread begins to look like a fried egg, then use your spatula to flip the bread over.
9. Repeat Step 8 for the other side and continue to rotate until both sides are golden brown.
10. Place on a plate, add toppings and enjoy.

Eggs-citing Science!

Eggs have two well-known parts: the **egg white** (the clear part before it is cooked) and the **egg yolk** (the inner yellow part of the egg). Both parts of the egg contain **proteins**, which are materials found in all living things. The proteins are made up of chains of amino acids that fold into complex shapes, all held together by different types of bonds. When the egg is cooked, the heat makes the proteins dance around. The bonds keeping the amino acids together start to **denature**, or unfold. When two unfolded proteins bump into each other, they start to form new bonds. A large net of proteins forms, which causes the egg to harden and change color. See if you can notice the egg change as it cooks: What began as a liquid has now turned to a solid!



Heat causes the proteins in the egg to unfold and form new bonds.



Tasty Questions

What questions do you have? Can you develop one for each of the categories below?

Noticing: _____?

Example: What do you notice about the content of the egg when you crack it open? How does it feel?

Comparing: _____?

Example: What is different about the egg mixture after it is cooked (compared to before)?

Predicting: What do you think would happen if (fill in the rest)

_____?

Experimenting: How could you test to see how the French toast changes when you use more eggs in the mixture? How about if you used only egg whites or only egg yolks?

Explaining: How can I tell if my egg is still good?

[Click here](#) to learn an easy way to **test the quality of your eggs.**

<https://www.youtube.com/watch?v=nj91JPn7HHw>



Share your experience! Scan the code on the left with your smart phone's camera to take a brief survey that will help us improve this recipe for families like yours!

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