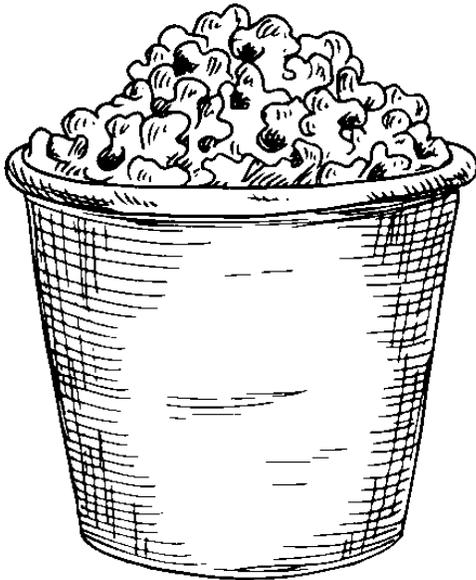




Carry Out Science: Stovetop Popcorn



Description: Learn how to make your own delicious popcorn and the science behind the POP!



Grades: 5 and up

Ability Level: Medium

Time: 15 minutes

Serving: 4 cups popped corn

Cooking Tip:

Use an oil with a high smoke point. Olive oil and butter don't work as well because when they heat up to a high temperature, they smoke and burn.

Tools:

- Measuring cup and spoons
- Pot with lid
- Stove

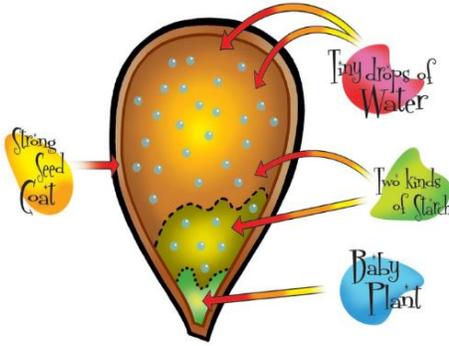
Ingredients:

- $\frac{1}{3}$ cup popcorn kernels
- 1 Tablespoon vegetable, canola, or coconut oil
- Salt and/or other seasoning
- Butter (optional)

Instructions:

1. Add the oil to the pot with 2 or 3 kernels of corn. If using coconut oil, melt the oil in the pot first, then add a couple of kernels.
2. Turn the pot to medium-high heat, cover and wait for the 2-3 kernels to burst into popcorn.
3. When the kernels pop, add the rest of the $\frac{1}{3}$ cup of popcorn kernels in an even layer (try to keep them in a single layer).
4. Cover the pot and gently shake it by moving it back and forth over the burner.
5. As the popcorn pops, try to keep the lid slightly ajar to let the steam from the popcorn release (the popcorn will be drier and crisper).
6. Once the popping slows to several seconds between pops, remove the pan from heat, remove the lid, and dump the popcorn into a bowl.
7. Gather your toppings, drizzle over the popcorn, and toss to distribute. Add butter if desired. Enjoy!

Why does popcorn pop?



Popcorn Kernel

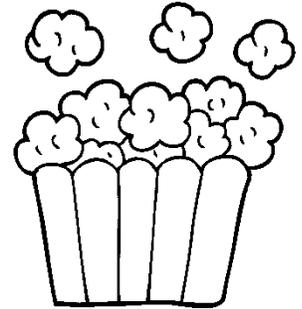
When the kernels are put on a heat source (like a stove), their insides heat up fast. The kernel has tiny drops of water inside of it that turn into steam. The steam builds up pressure inside the kernel's strong seed coat (called a *hull*). Eventually, the pressure can't be contained, and the kernel explodes! Once the kernel explodes, the sugar (called *starch*) inside it continues to expand and gives popcorn its soft texture.

Learn more about popcorn [here!](https://www.youtube.com/watch?v=eF9MI_R2Ynw)

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Play with your food!

- Try cooking popcorn with different types of oil – Which one tastes best?
- Get creative with your popcorn toppings! Here are some ideas: dried or fresh herbs (e.g., sage, rosemary, basil, oregano, basil, cilantro, dill), spices (e.g., paprika, cayenne pepper, cumin, pumpkin pie spice), parmesan cheese, salt and pepper, nutritional yeast, coconut flakes, honey, butter, maple syrup, chocolate chips.
- Other ideas you have? _____



Tasty Questions

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

Noticing: _____?

Example: What do you see, hear, and smell as the popcorn cooks?

Comparing: _____?

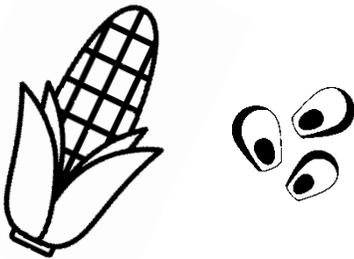
Example: What is different about the kernels before and after you cook them?

Explaining: _____?

Example: Why do some of the kernels not pop?

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

_____?



[Click here](https://youtu.be/FSZd33awqQk) to watch a kernel pop in slow motion!

What do you notice?

<https://youtu.be/FSZd33awqQk>



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!

https://kent.qualtrics.com/jfe/form/SV_401gFT0z9eogZox