



SCIENCE FESTIVAL FAMILY EXPERIMENT GUIDE: JOURNEY THROUGH THE BLOODSTREAM

Instructions:

- **Adult:** Before you start the ask you student these questions.
- Have you ever eaten a bunch of sugary food quickly? How did you feel afterward? (Younger students might enjoy demonstrating how they feel and act when they eat a lot of sugar!) Any different from when you eat, say, a sandwich on wheat bread?
- **Student:** Fill two plastic cups halfway with corn syrup. (Adults, help as needed.)
- **Adult:** Add two drops of red food coloring to each cup and stir. This will make your “artificial blood.”
- **Student:** Place one spoonful of sugar on top of the “blood” in one cup.
- Place one spoonful of flour on top of the “blood” in the second cup.
- **Both:** Talk about what you observe.

Questions for after:

K-2nd:

- What did you notice?
- Why do you think the flour/starch took longer to dissolve?
- Is that why you feel ‘hyper’ when you eat a lot of sugar?

3rd-5th:

- Which carbohydrate dissolved faster, why do you think that is?
- Can you explain now why you might feel a ‘sugar rush’ after you eat a lot of sugary food?
- Why do you think its important to know how your body absorbs different types of food?

How It Works:

Carbohydrates are absorbed into the blood at different rates. Sugar and starch are both carbohydrates, but starch is a much bigger molecule than sugar, so it takes longer to break down. As you have seen, the sugar is absorbed faster than the flour. When we eat sugar, these small molecules pass quickly into our blood. When we eat starches, the larger molecules take longer to pass into our blood.

Vocabulary:

Carbohydrates: One of three main types of nutrients used as energy sources by the body, mainly consisting of sugars and starches.

Real-World Application:

The small size of sugar molecules is the reason you get that “sugar rush” when you eat a lot of sugar quickly. Whole grain foods have larger molecules and are higher in fiber. They are digested more slowly, leaving you feeling full longer. They are not absorbed like pure sugar, so they don’t spike your blood sugar. It is also important to understand how different food affect blood sugar for people who have Type I or II diabetes.

spark. inspire. engage.



National PTA®

STEM
+FAMILIES



[PTA.org/STEM](https://www.pta.org/STEM)

spark. inspire. engage.



MATHNASIUM
The Math Learning Center



National PTA
every child, every voice.®