



## CARBOHYDRATES

Vocabulary (can be discussed before or after viewing):

- Carbohydrate (Carbon, Hydrogen, Oxygen)
- Molecule
- Glucose
- Blood sugar
- Fructose
- Sucrose
- Fiber

Teaching Tools:

- Cookie, apple, celery

I. Pre-viewing Questions

**Ask:**

**Do you know anyone on a low-carb diet?**

**What does “carb” mean?**

**What kinds of foods have carbohydrates in them?**

**Where do carbs come from?**

**What news stories about carbs have learners heard recently?**

OR:

**Does anyone know someone who has diabetes and must control his/her blood sugar?**

**What is blood sugar?**

**What kinds of foods should diabetics avoid?**

SHOW CARBOHYDRATES VIDEO (eight minutes)



## CARBOHYDRATES

### II. Post-viewing Questions

**Ask:**

**What exactly is a carbohydrate?**

[A molecule made of carbon, hydrogen, and oxygen that is found in most foods, particularly vegetables, grains, and fruits. A cookie, an apple, and celery all contain carbs.]

**Why do people think of carbohydrates as “sugars”?**

[Sugar is a type of carbohydrate. Most carbs we eat break down into a simple sugar, glucose, in our bodies. Glucose is a type of sugar that is one of the ingredients of table sugar.]

**Why is glucose called “blood sugar?” What does glucose do for us?**

[Glucose is the most common type of carbohydrate. It is the “fuel” that we take in through the bloodstream after we digest food. We break down glucose for energy. Glucose is a carbohydrate that plants make through the process of photosynthesis, and which the plants use for their own “fuel.”]

**What is a starch?**

[Starches are made up of long chains of glucose molecules. Starchy foods include potatoes, rice, and bread. When we digest starches, our digestive system breaks them down into individual glucose molecules in order to absorb them.]

**What is fiber?**

[A large web of glucose molecules. It is an important nutrient in food – you can see it in the tough strands of the celery stalk. It helps keep our digestive systems healthy.]

**What’s the difference between carbohydrates found in sweet snacks and carbohydrates found in fruits and vegetables?**

[Sugary snacks and drinks have little or no fiber or vitamins and minerals like the fruits and vegetables do.]

**General Discussion:**

What else did viewers learn from the video? Was it enjoyable? Ask for examples of what was clear/confusing. How did the recipe relate to the science topic? What else do learners want to know about this topic? Would they show it to their children?

**Web Lessons:** On [tv411.org/Science](http://tv411.org/Science), note the science and math web lessons that correlate to **Carbohydrates**. Use them as part of your lesson or encourage learners with outside access to the internet to visit [tv411.org](http://tv411.org) where they can review the videos, learn more about the topic through the related web lessons, or explore other videos and lessons.