

Strand: 8.2	Standard: 8.3.2	Episode 3	Big Idea: All living things need food to get energy.
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Title: What is food?	Time: 45 - 90 min	CCCs: <u>Patterns</u> <u>Energy and Matter</u>	Practices: Obtaining, Evaluating and Communicating Information Asking Questions
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Episode Snapshot: Students explore the different types of fuels used to obtain energy. Students identify carbohydrates as the molecules used by living organisms to get energy.

Gather

Given 15 - 20 minutes students work in pairs or small groups using internet sources to **obtain information** and create a side by side list of five common carbon based fuels known as hydrocarbons and five common carbon based compounds known as carbohydrates including the chemical formula for each. Information of how each is used as a fuel is also gathered.

Once the lists are created the student's **evaluate information** by identifying patterns between the two lists.

Reason

A class discussion follows where students will share the patterns that they found between the two different compounds.

Patterns that should come out during the discussion include:

- All hydrocarbons contain only carbon and hydrogen atoms
- All carbohydrates contain carbon, hydrogen and oxygen atoms

(Teacher Note: Although it isn't part of the standard, this is a good time to explain the meaning of the vocabulary hydrocarbon and carbohydrate to the students.)

- All of the molecules have carbon and hydrogen
- All of the hydrocarbons are fuels we use to get energy we use, fossil fuels
- All of the carbohydrates are some sort of sugar, food

Working in pairs or small groups students generate **questions** focusing on how we obtain the energy we need from the two different groups.

Class discussion: Each group shares a question that they came up with. All questions are discussed. The teacher guides the discussion to lead the students to one or two questions that can be used to guide the next episode.

Communicate

Students reflect on the difference between the two types of compounds and how they are used as fuel. They should distinguish those that are used to fuel our bodies and those that are used to make our life comfortable. This can be used as an exit ticket.

Assessment:

The student reflections in their lab book or the exit ticket will be used as a formative assessment.

[What is food? Exit Ticket](#)

Materials, resources, handouts, etc:

Access to a computer lab, laptop lab, ipads etc.

Lab Books

[What is food? Worksheet](#) (if not using lab books)