

## AB 4: Expert B – Cyanobacteria

### Task:

The following text on *Cyanobacteria* won't be very easy to understand. But don't worry! Work as follows: First read the text on your own. Just try to understand what the text is about. Then talk to the other experts in German: What did they understand? You can look up some words in a dictionary, but don't get carried away, as you don't need to understand every single word! Finally, read the text together once more and answer the following questions:

- a) What do *Cyanobacteria* feed on?
- b) How can they help to make our lives more convenient?

You may answer in English or German. Give evidence from the text (name the line you are referring to).

### Cyanobacteria

- 1 *Cyanobacteria* are amongst the oldest living organisms on earth. And what's more, they are the inventors of photosynthesis, the conversion of light energy into chemical energy that can later be used for the organisms' activities. So cyanobacteria produce their own food! Scientists say that the chloroplasts in plants (that is where
- 5 photosynthesis takes place in a plant) evolved from *cyanobacteria*. Researchers from a company called Algenol have grown genetically modified *cyanobacteria* in sea water inside clear plastic containers, where they first produce pyruvate, a simple carbohydrate, via photosynthesis. Then, the bacteria turn it into ethanol, which is then released into the water. As the day progresses, and the solar
- 10 radiation gets stronger, ethanol and water evaporate. When the sun sets, both ethanol and water condense into droplets which run into collectors, from where ethanol is extracted. Yields could potentially meet US demands for ethanol in gasoline in 2025, requiring far less area than ethanol from other biomass, such as corn.

Text: S. Reitzenstein, based on [en.wikipedia.org/wiki/Cyanobacteria](https://en.wikipedia.org/wiki/Cyanobacteria), 29.07.2015

- a) What do *Cyanobacteria* feed on?

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- b) How can they help to make our lives more convenient?

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