

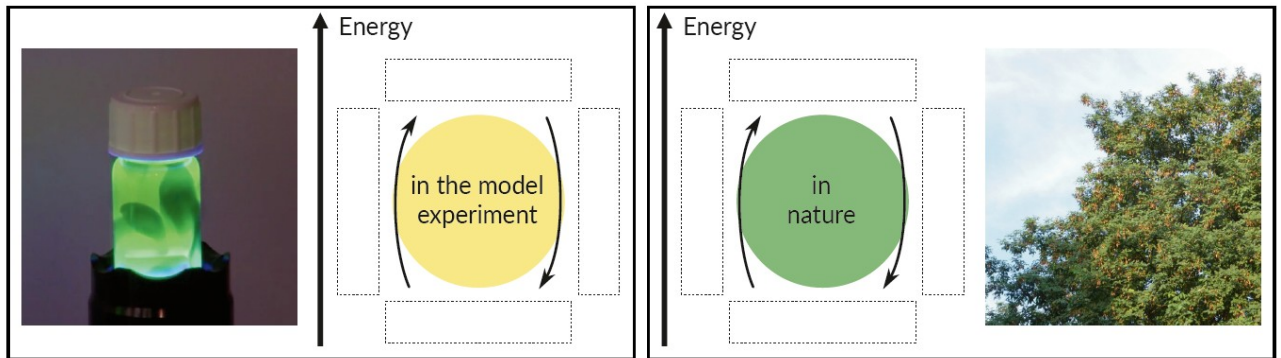


Name: \_\_\_\_\_ Date: \_\_\_\_\_

***Photo-Blue-Bottle (Sek. I/lower secondary level)***  
**A model experiment for matter- and energy-conversion**

**Analysis: From Photo-Blue-Bottle to photosynthesis**

**A1** The reaction cycles YELLOW → BLUE → YELLOW are a model for the natural cycle of photosynthesis and respiration. Fill in the boxes with these words:  
*blue solution, cellular respiration, high-energy substances, low-energy substances, photosynthesis, yellow solution, + oxygen, + light.*



**A2** Match the terms *oxidation* and *reduction* to the arrows and give reasons for your choice.

**A3** In a Venn diagram, collect similarities and differences between the two processes (model experiment vs photosynthesis/cellular respiration).

**A 4** By creating a list of the model experiment's advantages and disadvantages, assess it.

***Finished? An assignment for the quick ones***

**A5** In a chart or in a mind map, collect all forms of energy you have already come across in your science classes. Add an application example ("In which process is this form of energy being used?"). Specify the function of the respective energy form. Add a title to your diagram.

**Hint:** When working with a mind map, use different colours for energy form, application, and function. Create a legend.