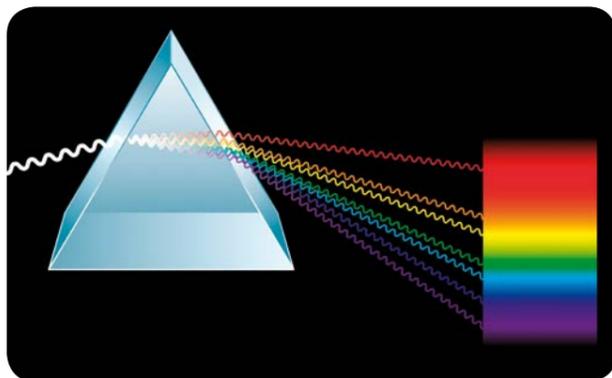


Why is the sky blue?

Do you know why the sky is blue? Why are sunrises* and sunsets** often different colors**, for example pink or orange?

American English !

▶ Light¹ is made of electromagnetic waves². Different waves make different colors. You can see the different colors when light travels through a specially shaped crystal called a prism³.



▶ When sunlight gets into our atmosphere, gases⁴ and particles⁵ in the air make it travel in all directions⁶. Blue light travels in shorter, smaller waves than other colors.

▶ The atmosphere scatters⁷ the blue light, but lets the other colors of light pass through. This is why we see a blue sky.

▶ LANGUAGE NOTE

- * **sunrise** – in the morning, when the sun goes up
- sunset** – in the evening, when the sun goes down
- ** **color** (Am. E.) – colour (Br. E.)

▶ TICK THE CORRECT ANSWER

- What changes the color of the sky? Tick.
- | | |
|---------------------------------------|---|
| a. <input type="checkbox"/> particles | c. <input type="checkbox"/> gases |
| b. <input type="checkbox"/> prisms | d. <input type="checkbox"/> flashlights |

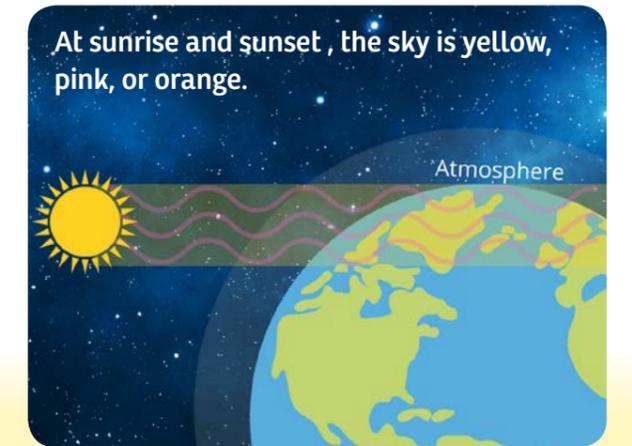
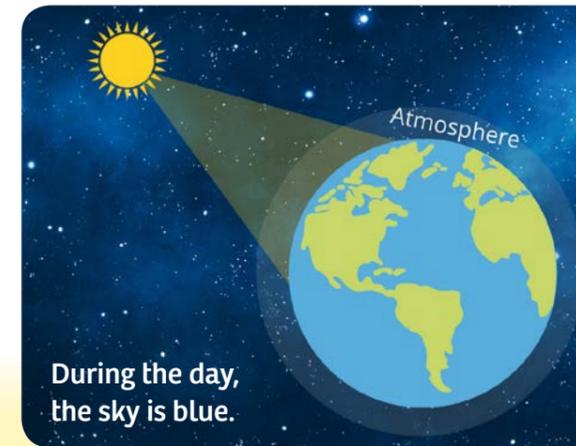
SOLUTIONS ON PAGE 19

▶ VOCABULARY

- ¹ **light** [laɪt] – světlo
- ² **wave** [weɪv] – vlna
- ³ **prism** [ˈprɪzəm] – hranol
- ⁴ **gas** [gæs] – plyn
- ⁵ **particle** [ˈpɑːtɪkl] – částice
- ⁶ **direction** [dɪˈrekʃn] – směr
- ⁷ **to scatter** [ˈskætə] – rozptýlit
- ⁸ **distance** [ˈdɪstəns] – vzdálenost
- ⁹ **to hit** [hɪt] – trefit
- ¹⁰ **flashlight** [ˈflæʃlaɪt] – baterka
- ¹¹ **to turn blue** [tɜːn bluː] – zmodrat

- ▶ During the day, light travels a shorter distance⁸ to the earth. The color of this light is usually blue.
- ▶ In the morning and evening, when the sunlight travels through more atmosphere, we

- see other colors, for example pinks and oranges in the sky.
- ▶ When light hits⁹ particles in the air, the color changes. This is why the sky is not always blue.



▶ **TRY THIS EXPERIMENT!** Would you like to see how it works? You need a glass, water, milk, a flashlight¹⁰ and a dark room. Put some water in your glass, but leave some space at the top. Mix in some milk.



Cutout Cards

See teaching tips for using the cards at www.gradus.cz.



1. Go into the dark room. Hold the flashlight on the side of the glass.



2. Now hold the flashlight under the bottom of the glass.