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Quarterly Problem

-Science Edition -

Visibility and Wet Road



Being one of our five senses, humans heavily rely on their sight, making vision and visibility important aspects of our daily lives. Good sight is an important safety issue, especially when driving or cycling at night, when lots of people relate to interferences on their visibility if the roads are wet. How can you explain this so called night-blindness?

Observe the two photos and describe their differences. Set up two models to recreate the situations in both pictures. Find simple materials at home to build one model of a dry road and the other of a wet one. Then, describe how they tell apart, especially when light is being shed on each surface.

You can also use virtual laboratories (for example <https://phet.colorado.edu>) to explain your observations using science terminology and ideas. Check out this online tool to help draw your experiment: <https://chemix.org>.

Brainstorm-Box

Did you notice that when the roads are wet during the night you cannot see very well? How can you explain this phenomenon?



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Explain your thoughts!

Use your models and virtual labs to explain what is and why it is happening.

Tip: Think about mirrors and reflections and why they might relate to this phenomenon.

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