

# Biophysics Flash Cards


**Rebecca D Hogewood & Sharyn A Endow 2022**  
**Aerosols Flash Cards**

Duke University  
Durham, NC USA

## Instructions

Print the flash cards from the templates on pages 2-3. Each page has 4 flash cards.  
The concept is on the left side of the template and the explanation is on the right side.

To create individual flash cards:

- 1) Trim the margins on the top, bottom, and sides of the page where you see the scissors icon 
- 2) Cut between the cards where you see the scissors icon to create individual cards.
- 3) Fold the cards in half at the dashed "Fold" line and align the front and back edges of each card.
- 4) Each template makes 4 flash cards of 2.5 x 3.75 inch (H x W). There are 8 cards in a set.

The colored border indicates that the cards are in the same set.

## Objectives & Grade Level

Teach students basic concepts about biophysics. Appropriate for middle school to high school students. Students can use the flash cards singly or in groups by studying the cards and testing themselves or others on concepts from the cards.

## Acknowledgements

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# Aerosols

## Aerosols

are tiny particles or droplets suspended in air



# Aerosols in Life

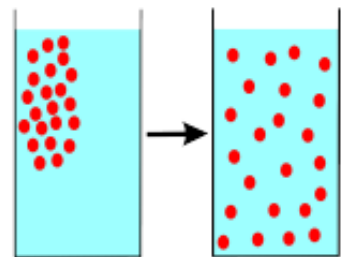
Aerosols are formed by humans & nature



# Aerosols & Diffusion

## Aerosols spread by Diffusion

Rapid, back and forth random movement



<https://simple.wikipedia.org/wiki/Diffusion>

# Aerosols & Convection

## Aerosols travel by Convection

Bulk transport or movement in air



# Viruses Form Aerosols



## Viruses form aerosols in air

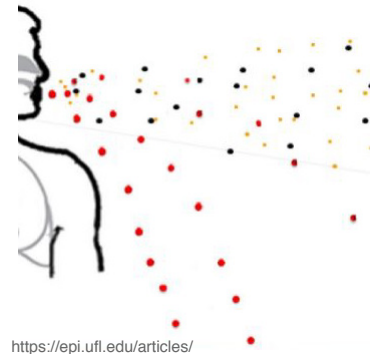


[www.healtheuropa.eu/](http://www.healtheuropa.eu/)

# Viruses Spread in Aerosols



Viruses are spread by sneezes, coughs, & talking



<https://epi.ufl.edu/articles/>

# Viruses Spread in Droplets



## Viruses in droplets

travel in air or fall, depending on the force of a sneeze or cough, by **Newton's 2nd Law**

$$F = m a$$

*F, Force*

*m, mass*

*a, gravity constant*

# Viruses Spread by Convection



## Viruses

travel in air by bulk movement



[www.colorado.edu/today/2020/07/09/](http://www.colorado.edu/today/2020/07/09/)

or **Convection**