

WORKSHEET
Science on Saturday

Crossing the Blood Brain Barrier: One byte at a time

Video Link:

[Crossing the Blood Brain Barrier: One byte at a time](#)

Presenters:

Tim Carpenter, Nicholas Be – LLNL Scientist
Dan Burns - Science Teacher – Los Gatos High School

Student Lecture Notes:

1. What do they call flashlights in England?
2. What does a tight junction do?
3. What does the term “hydrophobic” mean?
4. The 3 ways to determine drug permeability are In Silico, In Vitro, and _____.
5. Draw a line to match the drug permeability method to the best correct description.

<u>Drug Permeability Method</u>	<u>Description</u>
In Silico	Most Expensive
In Vitro	Fastest
In Vivo	Most Accurate

6. What are Molecular Dynamics Simulations similar to?
7. What is Newton’s Second Law?
8. How many calculations must be done to model 25,000 atoms on a computer?
9. What is an “In Vitro Assay” ?
10. According to the graph, how do the results of “in silico” modelling of permeability compare to the results of “in vitro” experiments?