

A wide-angle photograph of the TU Delft campus. On the left is a long, modern building with a white facade and vertical slats. A red brick path runs alongside it. In the center and right, there are green lawns, paved walkways, and several trees. A tall, blue and red building is visible in the background under a cloudy sky.

Blended education

Johannetta Gordijn

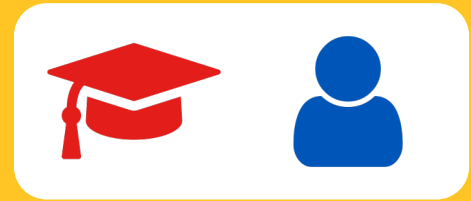
Blended?!

Blended Learning?!

Learning as a result of a **deliberate, integrated combination** of online and face-to-face learning activities.

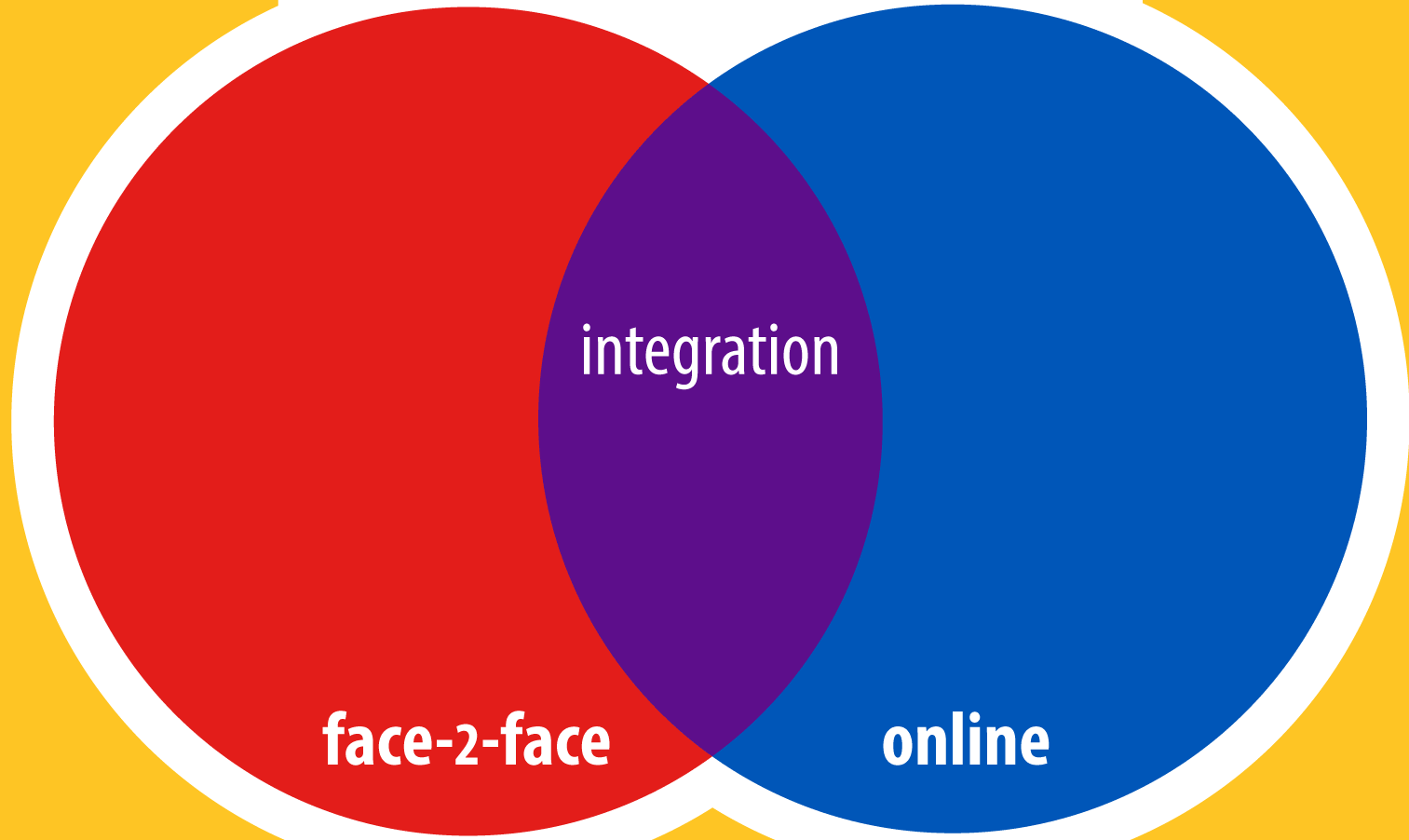


Face-2-face
Online



Teacher paced
Self study

blended education



integration

face-2-face

online

No more lectures?









Lecture



F2F



Lecture



Lab Work



Problem
solving



Clickers



Student
presentations



Game



Peer
instruction



Guest
lecture



Excursion



Difficult
exercises



Discussion

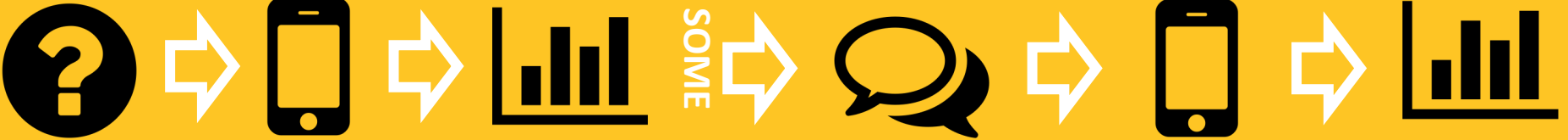


One minute
paper

Peer Instruction



ALL





F2F



Lecture



Lab Work



Problem
solving



Clickers



Student
presentations



Game



Peer
instruction



Guest
lecture



Excursion



Difficult
exercises



Discussion



One minute
paper



Watch video



Discussion board



Assignments



Interactive Video/PDF



Peer feedback



Concept Map



Online



Read Chapter



Online quiz



Online brainstorm



Blog



Case study



Virtual Reality



Lecture



Lab Work



Problem solving



Clickers



Student presentations



Game



F2F



Peer instruction



Guest lecture



Excursion



Difficult exercises



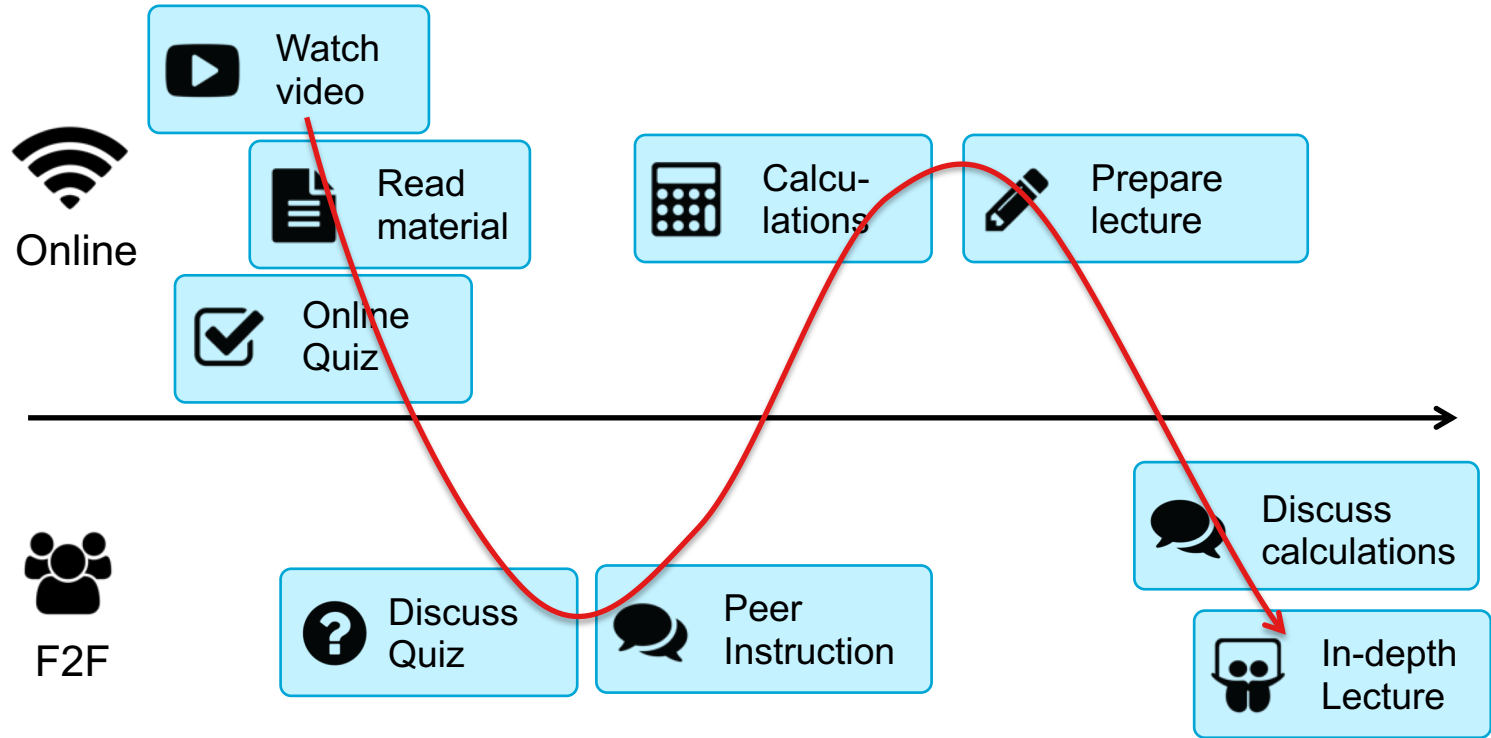
Discussion



One minute paper

Blended Learning Wave

Blended Learning Wave



Pros and Cons

Pros

- Activating
- Accessibility
- Flexibility
- Feedback
- Effective
- Efficient
- Best of both worlds

Cons

- Self-reliant learning needed
- Students may fall behind
- Clicking monkey
- Could lead to lack of face-to-face communication
- More course design choices

Using OER

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This course applies the concepts of reaction rate, stoichiometry and equilibrium to the analysis of *chemical* and biological reacting systems, derivation of rate ...

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Overview

What you'll learn

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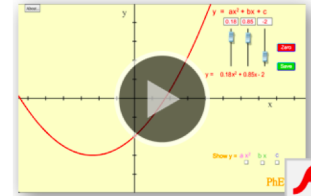
Wave on a String

How to Run Simulations	Teaching Resources	About	PhET is supported by...
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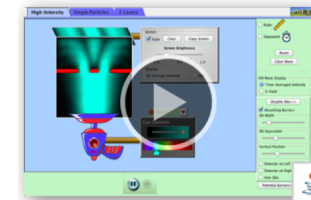
Molecule Shapes



Equation Grapher



Quantum Wave Interference





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Showcase

Browse the simulations available on this site below. There are many other simulations that are not shown here but can be found in the Library of Models within [Molecular Workbench](#).

Navigation tabs: ALL FEATURED | PHYSICS | CHEMISTRY | BIOLOGY | BIOTECH | NANOTECHNOLOGY

Physics: Mechanics

- A Ball in a Box (3D)
- Rolling on an Inclined Plane
- Pendulum
- Double Pendulum
- Newton's Cradle
- A Mass Hung on a Spring
- Three Masses and Two Springs

Physics: Fluid Mechanics and Dynamics

- Archimedes' Principle of Buoyancy
- Pascal's Principle
- Pressure Conveyance through Fluids
- Pouring Liquid
- Water Flow When a Dam Collapses
- Particle Flow in a Rotating Quantum Well
- Controlling the Flow Size at Your Fingert

Physics: Electromagnetism

- Electroscopes
- Uniform Distribution of Charges on a Conductor Surface
- The Lorentz Force (3D)
- Reversing Velocity with a Magnetic Field
- Electric Field Distribution of a Parallel-Plate Capacitor
- Electrostatic Interactions between a Charged Balloon and a Hair
- Electrostatic Maze

Physics: Quantum physics

- Scanning Tunneling Microscopy
- Quantum Merge
- Quantum Coalescence
- Laserlight: Bragg Diffraction
- Quantum Interference in a Magnetic Field
- An Electronic Star Charger
- Quantum Harmonic Oscillator

Examples

Practicum basisvaardigheden

- Redesign bachelor course
- Leiden and Delft

Universiteit Leiden 1920-S1 Practicum basisvaardigheden

Course Home Content Grades Course Tools Help

Practicum Basisvaardigheden

Visual Table of Contents

- Algemene informatie
- Veiligheidsinstructie

Slim Announcements

Create Announcement





PBV-Delft rooster op Brightspace

Posted Thursday, November 7th, 2019 at 1:57 PM

Voor de studenten die in Periode 2 PBV in Delft volgen: het rooster staat op Brightspace, rooster Delft P2 en de bijbehorende PBV-nummers staan hier ook: PBVnummers Delft P2

[+ New Unit](#)

Experimentenserie 1

Synthese van
bananenolie Voorbereiding voor
het experiment Formulier
veiligheidsrapport.p Synthese
bananenolie (handl Reflux pH-controle

Visible





Add



Synthese van bananenolie

In deze proef zal er door middel van een zuurgekatalyseerde condensatie van een alcohol en een zuur wordt een ester gemaakt worden. Er zal isopentyl-acetaat gemaakt worden, wat een duidelijke bananengeur heeft. Verschillende praktische technieken zullen aan bod komen. Hieronder volgt een lijstje van de leerdoelen die van belang zijn bij deze proef:

- Reflux opstelling bouwen en gebruiken
- Extraheren
- pH-controle
- Filtreren
- Destillatie opstelling bouwen en gebruiken
- H-NMR spectrum maken en interpreteren
- IR-spectrum maken en interpreteren

+ New Unit  Reflux pH-controle Filtratie  Destillatie-
opstelling  H-NMR
spectrometrie IR-spectrometrie Extractie  Visible

Add

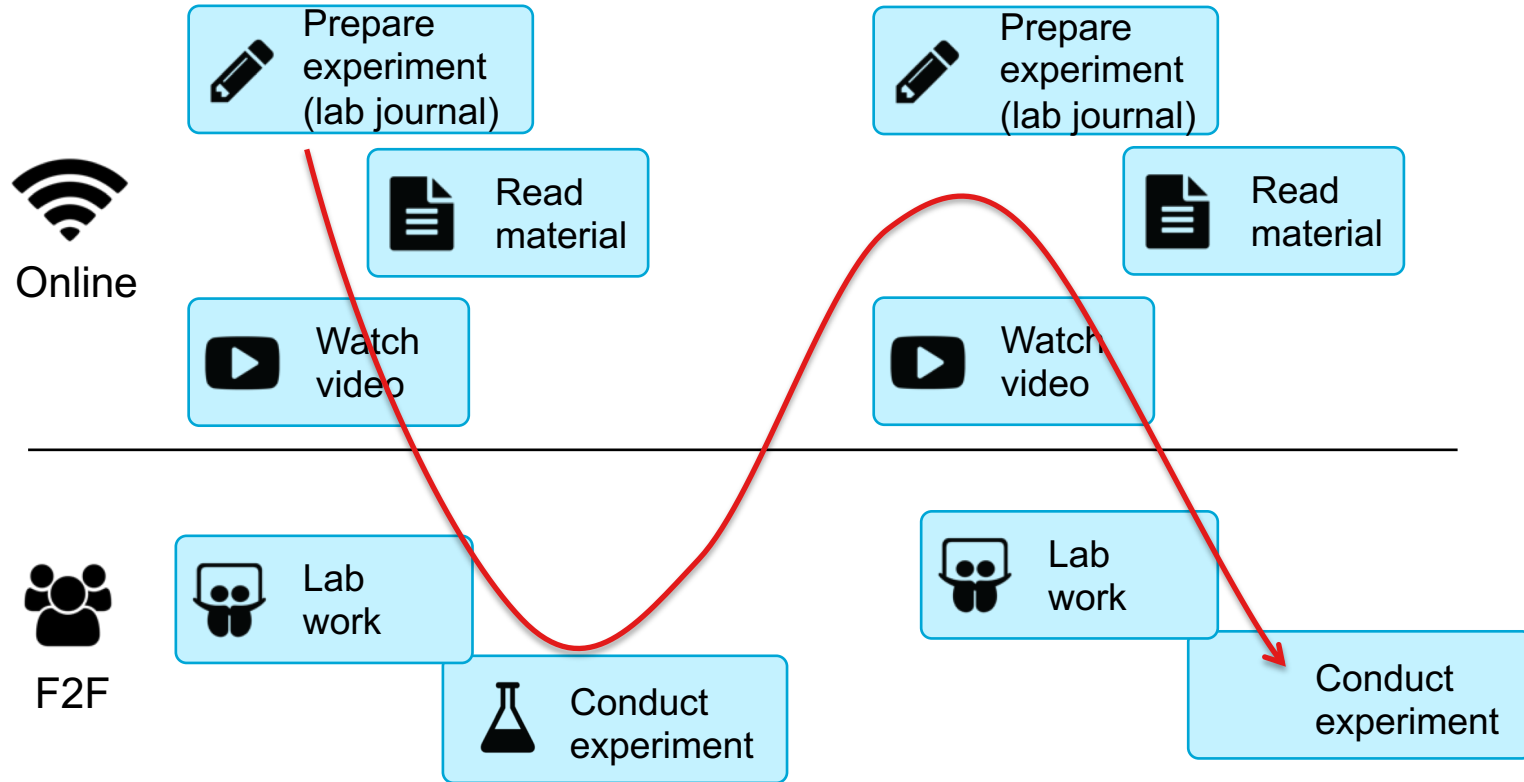


Destillatie-opstelling

Naast het lezen van de handleiding en de aanvullende informatie in de appendix (pg. 53-74) kan dit filmpje (<https://www.youtube.com/watch?v=GtuMIWMajtw>) je helpen bij het voorbereiden van de proef. Hierin wordt een destillatie opstelling gebouwd en uitgelegd waarmee je rekening moet houden.

Hier volgt ook nog een foto van de destillatieopstelling die gebruikt kan worden bij de voorbereiding van de proef: [destillatieopstelling](#)

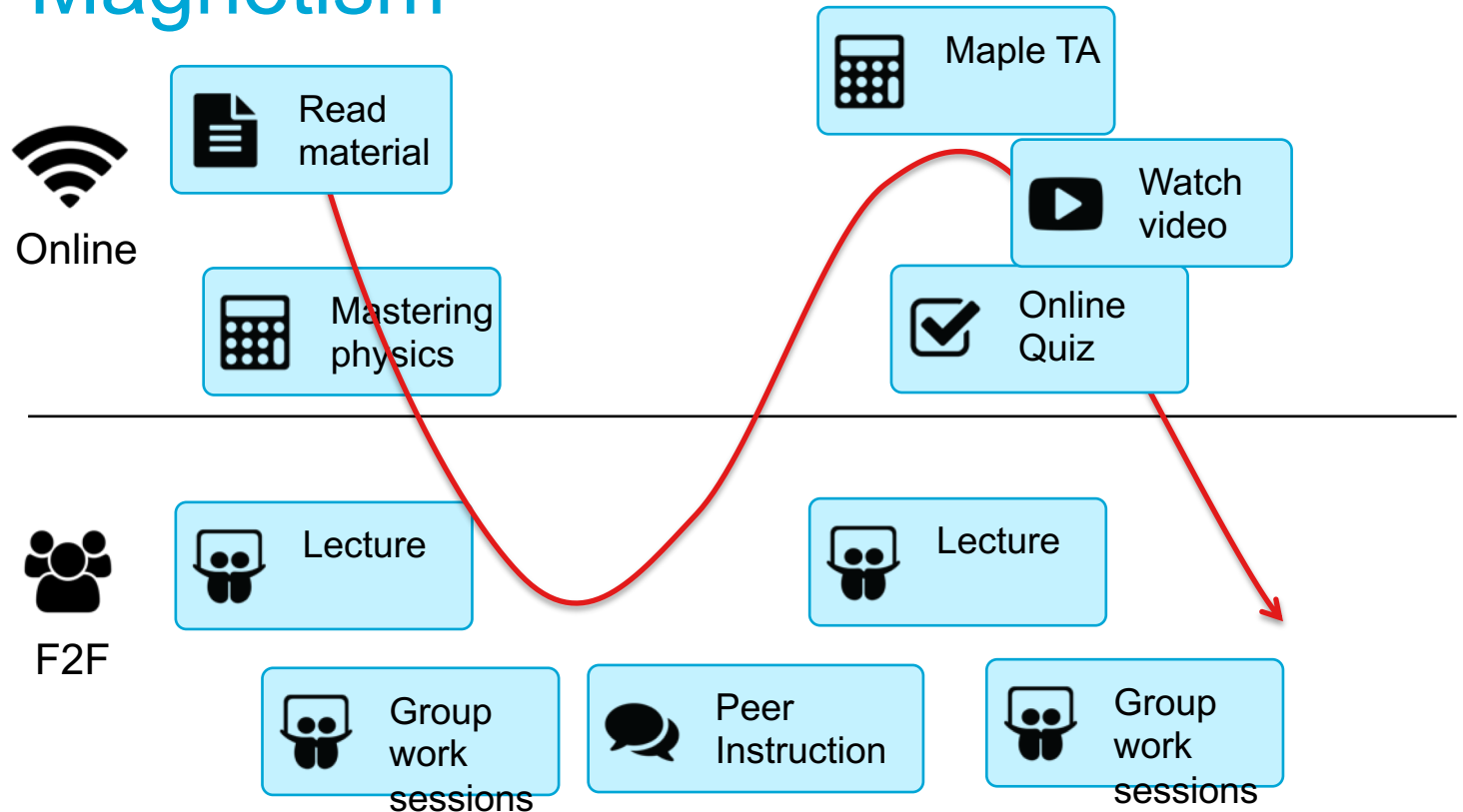
Practicum Basisvaardigheden



Introduction to Electricity and magnetism

- Using MIT MOOC videos
- Online quizzes
- Phet simulations

Introduction to Electricity and Magnetism



So, more blended education?

The best
education
we can offer

(and it's probably blended)

Discussion Questions



What is the added value of the teacher?



How (often) do you communicate with your students?



What do you do if students don't do the online work?



How many hours can students spend per week?



How do you use online activities as input?