



# TEKNOLOGI PEMBELAJARAN

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KECAKAPAN  
HIDUP ABAD 21

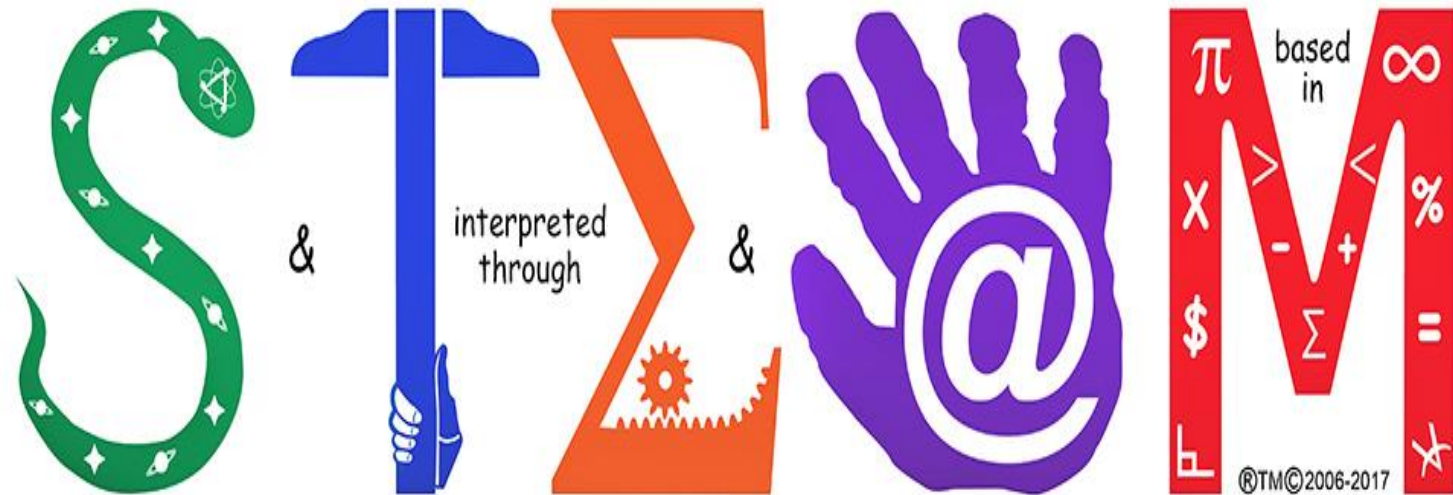
PEMBELAJARAN  
KIMIA ABAD 21

STEAM

HAKIKAT DAN  
PERAN STEAM

KOMPONEN-  
KOMPONEN STEAM

TAHAPAN  
PELAKSANAAN STEAM



<b>Science</b>	<b>Technology</b>	<b>Engineering</b>	<b>Arts</b>	<b>Mathematics</b>
the natural universe, where everything comes from	tools & innovative devices, uses & enhanced abilities	purposeful innovation, creation & analysis	humanities, ethics, ideals & expression	fact organizing base language

# EDUCATION



# Kecakapan Hidup Abad 21

21<sup>st</sup> Century learning:

- To know
- To do
- To be
- To live together

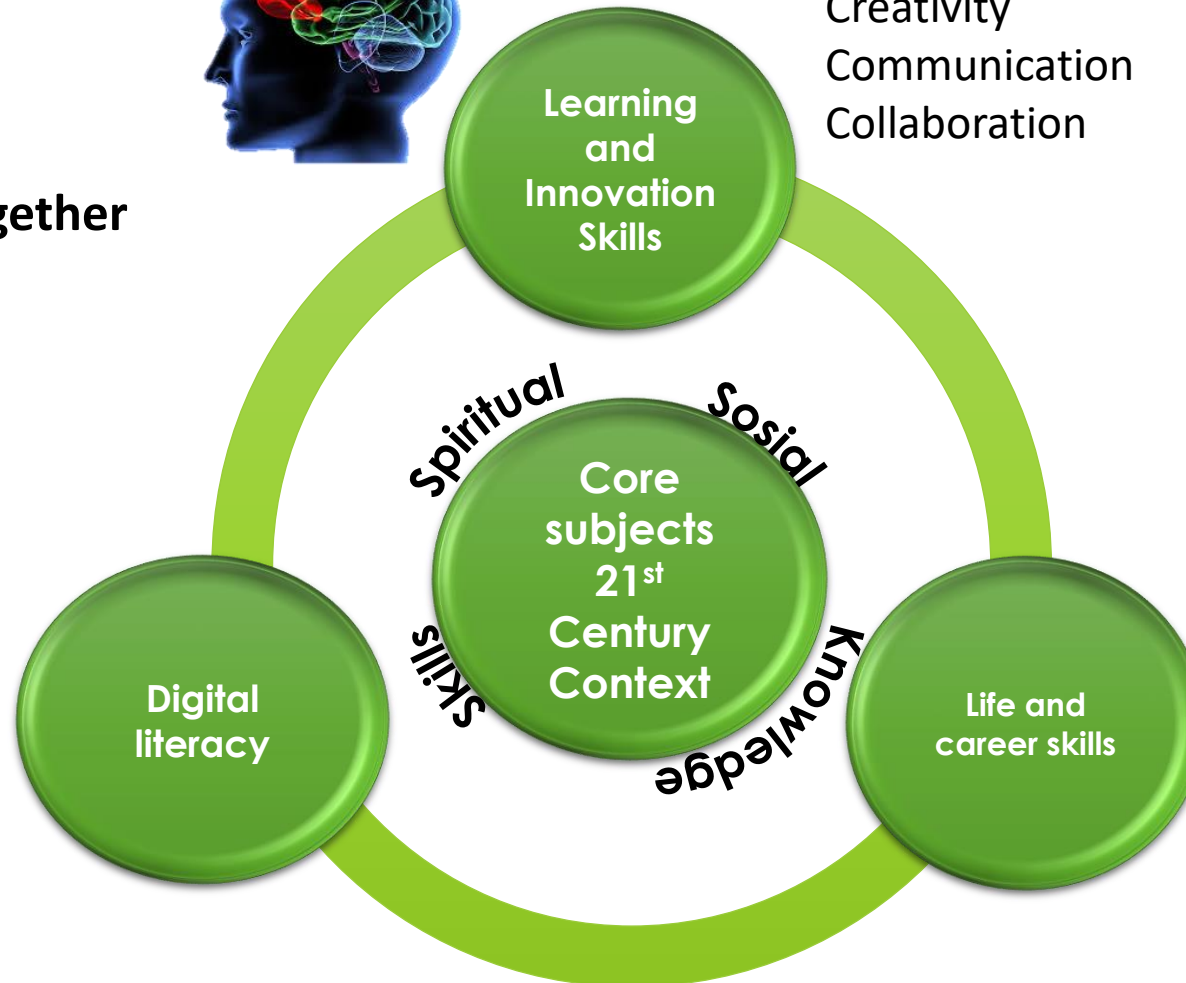


Critical thinking  
Creativity  
Communication  
Collaboration



Flexibility  
Initiative  
Leadership  
Social-skills  
Cross cultural  
Productivity  
Accountability  
Life-long learner

Information  
Media, and  
ICT literacy



# Pembelajaran Kimia Abad 21

Pembelajaran  
Abad 21 + Kimia = ?

Seperti apa pembelajaran kimia abad 21 yang dimaksudkan ?



# STEAM



PERPINDAHAN STEM KE STEAM

INTEGRASI SENI

MODEL “WAIT”



# HAKIKAT DAN PERAN STEAM

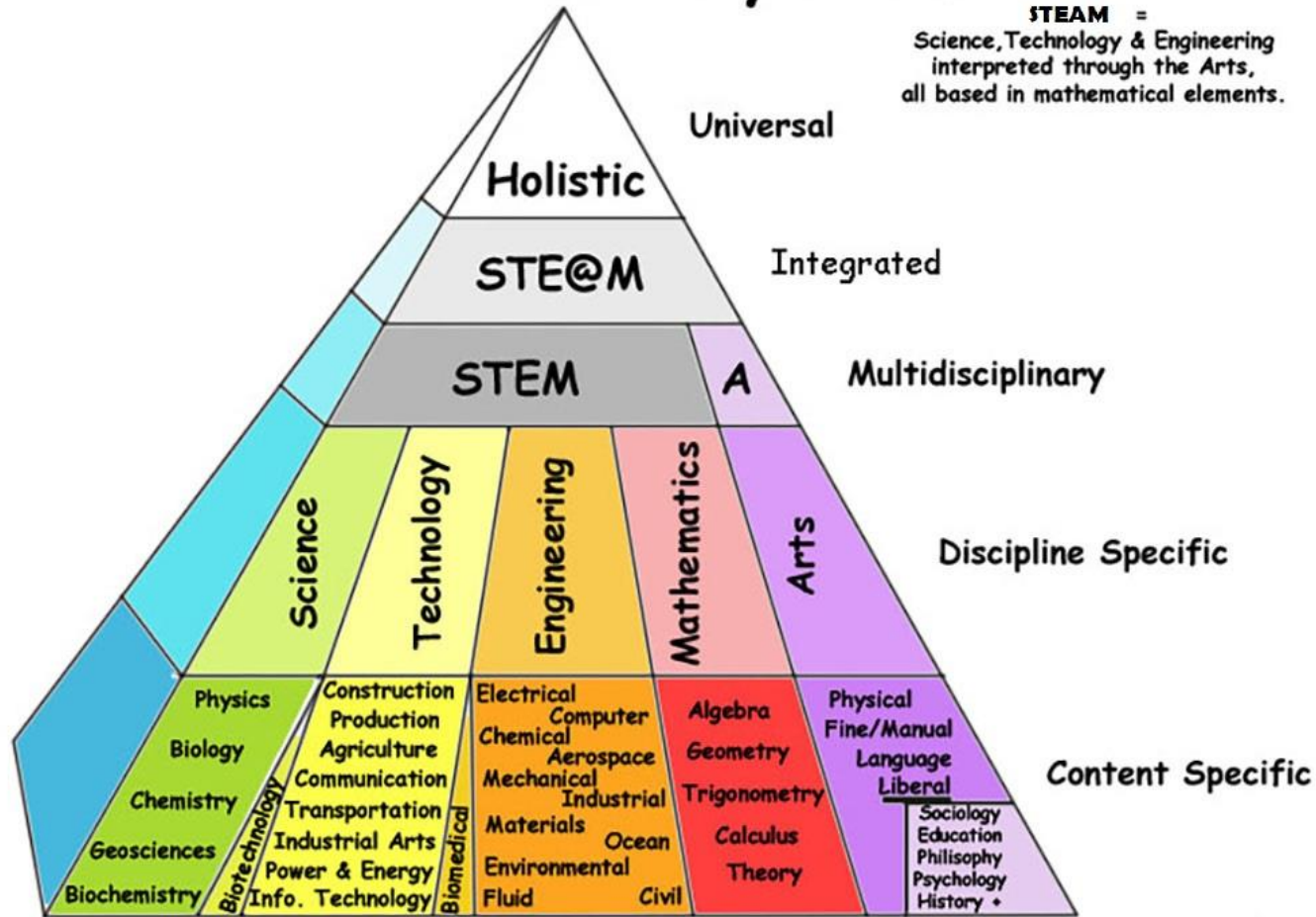
- Apa hakikat STEAM ?
- Bagaimana peran STEAM dalam pembelajaran ?



# Komponen- komponen STEAM

## THE STEAM Pyramid

STEAM =  
Science, Technology & Engineering  
interpreted through the Arts,  
all based in mathematical elements.



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- SCIENCE
- TECHNOLOGY
- ENGINEERING
- ARTS
- MATHEMATICS

Dapatkah STEAM diterapkan dalam pembelajaran kimia ?



# TAHAPAN PELAKSANAAN STEAM

Menurut *educationcloset.com* terdapat enam tahapan STEAM :

- Fokus
- Detail
- Penemuan
- Aplikasi
- Presentasi
- link

Menurut Ridwan&Rahmawati, 2017 tahapan STEAM dijabarkan menjadi :

- Relating
- Planning
- Developing
- Cooperating
- transferring

Apa yang membedakan kedua tahapan tersebut ?

Jika Anda akan menerapkan STEAM dalam pembelajaran Kimia, tahap mana yang akan Anda pilih ? Jelaskan alasannya !





# Thank you

