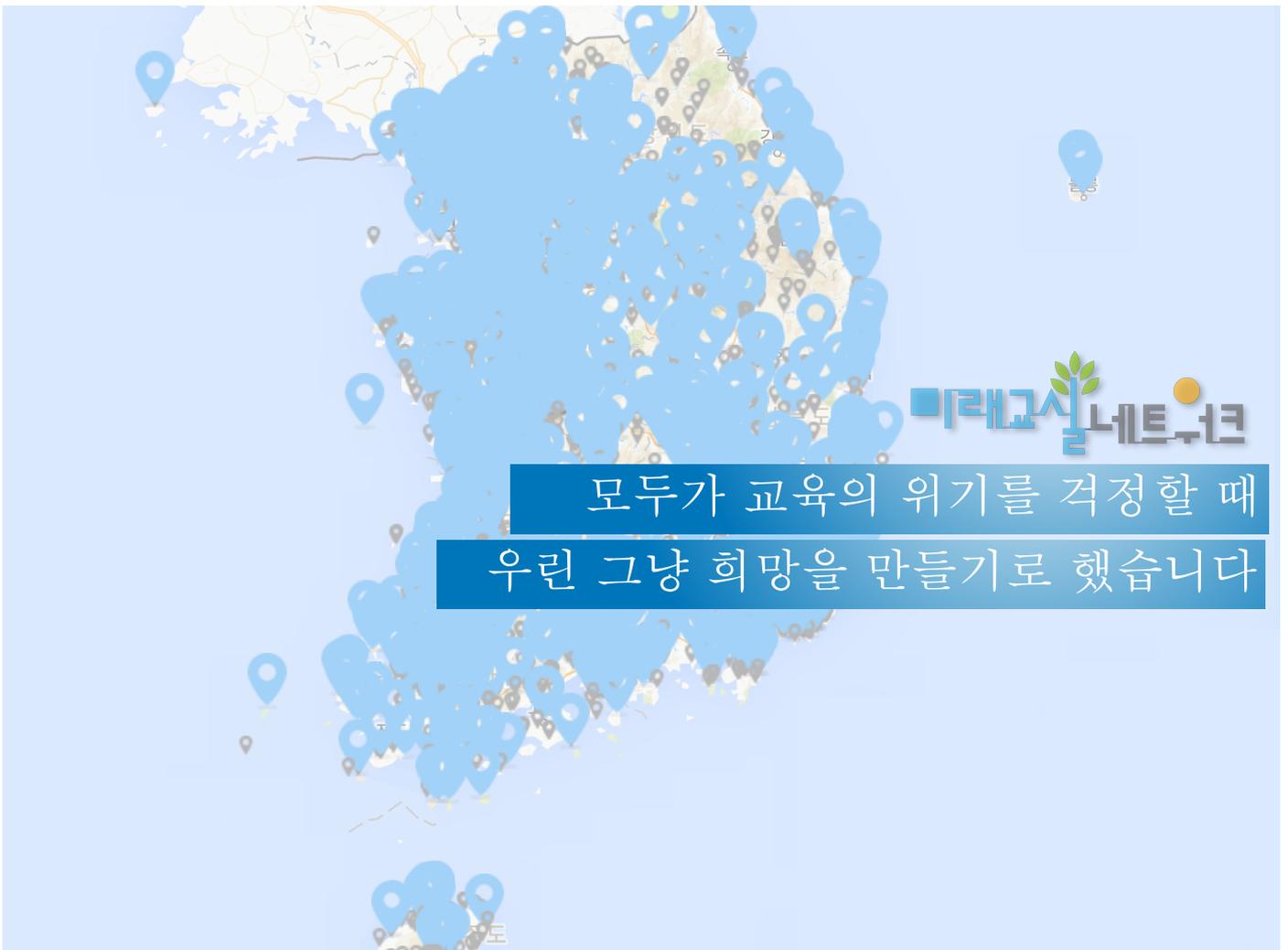


**NO PROBLEM
CAN BE SOLVED
FROM THE SAME
LEVEL OF
CONSCIOUSNESS
THAT CREATED IT.**

Albert Einstein

**어떤 문제도
문제를 발생시킨 것과
같은 수준의 인식에서는 해결할 수 없다**



**미래교육
네트워크**

모두가 교육의 위기를 걱정할 때
우린 그냥 희망을 만들기로 했습니다

핀란드 hundrED 재단 세계 100대 교육혁신 단체 선정(2017.9)

hundrED

About Innovations Community News Research Summit

Help

Login



How can teachers be supported to implement change in their classrooms?

Future Class Network

South Korea

Education should be closely linked with changing society. FCN spreads the idea of what future education should look like, and designs 21st century education through a network of collaborative teachers to make a change in South Korea.

BLENDING LEARNING, COLLABORATIVE LEARNING, FLIPPED LEARNING, MOTIVATION, NETWORK, OPEN EDUCATIONAL RESOURCE, PROFESSIONAL DEVELOPMENT

OECD-America Achieves 공동주관 21세기 교육실현 세계 30대 학교 선정

The Global Learning Network engages with and learns from schools around the globe to better prepare students to succeed in a rapidly changing world.



America Achieves CEO Jon Schnur, participants from the Future Class Network in South Korea, and Andreas Schleicher of the OECD at the 2017 International Convening of World-Leading Learners.



Congratulations from MIT Solve! 받은 편지함 x

☆ Eliza Berg 에게: yu... 2018. 8. 18. 오전 1:44

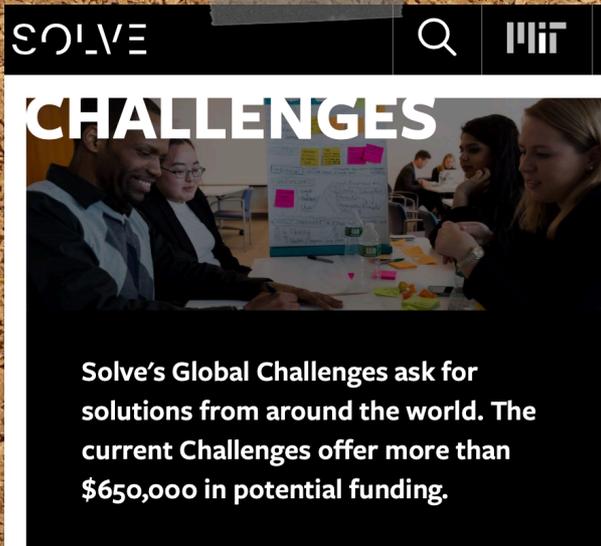
Hello,

I'm pleased to inform you that your solution, World's Biggest Class Project, has been selected by Solve judges to advance to the next stage of the Solve Global Challenges. Congratulations!



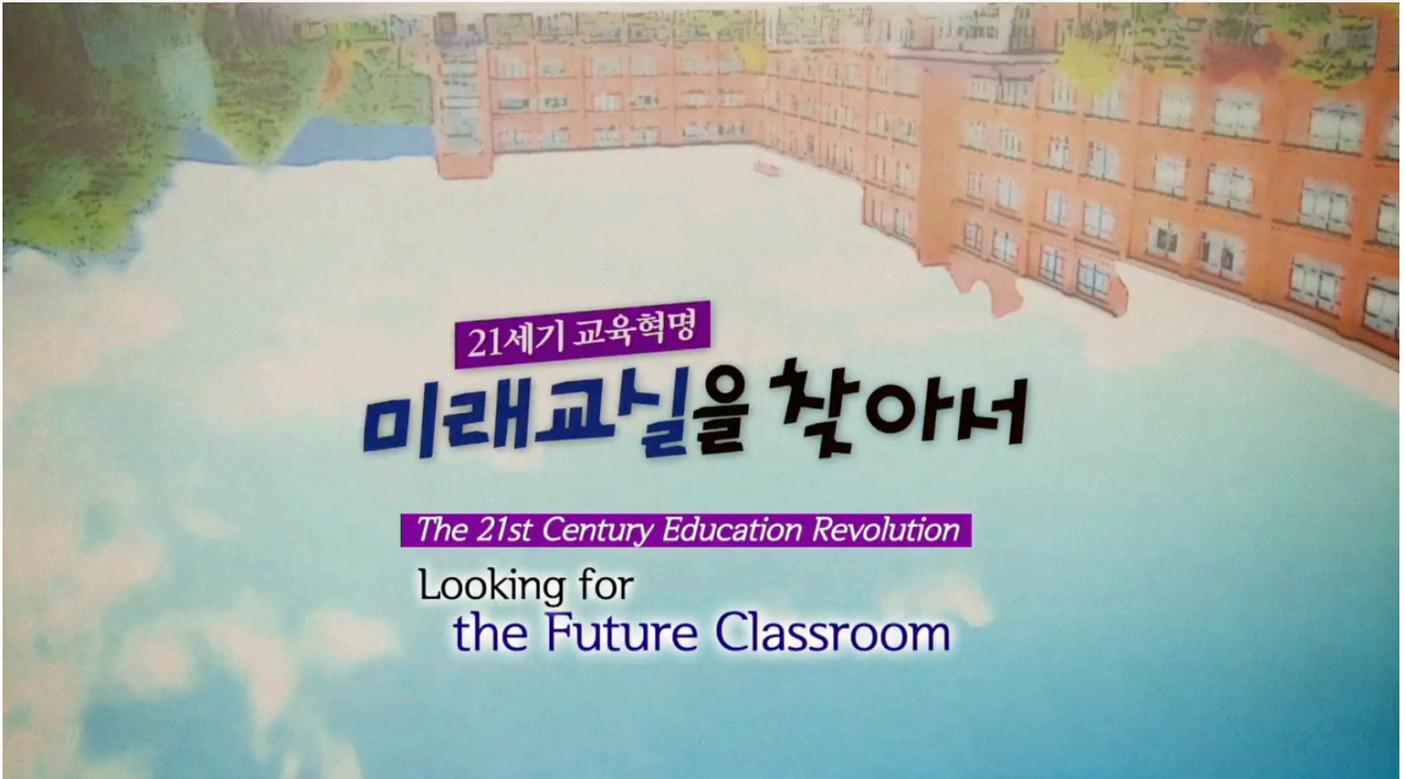
Thank You to Everyone Who Applied to Solve's 2018 Global Challenges:

We have been overwhelmed with the quality and quantity of innovative solutions to the 2018 Solve Global Challenges. 1,150 solutions were submitted over the past several months from 110 countries. Thank you so much!



How?

2014.3



Traditional Classroom



+ 

- Instructor prepares material to be delivered in class.
- Students listen to lectures and other guided instruction in class and take notes.
- Homework is assigned to demonstrate understanding.

Flipped Classroom



+ 

- Instructor records and shares lectures outside of class.
- Students watch / listen to lectures before coming to class.
- Class time is devoted to applied learning activities and more higher-order thinking tasks.
- Students receive support from instructor and peers as needed.

교실에서 선생님의 강의를 없애고
대신 강의 영상을 짧게 만들어
수업 전에 보고 오게 한 후
수업 시간에는 학생들 스스로
다양한 협력, 동료학습을
하도록 함



2편 가르침시대의 종말



Stephen M. Kosslyn, Ph.D.,
Dean of Arts and Sciences

2편 가르침시대의 종말



거꾸로교실의 마법





제1가설

공부를 싫어하는 아이는
원래 없었다

번호	이름	1학기말	2학기중간	2학기 기말	점수변화
20		50.00	68.00	91.00	41.00
24		20.00	38.00	61.00	41.00
19		46.00	80.00	77.00	31.00
6		45.00	61.00	75.00	30.00
11		48.00	66.00	77.00	29.00
15		60.00	80.00	85.00	25.00
17		17.00	23.00	42.00	25.00
18		41.00	53.00	64.00	23.00
3		36.00	22.00	58.00	22.00
13		48.00	60.00	70.00	22.00
21		21.00	19.00	40.00	19.00
2		74.00	75.00	92.00	18.00
9		56.00	48.00	74.00	18.00
16		50.00	38.00	68.00	18.00
12		68.00	90.00	85.00	17.00
14		66.00	66.00	82.00	16.00
32		67.00	68.00	83.00	16.00
26		60.00	53.00	75.00	15.00
27		66.00	71.00	80.00	14.00
8		79.00	88.00	92.00	13.00
10		16.00	19.00	29.00	13.00
28		65.00	78.00	78.00	13.00
23		60.00	60.00	70.00	10.00
25		74.00	82.00	84.00	10.00
22		87.00	97.00	96.00	9.00
7		81.00	58.00	89.00	8.00
29		90.00	88.00	97.00	7.00
4		69.00	69.00	75.00	6.00
30		94.00	85.00	100.00	6.00
31		93.00	95.00	96.00	3.00
1		88.00	100.00	88.00	0.00
33		68.00	70.00	68.00	0.00
34		80.00	73.00	77.00	-3.00
5		71.00	61.00	60.00	-11.00



실험에서 증명으로



거꾸로교실은?



교실 비우기



인정

NG 금지

3. 다인자 유전

1. 다인자 유전의 특성

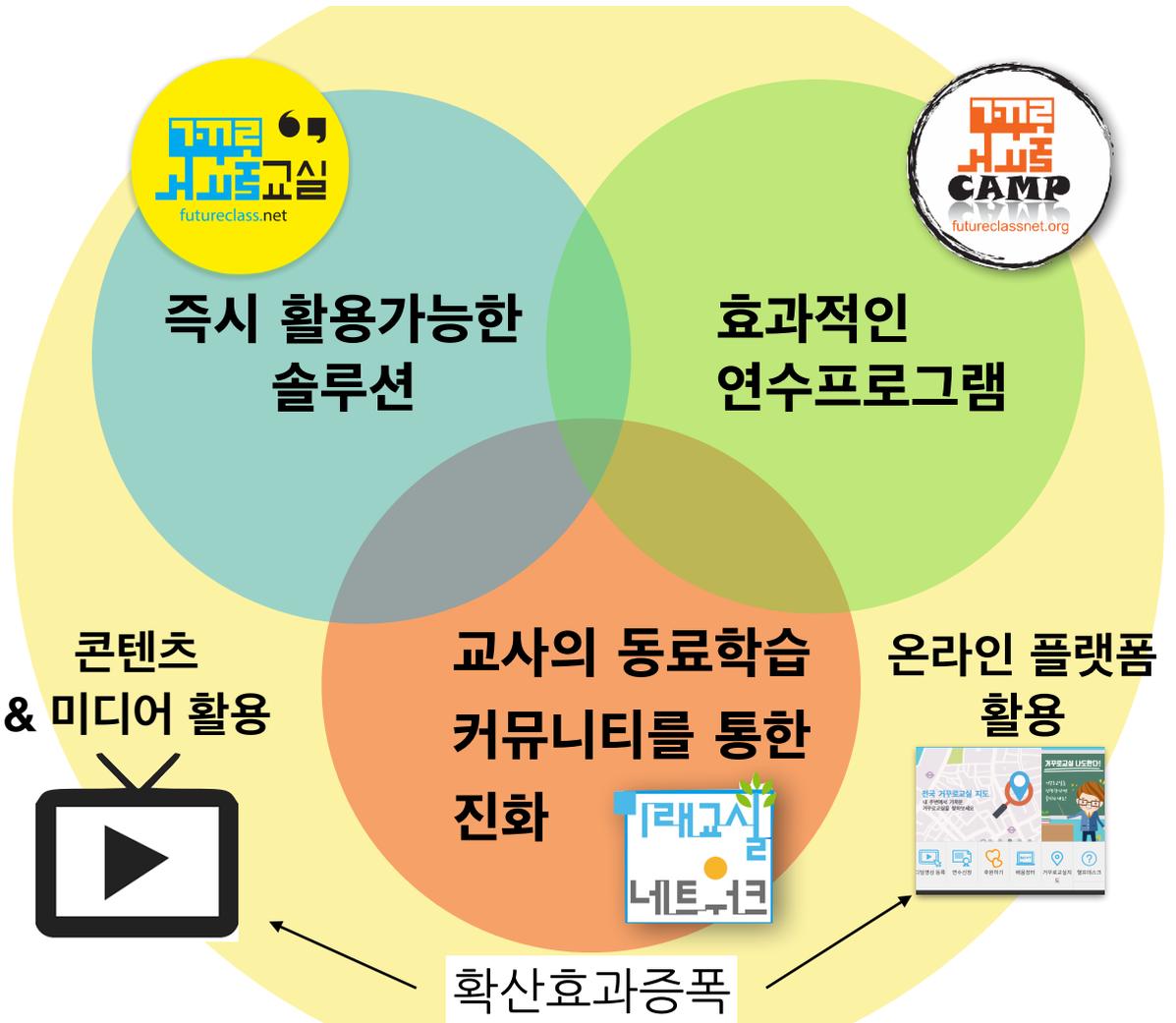
- ① 한 가지 형질에 두 쌍 이상의 대립 유전자가 관여함.
- ② 환경의 영향을 받는 경우가 많기 때문에 다양한 표현형이 나타나며, 형질의 분포가 정규 분포 곡선의 형태로 표시됨.
- ③ 예 : 사람의 피부색, 키, 눈동자 색, 몸무게, 지능 등

2. 피부색 유전 모델

(1) 피부색 유전 모델의 특성

- ① 가정 : 3쌍의 대립 유전자에 의해 피부색 결정
- ② A, B, C : 피부색을 검게 만드는 유전자
a, b, c : 피부색의 희게 만드는 유전자
- ③ 피부색 : 우성 유전자의 수에 따라 결정됨. (종류와 관계 없음)

2014.12



21세기 교육이란?

KBS 파노라마

The poster titled 'Framework for 21st Century Learning' features a central diagram. At the top, it lists 'Learning and Innovation Skills—4Cs' (Critical Thinking, Communication, Collaboration, Creativity) in a yellow segment, 'Life and Career Skills' in a red segment, and 'Information, Media, and Technology Skills' in a purple segment. Below these is a green segment for 'Core Subjects—3Rs and 21st Century Themes'. The diagram is supported by a base of four concentric circles representing 'Standards and Assessments', 'Curriculum and Instruction', 'Professional Development', and 'Learning Environments'. Text on the poster explains the vision for student success in the global economy and lists 21st-century student outcomes.

Framework for 21st Century Learning

The Partnership for 21st Century Skills has developed a vision for student success in the new global economy.

21st Century Student Outcomes and Support Systems

Learning and Innovation Skills—4Cs
Critical Thinking • Communication
Collaboration • Creativity

Life and Career Skills

Information, Media, and Technology Skills

Core Subjects—3Rs and 21st Century Themes

Standards and Assessments

Curriculum and Instruction

Professional Development

Learning Environments

21ST CENTURY STUDENT OUTCOMES

To help practitioners integrate skills into the teaching of core academic subjects, the Partnership has developed a unified, collective vision for learning known as the Framework for 21st Century Learning. This Framework describes the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies.

Every 21st century skills implementation requires the development of core academic subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of core academic subject knowledge.

Within the context of core knowledge instruction, students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication and collaboration.

When a school or district builds on this foundation, combining the entire Framework with the necessary support systems—standards, assessments, curriculum and instruction, professional development and learning environments—students are more engaged in the learning process and graduate better prepared to thrive in today's global economy.

One Massachusetts Avenue NW Suite 700 Washington, DC 20001 202-312-6429 www.P21.org

Silo 교육의 한계



국어



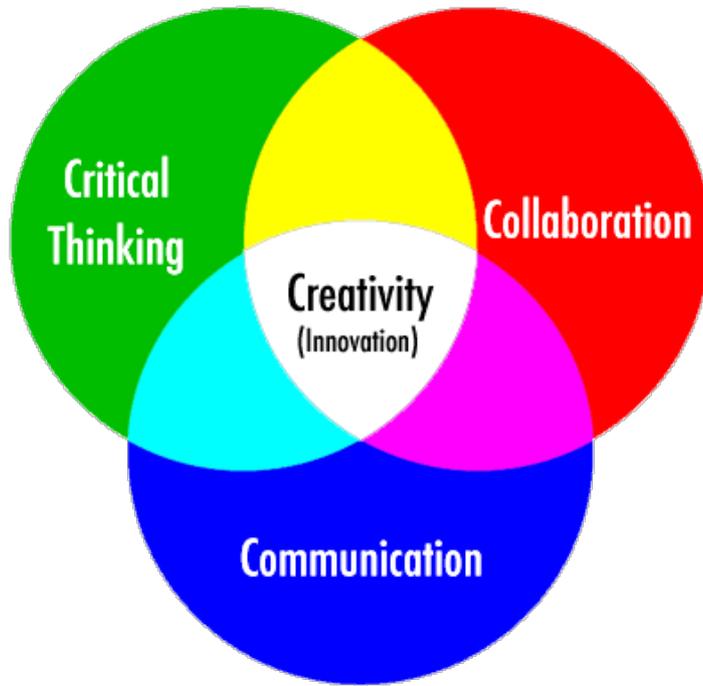
영어



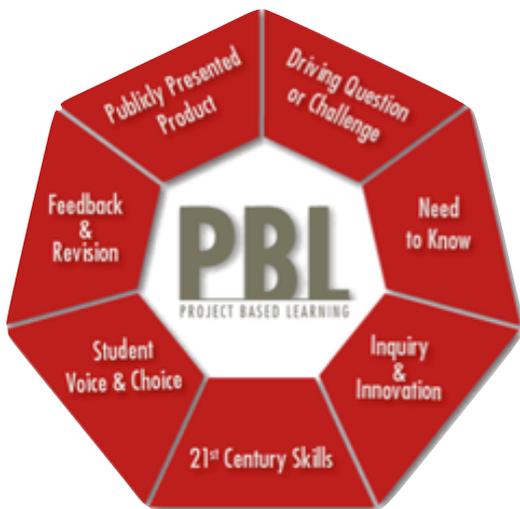
수학



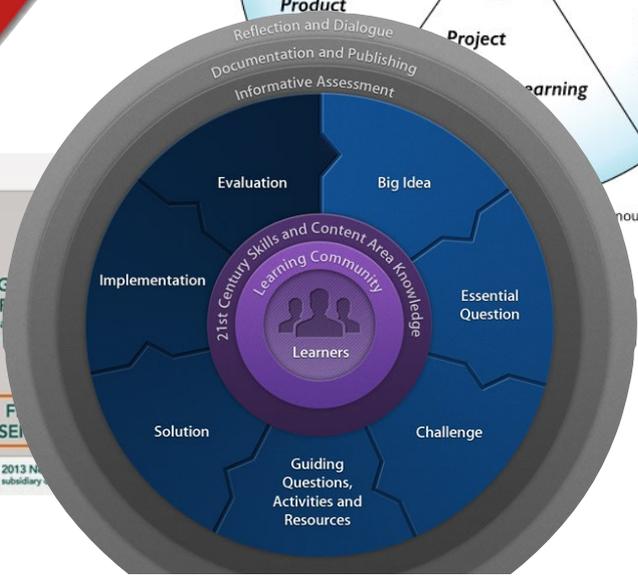
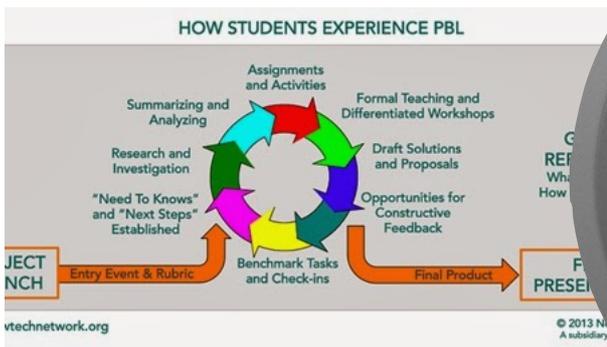
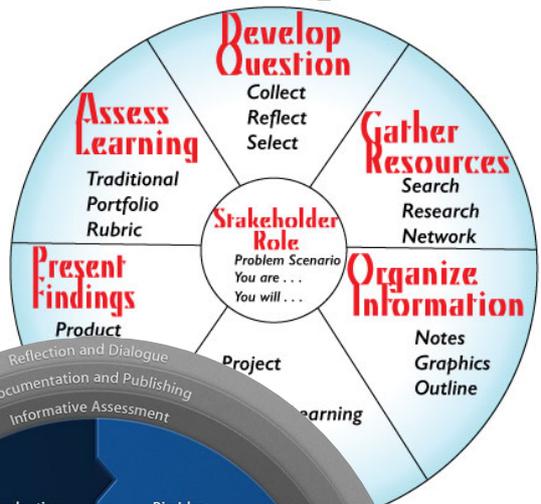
과학



21세기 핵심역량 = 협력적 문제해결능력

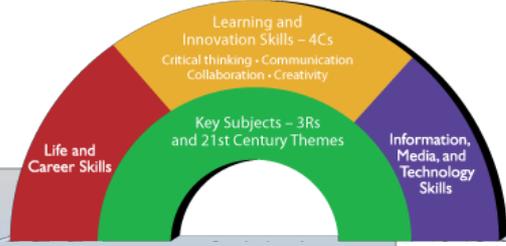


Problem Based Learning for 21st Century Citizens



...though." - Albert Einstein

21세기 스킬



소통과 협력

거꾸로교실



2017.04.04 03:03

[연희대·세브란스의대 통합 60주년, 김용학 연세대 총장 인터뷰]



'2021학년도 교사추천제 도입, 잠재력 보고 100명 내외 선발

"4차혁명시대, 정답 찾는 것보다 문제해결·공감 능력 더 키워야"

"공교육의 새로운 실험과 도전을 격려하는 대입 전형 도입 방침이다. 그러면 사교육도 감소하지 않겠나. 학생 스스로 제안한 과제 등을 서로 협력해 해결하며 배우는 프로젝트학습 (PBL), 교사 설명 중심의 기존 수업방식을 뒤집어 토론과 실습 위주로 배우는 '**거꾸로교실**' 등 새로운 방식으로 가르치는 고교에 **입시 가점**을 주는 방안을 추진하겠다.

미래교실네트워크 교육혁신 솔루션의 진화

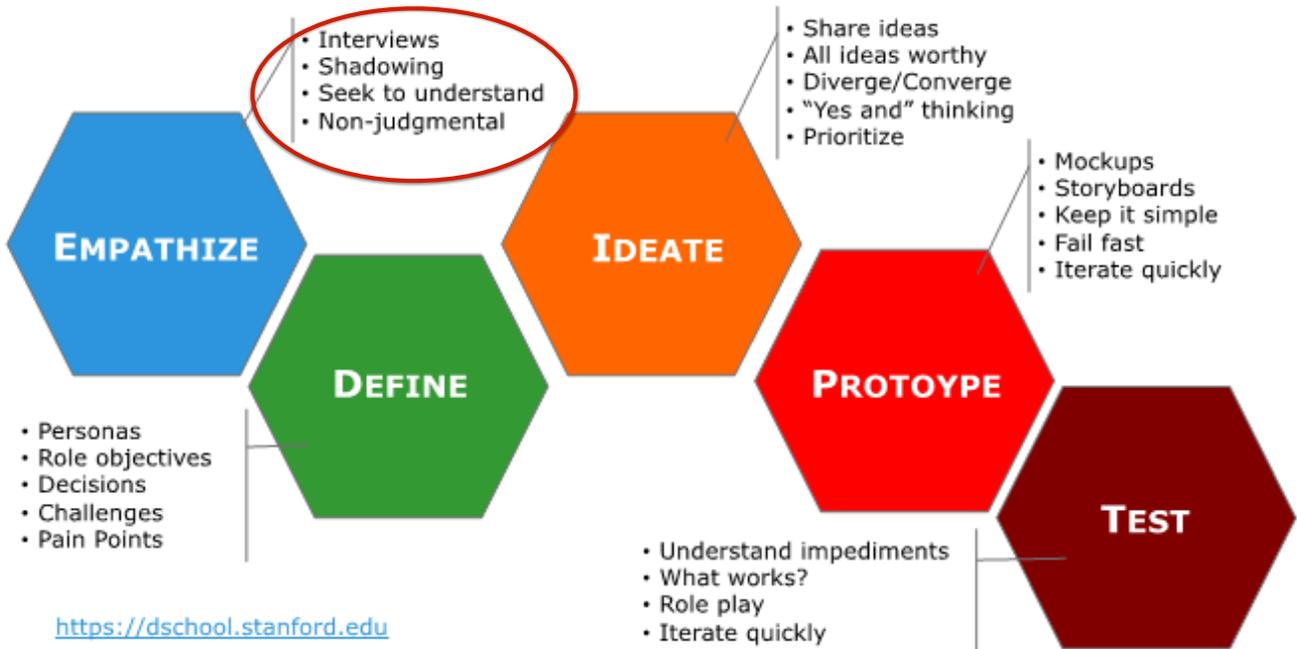


- * 거꾸로교실을 통한 붕괴된 교실 살리기
- * 소통과 협력 능력 배양

- * 협력적 문제해결 프로젝트 수업
- * 21세기 교육의 종합적 실현



Stanford d.school Design Thinking Process



올바른 **문제정의**가 성패 좌우

문제정의의 성패는 **Empathy!**

Cognitive Empathetic Skill

Critical Thinking의 원천

대학
신문
이력
2부 '학교 왜 개?'



興時齋
Yeosijae

'미래를 바꾸

일시 | 2017년



캠페인

안되는 이유

비난

실행전략

해야하는 이유

원인분석

**미래교실네트워크
교육혁신 솔루션의 진화**



- * 거꾸로교실을 통한 붕괴된 교실 살리기
- * 소통과 협력 능력 배양

- * 협력적 문제해결 프로젝트 수업
- * 21세기 교육의 종합적 실현

* 21세기 최적화된 학교 교육 실현

21세기 교육 실험학교 거꾸로캠퍼스 설립(2017.3)



A map of South Korea is shown with numerous blue location pins scattered across the country. In the bottom left corner, there is a logo for '미래교사 네트워크' (Future Teacher Network) with the text 'FUTURECLASS NETWORK' below it. In the center, there is a circular logo for '미래교사 CAMP' (Future Teacher Camp) with the website 'futureclassnet.org' below it. To the right of the center is a logo for 'World's Biggest Class Project' featuring a school building and a banner. In the bottom right corner, there is a logo for 'FCN LEARNING LAB'.

모두가 교육의 위기를 걱정할 때
우린 그냥 희망을 만들기로 했습니다