Advancing the Quality of Physics Teaching using Peer Instruction



Long Island Physics Teachers' Association Manhasset High School 28 October 2023, Manhasset, NY

Advancing the Quality of Physics Teaching using Peer Instruction





Long Island Physics Teachers' Association Manhasset High School 28 October 2023, Manhasset, NY

quick reflection

think of something you are good at

quick reflection

how did you become good at that?













an illusion...



n . .

r.

- ----

0

- C

40

N. N. N.

1. transfer of information

1. transfer of information

2. assimilation of that information

1. transfer of information (in class)

2. assimilation of that information

1. transfer of information (in class)

2. assimilation of that information (out of class)

Should focus on THIS!

1. transfer of information (i)

2. assimilation of that information (out of class)

1. transfer of information (in class)

2. assimilation of that information (out of class)

1. transfer of information (out of class)

2. assimilation of that information (in class)

1. transfer of information (out of class)

2. assimilation of that information (in class)

















Archimedes Principle



The volume of displaced fluid is equal to the volume of the submerged portion of the object.



The volume of displaced fluid is equal to the volume of the submerged portion of the object.



The volume of displaced fluid is equal to the volume of the submerged portion of the object.





After the boulder sinks to the bottom of the pond, the level of the water in the pond is

higher than
the same as
lower than



After the boulder sinks to the contern of the pond, the level of the water in the pond is

high or trail
the same as
low r than

fle

de

A[.]

th

2.

3

tc Before I tell you the answer, let's analyze what happened.

 \wedge

fle

de

A[.]

th

2.

3

tc Before I tell you the answer, let's analyze what happened. You...

 \wedge

de

th

2.

3

fle

tc Before I tell you the answer, let's analyze what happened. You...

 \wedge

A 1. made a commitment

fle

de

th

2.

3

tc Before I tell you the answer, let's analyze what happened. You...

 \wedge

- A 1. made a commitment
 - 2. externalized your answer

fle

de

A.

th

2.

3

tc Before I tell you the answer, let's analyze what happened. You...

 \wedge

- 1. made a commitment
 - 2. externalized your answer
 - 3. moved from the answer/fact to reasoning

fle

de

th

2.

3

tc Before I tell you the answer, let's analyze what happened. You...

 \wedge

- A 1. made a commitment
 - 2. externalized your answer
 - 3. moved from the answer/fact to reasoning
 - 4. became emotionally invested in the learning process



After the boulder sinks to the bottom of the pond, the level of the water in the pond is

higher than
the same as
lower than



After the boulder sinks to the bottom of the pond, the level of the water in the pond is

higher than
the same as
lower than















points worth noting

my "clear" lecture wasn't very good

discussion promoted "aha" moments















Education is not just about:

- transferring information
- getting students to do what we do

Education is not just about:

- transferring information
- getting students to do what we do

active engagement/social interaction a must!

for a copy of these slides

mazur.harvard.edu

