The Pedagogy behind Learning Catalytics

Mastering Leadership Conference
Tucson, AZ, 25 February 2017
an illusion. . .
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)
1. transfer of information (in class)

2. assimilation of that information (out of class)

Should focus on THIS!
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
An object submerged either fully or partially in a fluid experiences an upward buoyant force the magnitude of which is equal to the magnitude of the force of gravity exerted on the fluid displaced by the object.
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The volume of displaced fluid is equal to the volume of the submerged portion of the object.
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A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond.
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After the boulder sinks to the bottom of the pond, the level of the water in the pond is

1. higher than
2. the same as
3. lower than

it was when the boulder was in the boat.
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1. higher than
2. the same as
3. lower than it was when the boulder was in the boat.

Before I tell you the answer, let’s analyze what happened.
A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond. After the boulder sinks to the bottom of the pond, the level of the water in the pond is
1. higher than
2. the same as
3. lower than it was when the boulder was in the boat.

Before I tell you the answer, let’s analyze what happened. You...
A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond. After the boulder sinks to the bottom of the pond, the level of the water in the pond is 1. higher than 2. the same as 3. lower than it was when the boulder was in the boat.

Before I tell you the answer, let’s analyze what happened. You…

1. made a commitment
A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond. After the boulder sinks to the bottom of the pond, the level of the water in the pond is
1. higher than
2. the same as
3. lower than it was when the boulder was in the boat.

Before I tell you the answer, let’s analyze what happened. You…

1. made a commitment
2. externalized your answer
A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond. After the boulder sinks to the bottom of the pond, the level of the water in the pond is

1. higher than
2. the same as
3. lower than it was when the boulder was in the boat.

Before I tell you the answer, let’s analyze what happened. You…

1. made a commitment
2. externalized your answer
3. moved from the answer/fact to reasoning
A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond. After the boulder sinks to the bottom of the pond, the level of the water in the pond is

1. higher than
2. the same as
3. lower than it was when the boulder was in the boat.

Before I tell you the answer, let’s analyze what happened. You…

1. made a commitment
2. externalized your answer
3. moved from the answer/fact to reasoning
4. became emotionally invested in the learning process
A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond.

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

1. higher than
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it was when the boulder was in the boat.
A boat carrying a large boulder is floating on a small pond. The boulder is thrown overboard and sinks to the bottom of the pond.

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

1. higher than
2. the same as
3. lower than

It was when the boulder was in the boat.
remember: amount of displaced water
remember: amount of displaced water
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remember: amount of displaced water
remember: amount of displaced water

displaced water = weight of rock
remember: amount of displaced water

displaced water = weight of rock

= volume of rock
You won't forget this

Amount of displaced water

Displaced water

= weight of rock

Volume of rock

Remember: amount of displaced water
Education is not just about:

- transferring information
- getting students to do what we do

active participation a must!
Education is not just about:

- transferring information
- getting students to do what we do