

Interactive Simulations

Introduction

- Use simulations as intro activity at the beginning of a unit to see what students already know, as an activation before the lesson, or at the end for students to see how much they have learned
- Can be played by multiple students or individually
- Games are available for most subjects in all grades – you just have to find them!

Map Puzzles

- Using a USA map puzzle game as an example (Canada is too easy for our class but might be great for your class!)
- There are ones for Canada, as well as ones for labelling countries and capital cities

Benefits

- Engagement
 - Students have increased attention and attendance because they want the chance to play with the Smart Board or play these 'games' on the computer
- Represent things that we otherwise wouldn't be able to see
 - Experience the impossible
- Cheaper in cost than other materials
- More time effective (less set up and clean up)
- Facilitates concept understanding
- Increases predictability of lab experiment results

Limitations

- Possibility of superficial interest (are they interested in the game or with the novelty of the Smart Board?)
- Lacks authentic, real world skills
- Does not teach real lab skills like careful measuring
- Simulations that can't fail – lacks lessons learned from mistakes
- Disconnect – looking at a screen instead of hands-on
- No room for experimentation and change – simulations can only produce results that are programmed into them

Concluding Thoughts:

- Good simulations will be helpful and positive
- Always check and do the simulations yourself before having students work with them
 - Some are inappropriate (stereotypes)
 - Some are just bad – don't do what you expected or they aren't engaging.