

**The FIS Mission Statement says that we offer an "Inquiry-Driven" education.**

All too often, FIS teachers give lectures where all students are learning the same thing at the same time. This is also valuable, but the "inquiry-driven" experiences are often neglected.

In grades 11 and 12 - the IB programme - teachers will be even more inclined to "direct instruction". Many educational researches claim that "inquiry-driven" education is more effective than direct instruction. We probably need both. You will get plenty of "direct instruction" from your teachers - it is UP TO YOU to ensure that you also engage in "inquiry-driven" learning, whether your teachers assign it or not.

This week we will practice this concept. If you take this seriously, you will probably learn something useful, and you may have more fun. You may not be able to use your resulting knowledge to score points on a test, but it may be useful for other reasons.

Below is a description of Inquiry-Driven Learning from one of our school's administrators.

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### **Inquiry-Driven Learning:**

- is a stance or set of beliefs, not a formula or a recipe.
- is predicated on an underlying belief in the importance of student voice and relevance in what is being learning and how it is being learned.
- is a way to have students access learning objectives for a reason, resulting in deeper conceptual understanding.
- can result in students having more intrinsic motivation to learn.
- can be guided or more open ended, depending on time and student readiness.
- Balances teachers risk taking and exploring with accountability for teaching the written curriculum is being learned.
- needs teachers to know where their learners are in the process, before, during and after learning (necessitates a range of assessment strategies: short, medium, long cycle formative assessment).
- does not always require the teacher to be the expert, students and teachers co-learning.

**Each day this week, we will start class with a video or explanation. You may choose to explore this topic further, or you may explore some other idea - as you wish. A variety of possible topics for INVESTIGATION are provided below. You may investigate something else that you find interesting - but whatever you choose, you should investigate with the intention of learning something more than you already know. For example, you probably already know a lot about video games, so it probably achieves little or nothing to investigate video games.**

## **Amazing Magic Tricks - 21 June 2017**

**Try searching for [Amazing Magic Tricks] into Youtube - you will find entertaining videos, like:**

Fun Fake Photography

<https://www.youtube.com/watch?v=rZpD8WHnGqQ>

<https://www.youtube.com/watch?v=EWbYIE6MvNI>

Real tricks based on Science

<https://www.youtube.com/watch?v=gnGAec9gZaE>

Real Magicians

<https://www.youtube.com/watch?v=Dw0AOj12Exw>

<https://www.youtube.com/watch?v=Qg8HQD5-seI>

Future Magic

[https://www.youtube.com/watch?v=w\\_0CwvWH2bw&list=PLmZTDWJGfRq266v0ZkYcMHH-TAAHuAVXM](https://www.youtube.com/watch?v=w_0CwvWH2bw&list=PLmZTDWJGfRq266v0ZkYcMHH-TAAHuAVXM)

CGI Movie Magic

<https://www.youtube.com/watch?v=hxHX2PB5osM&list=PLmZTDWJGfRq266v0ZkYcMHH-TAAHuAVXM&index=6>

**See if you can find some other "magic" videos, especially videos that tell the "secrets" of how some magic tricks really work.**

## Artificial Intelligence

**Find out what Artificial Intelligence really is, and why it is important now and in the future, and what new ideas are we likely to experience in the near future.**

Human Computation and Image Recognition

<https://www.youtube.com/watch?v=dtFroEJN1nI>

What is the Turing Test?

<https://www.youtube.com/watch?v=3wLqsRLvV-c>

<https://www.youtube.com/watch?v=oHL1JpPTle0>

What is a Chatbot? Which of these videos is better? Why?

<https://www.youtube.com/watch?v=JGIFN9HHI04>

<https://www.youtube.com/watch?v=IYJjrvXSbnM>

What is ELIZA? Is it believable? Which of these is best?

<http://www.manifestation.com/neurotoys/eliza.php3>

<http://ec2-54-215-197-164.us-west-1.compute.amazonaws.com/speech.php>

<https://chatbotsmagazine.com/which-are-the-best-intelligent-chatbots-or-ai-chatbots-available-online-cc49c0f3569d>

<https://venturebeat.com/2014/06/08/talk-to-the-computer-that-passed-the-turing-test-a-historic-artificial-intelligence-milestone/>

What about robots? Are they intelligent?

[https://www.youtube.com/watch?v=t\\_9VApRW8LY](https://www.youtube.com/watch?v=t_9VApRW8LY)

<https://www.youtube.com/watch?v=LvnZbh4hXHY>

What about Watson? How intelligent is it?

<https://www.youtube.com/watch?v=Xcmh1LQB9I>

<https://www.youtube.com/watch?v=OpDTURfDwQ0>

## What is Computer Science?

**Watch any COMPUTER SCIENCE videos that interest you.**

**This is especially useful for students who wish to enroll in IB Computer Science next year.**

[You Should Learn to Program](#)

[MacTini](#)

[Cicret Smartphone Bracelet](#)

[Future Computers](#)

[Computer Science - Past, Present, Future](#)

[Learning to Code is for Everyone](#)

[Build a Billion Dollar App](#)

[Human Computer Interface](#)

[Enchanted Objects](#)

[Self Driving Cars](#)

=== History of Video Games (each video about 10 min) ===

[Pixel Pioneers: A Brief History of Graphics, Part One](#)

[Sprite Supreme: A Brief History of Graphics, Part Two](#)

[Polygon Realm: A Brief History of Graphics, Part Three](#)

[Voodoo Bloom: A Brief History of Graphics, Part Four](#)

[Future Crisis: A Brief History of Graphics, Part Five](#)

## 3D Effects - 15 June 2016

This is an interesting web-site with a programming language that makes 3D effects:  
<https://www.shadertoy.com/view/MsGSRd>

You can try to change some numbers, then press the "go" arrow at the bottom to see your changes in the display window.

Then try to find some other interesting programs (in Browse) and try changing them.

## Games Exploration

**Watch this video featuring Jane McGonigal:**

[Gaming for a Better World](#)

**Then test any or all of the following games.**

**While playing each game, ask yourself:**

--> **"Is this game bringing out the best in me?"** <--

**On that basis, decide whether you find each game good, bad or medium.**

[Interland](#)

[CIA World Exploration](#)

[Geo Guesser](#)

[Any of these Geography Games](#)

[Any of these Math Games](#)

[Any of these Brain Games](#)

**Try various games, searching for the most challenging and interesting.**

## Fake Photos

**Try making some FUN FAKE FOTOS.**

**Print them and hang them up to decorate the room.**

Use [PIZAP](#) or [FotoFlex](#) make a funny picture, or investigate some of the tools on this page:

<http://www.hongkiat.com/blog/25-websites-to-have-fun-with-your-photos/>

### [How to make Fake Photo with Photoshop](#)

== Printing ==

You need to print the pictures on the COLOUR PRINTER.

To do this, you must :

- go to the Atrium
- load your picture on one of the 3 Loaner MacBooks near the printers
- before printing, use Print Preview to check what it will look like, then make changes/adjustments if necessary - especially deciding whether to use PORTRAIT or LANDSCAPE mode
- send your picture to the Atrium Colour printer
- if the picture does not print soon, DO NOT send it again  
Instead, ask the technicians at the Tech Deck for help.

== Reading ==

You might want to read some info about Fake news and Fake pictures.

<http://gizmodo.com/69-viral-images-from-2016-that-were-totally-fake-1789400518>

<https://www.wired.com/2016/12/photos-fuel-spread-fake-news/>

<https://www.wired.com/2017/02/internet-made-fake-news-thing-made-nothing/>