

MODULE 1 - CS INTRO



LESSON 1.1 - COMPUTER INFORMATION

SUMMARY

The first lesson of the 'CS INTRO' is meant to make students think about some of the different categories of information that computers can hold – as well as different types of computers. At the end of the lesson students will be told that this information is stored as a series of zeros and ones, which will serve as an opening for the next class.

DURATION

20 minutes.

MATERIALS

- Writing board;
- Projector;
- '1.1 - Computer Information' powerpoint.

PREPARATION

1. Traditional seating arrangements, either in rows or in groups.
2. Set up the projector with the '1.1 - Computer Information' powerpoint.

PROCEDURE

1. Begin by telling the students that they are starting their first module, 'Intro to Computer Science (CS)', or in other words, the study of Computers. Bring up the powerpoint to the slide, "Which of these are computers?", and ask which of the pictures correspond to one. Elicit the terms for each picture, i.e., desktop, laptop and mobile phone/smartphone. [When asked if this last one is a computer the students will probably say, "No, a mobile phone is not a computer". Accept this answer so that it can be picked up again in point 4]



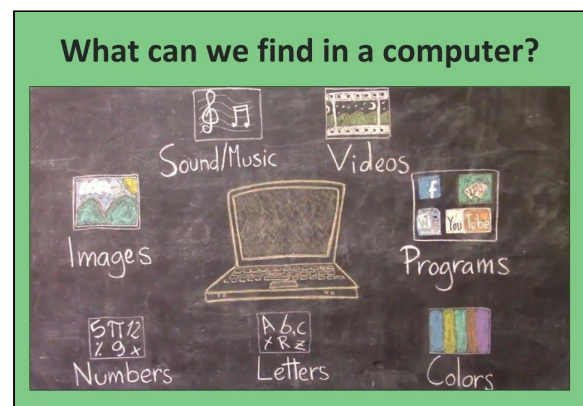
2. Bring up the slide "What can we find in a computer?", with just the computer in it, and



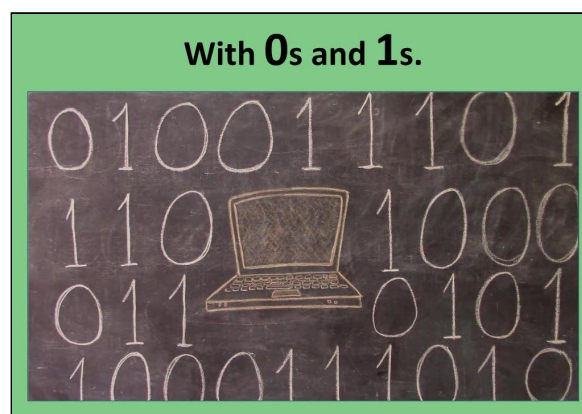
have students list the type of content they can find stored in a computer. Write down the answers on the board, and group them with headings along these lines:

- Images: photos, drawings, etc.
- Sounds: songs, etc.
- Vídeos: cartoons, movies, etc.
- Programs: facebook, youtube, games, etc.

3. Once students have finished listing the things they can find in a computer, go through the following powerpoint slides to see if anything was left out. The first few (slightly more abstract) elements are not usually mentioned by students, i.e., 'Numbers', 'Letters' and 'Colours'. But it should be pointed out that none of the other things would be possible without these basic ones (and these will be the elements that students will learn how to represent in binary in the following classes).



4. Using the next slide, "So, what's a computer?", revisit the question of whether our mobile phones are computers or not. Elicit the right answer by asking the students what they can find in a mobile phone, out of the list they have just elaborated: "Can I look at pictures? Watch a movie? Surf the web? Etc. So, then it *is* a computer!".
5. Moving on to the next couple of slides tell students that all of the things that have been listed constitute "Information". And, the computer stores this information using only two things: 0's and 1's. Lots and lots of 0's and 1's... The teacher will start explaining how on the next lesson.



SOURCES

- "[CS Unplugged - An enrichment and extension programme for primary-aged students](#)", Tim Bell, Ian H. Witten and Mike Fellows, 2015.

