Introduction to Computer Science

A creative and engaging start to learning computer science

The TEALS **Introduction to Computer Science** curriculum is based on the award-winning University of California at Berkeley CS 10 course, "Beauty and Joy of Computing" (BJC). TEALS has worked closely with the University to adapt BJC to be flexible and approachable for a wide range of high school students from diverse backgrounds. The course has successfully been implemented in hundreds of high schools nationwide. BJC has also been adapted to be a College Board endorsed Computer Science Principles curriculum.

Introduction to Computer Science is an engaging course that explores a variety of basic computational thinking and programming concepts through a project-based learning environment. Every unit of content culminates in a comprehensive project and roughly 75% of student time is spent building projects and practicing the skills they are learning.

Visual and approachable

Intro to CS uses SNAP!, an approachable visual block-based programming language with a robust toolset, perfect for introducing students to coding for the first time.

Flexible implementations

The TEALS Intro to CS course can be offered as a semester-long course offered twice in a single school year or as a year-long course with an expanded curriculum. The year-long class transitions to text-based programming using the beginner-friendly Python language in the second semester.

Curriculum materials

All TEALS curricula are available for free, non-commercial use through a Creative Commons license.

The Intro to CS curriculum includes:

- Daily lesson plans
- Required Text: *Blown to Bits*
- Student lab handouts
- Project specifications and grading rubrics
- Access to nationwide community of tech volunteers and teachers learning CS
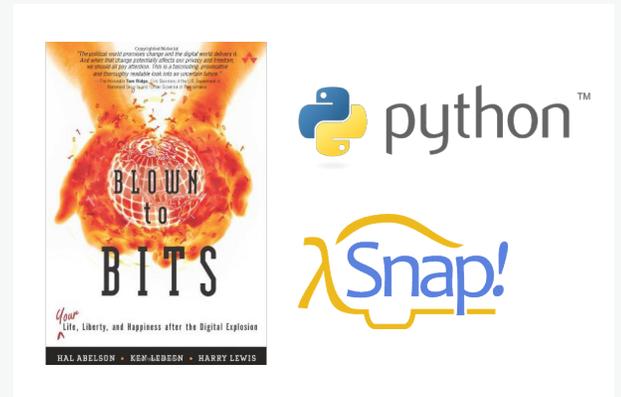
Semester 1: SNAP! Introduction to programming concepts	
UNIT	**PROJECT**
1: SNAP! basics	Animated nursery rhyme
2: Loops	Platform game
3: Variables and customization	Pong
4: Lists	Hangman
5: Cloning	Space invaders
6: Final project	Student designed final project

Semester 2: Python An introduction to text-based programming	
UNIT	**PROJECT**
1: Introduction to Python	Mad libs
2: Data types	Text-Based adventure game
3: Functions	Oregon trail
4: Loops	Tic-tac-toe
5: Sounds in Python	EarSketch song composition
6: Dictionaries	Guess who?
7: Objects	Python pokémon
8: Final project	Student designed final project

Try it!

What shape would this draw?
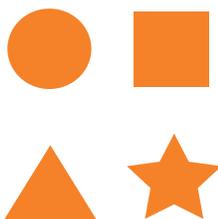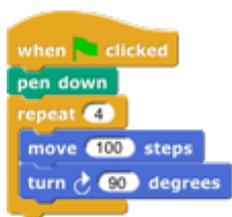
```
welcome = "Welcome to Python!"
schoolYear = "TEALS 2017/18"

print(welcome)
print(schoolYear)

x=2
y=3

if x < y:
  print ("CS Rocks!")
```