Preparing for the Computer Science Content on the iLearn Exam

Blueprints – specify, by percentage, how state standards will be assessed by iLearn testing

4th grade: https://www.doe.in.gov/sites/default/files/assessment/ilearn-science-blueprint-grade-4.pdf

6th grade: https://www.doe.in.gov/sites/default/files/assessment/ilearn-science-blueprint-grade-6.pdf

From the blueprints (updated summer 2018, and **won't be finalized until October 2018**), assessment categories have been designated:

Blueprint Categories		
	4th Grade	*6th Grade*
Questioning and Modelling (21-25 %)	3-5.CD.1 3-5.CD.4 3-5.DI.1 3-5.DI.2 3-5.IC.1 3-5.NC.2 3-5.PA.1	6-8.CD.1 6-8.CD.3 6-8.DI.3 6-8.DI.4 6-8.PA.1
Investigating (21-25 %)	3-5.DI.3 3-5.PA.2	6-8.DI.2 6-8.IC.1 6-8.IC.2 6-8.PA.2
Analyzing, Interpreting and Computational Thinking (25-29%)	3-5.CD.3 3-5.DI.4 3-5.IC.2 3-5.PA.3	6-8.CD.2 6-8.DI.1 6-8.DI.5 6-8.PA.3
Explaining Solutions, Reasoning, and Communicating (25-29%)	3-5.CD.2 3-5.DI.5 3-5.IC.3 3-5.IC.4 3-5.NC.1	6-8.CD.4 6-8.IC.3 6-8.IC.4 6-8.NC.1 6-8.NC.2

Item Specifications – Exemplar questions, including context details, by standard

(a) Database: http://iasstandardviewer-878159656.us-east-2.elb.amazonaws.com/

(b) Zip files of item specifications, note that these are not updated as frequently as the database contents. You must scroll down toward the bottom of the page to find the links. 4th and 6th grade links are individualized
General page link: https://www.doe.in.gov/assessment/ilearn-test-design

(c) **iLearn Released Items Repository – You can log in as a guest and see more finalized questions**
https://login11.cloud1.tds.airast.org/student/V280/Pages/LoginShell.aspx?c=Indiana_PT

Standards Unpacking – request access to free TeacherU materials that include standards unpacking with explanations, classroom activities, extensions, and more. (**microber@iu.edu**)

Scope and Sequencing :

An analysis of the CS standards permits a classification into three categories: already covering, covering but without CS word wall, and not covering. Content currently not being covered includes data representation and programming.

Data representation is sequenced across grade bands. Programming, however is not. K-2 requires no programming, 3-5 requires very little ("Solve a program using a block based language"). Most of the programming content is placed in 6-8, where coverage in time for iLearn will be challenging without impacting Science. Consider the following scope and sequence for a more smooth distribution of learning objectives in regard to programming (Note that debugging should be included at every level):

K-1 – Sequencing control structure and introductory event triggers (Click, Run, Flag)

2 – Add looping control structure (By implication, this also requires variables)

3 – More complicated looping (e.g., nested) and add simple branching

4 – More of above and add functions

5 – More of above and add compound conditionals and expressions (and, or and not); parameter passing and scoping

6 - Reinforcement