## **Video1:** [**Welcome for K-12 TKPJava Teachers**](https://www.youtube.com/watch?v=CNiPrGuR_7U)

# **00: Instructional Design Information**

## **Getting Started — for Teachers:**

This section contains instructional design material about TKPJava courseware.

Topics include:

* How to Teach TKP Courses
* About The TKP Intentional Method
* What are the Parts of each TKP Course?
* How TKP uses Agile Technical Practices
* Why Pair Programming
* TKP Classroom Management Tips
* Guide to TKP Java courseware and source code on Github
* Guide to Authoring TKP Recipes
* TKP courseware for other computer languages – SmallBasic, C#, T-SQL and more

## **Video2:**[**SimpleSquare Variation for TKP Java**](https://www.youtube.com/watch?v=kh8w_plilUU)

# **01: Intro to Classes, Methods and For Loops**

## ***Make a Square and other shapes to learn basic programming objects.***

## **Concepts Taught:**

Students will learn the following concepts in this unit:

* Programming objects
* Classes
* Methods
* For loops

Students will use the Java programming language and a customized (simplified) version of the Eclipse code editor.

## **Video3:** [**Houses Recap for TKP Java**](https://www.youtube.com/watch?v=nQlsrnaMeuw)

# **02: More Methods and Intro to Variables**

## ***Draw some Houses to learn more about methods. Also learn how variables work.***

## **Concepts Taught:**

Students will learn how to write and to extract methods using the refactoring tools in Eclipse.

Students will learn how to declare, set and change the value of variables in this course.

## **Video4:** [**HiLow Recap for TKP Java**](https://www.youtube.com/watch?v=nQlsrnaMeuw)

# **03: Intro to Conditionals with If Statements**

## ***Make a game to learn more about If statements.***

## **Concepts Taught:**

## **Students will learn how to write conditional statements using the If-Else If-Else construct.**

## **Video5:** [**PentagonCrazy Recap for TKP Java**](https://www.youtube.com/watch?v=rsJ5m_zxnnE)

# **04: Mastery Unit**

## ***Make a crazy Pentagon using classes, methods, variables, for loops and if statements***

## **Concepts Taught:**

Students will learn how to combine core programming concepts, including classes, methods, variables, for loops and if statements.

## **Video6:**[**TurtleTree TKP Recap for TKP Java**](https://www.youtube.com/watch?v=LVWVMTPPeKE)

# **05: Intro to Recursion**

## ***Draw a beautiful Tree and learn about recursion***

## **Concepts Taught:**

Students will learn about recursion and continue to use core programming concepts such as classes, methods and variables.

## **Video7:** [**AdLibs Recap for TKP Java**](https://www.youtube.com/watch?v=1HSWdT4-czc)

# **06: About MVC – Model-View-Controller**

## ***Write a funny Ad Lib and learn about the MVC coding pattern***

## **Concepts Taught:**

Students will learn string concatenation as well as working with the MVC (model-view-controller) pattern.

## **Video8:** [**Bubble Recap for TKP Java**](https://www.youtube.com/watch?v=3aihvg44gNs)

# **08: Intro to Events**

## ***Work with Bubbles and Turtles to learn about programming events, objects and instances***

## **Concepts Taught:**

Students will learn how to work with programming events which are triggered by mouse activity – movement and clicks. Students will also continue learn about objects, instances and constructors.

## **Video9:** [**FizzBuzz TDD Recap for TKP Java**](https://www.youtube.com/watch?v=p5EAGD7fOHQ)

# **09: Final Unit – Real-world Coding**

## ***Learn how to use TDD with the FizzBuzz coding challenge and more***

## **Concepts Taught:**

Code Katas – FizzBuzz

How to code conditional logic in multiple ways

Type conversions (String, Integer)

Test-driven development with JUnit

Real-world coding – completing the ‘Simple Puzzle’

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