Question: Can you create a count-controlled loop?
Programming A- repetition in shapes.

National Curriculum Link:
-Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
-Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
-Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
-Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

International Baccalaureate Learner Profile Link:

Balanced.
To understand the impact on my mind, body and emotions.
Understanding the impact on others.
Principled.
To take my time and think before acting.
To remain calm, thoughtful and deliberate in my actions.

Prior Skills: Year 3	New Skills: Year 4	Future Skills: Year 5
To use a computer to create an animation (tell a story). To set up a device to capture freeze frame photos. To capture a series of images. To use tools to review subject position. To move a subject between captures. To play a sequence of images back to review. To remove images to improve an animation. To add sound effects. To add text (captions). To play back and review a film.	To list an everyday task as a set of instructions including repetition. To use an indefinite loop to produce a given outcome. To use a count-controlled loop to produce a given outcome. To plan a program that includes appropriate loops to produce a given outcome. To recognise tools that enable more than one process to be run at the same time (concurrency). To create two or more sequences that run at the same time.	To create graphical objects on a computer screen. To select a shape type to add to a drawing. To select a line type to add to a drawing. To add text to a drawing. To drag out an object on the page. To duplicate an object. To select an object. To delete an object. To reposition objects. To rotate objects. To resize an object. To alter object proportions. To recolour an object. To select multiple objects. To group objects. To modify multiple objects. To change the layers of an object.

Knowledge, Skills and Understanding
To use technology to collect, sort and display information that could include data, photos, video or sound. To learn and access different types of media content on their device. Including; sound, images, books, podcasts/ audiobooks and video via the web
Challenge

| Resources: Hardware: iPads, Computers   You can use Turtle Academy online at turtleacademy.com/playground | Websites or Apps: Apps: Book creator https://codakid.com/coding-for-kids-the-ultimate-guide-for-parents-2/ https://funtech.co.uk/latest/4-best-kids-coding-languages-to-start-them-programming |

You can download FMSLogo from fmslogo.sourceforge.net	**Extended Writing Opportunities:** Make a count-controlled loop using only 2D shapes.
Vocabulary: Compute, program, Logo, commands, code, algorithms, implement, debug, values, actions, procedure, evaluate.	**Numeracy skills:** Notice repetition within shape.
Suggested Quality Texts: See selection in library.	**WOW Experience:** Visitor to visit to share coding ideas and examples.
Cross Curricular Links: Art/DT: building a program on paper before computer.	