On The Tiles

Assessment Focus

Interactive Design

- Explore (2)*

- Evaluate

- Exhibit

Pupil Notes

Level 3	Part 1
Level 4	Part 2

* Explore (2) refers to the second bullet point of Explore in the Levels of Progression.

Task Description

In this task pupils should use a suitable package, such as Black Cat Logo or Scratch, to design three regular shapes - a square, triangle and hexagon. These will be used to design a tessellating pattern.

When making a judgement of the pupil's level of Using ICT competence within this task, teachers should use the Assessment Criteria Grid.

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Prior Knowledge/Experience

Depending on the level at which they are working, pupils should have some experience in some of the following:

- regular 2D shapes and their angle properties;
- tessellating patterns;
- using Black Cat Logo (or other Logo program) or Scratch;
- altering pen width and colour;
- using repeat commands to draw patterns/shapes;
- designing and naming simple procedures to draw patterns/shapes; and
- saving and printing work.

Resources

Suitable software, for example, Black Cat Logo or other Logo program or Scratch.

Managing the Task

Pupils should be given opportunities to:

Plan

Pupils should plan and write commands to draw the three regular shapes using the Pupil Notes as a stimulus.

Do

Pupils should work individually to test out the commands using a suitable ICT package. They should make use of pen width and colour icons in their overall tessellating pattern. Depending on the level at which they are working, they should store, save and retrieve their work appropriately.

Review

Pupils should be given the opportunity to discuss their pattern with their peers. They should reflect on the process and make any improvements if required.

Evidence for External Moderation

As well as submitting the final product, please include;

- evidence of planning
- a pupil evaluation at the appropriate level

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Rewarding Learning

Assessing Pupils' Responses to the Task

The first column of the Assessment Criteria Grid sets the Requirements for Using ICT that are covered in this task. Alongside this are the Levels of Progression and the Using ICT Desirable Features for Interactive Design at Levels 3 and 4. These Desirable Features have been produced as guidance for teachers to consider when observing a pupil and assigning a level to a piece of work. When coming to a holistic judgement of the pupils' level of Using ICT competence, teachers should ensure that these Desirable Features are used in conjunction with the Using ICT Levels of Progression.

Assessment Criteria Grid		
Using ICT Requirements	**Level 3**	**Level 4**
Explore • investigate, make predictions and solve problems through interaction with digital tools.	Pupils can: • carry out and edit a series of instructions, make predictions and solve problems using a digital device or environment;	Pupils can: • investigate and solve problems in a digital environment;
Evaluate • talk about, review and make improvements to work, reflecting on the process and outcome and consider the sources and resources used, including safety, reliability and acceptability.	• make modifications to improve their work; and	• use appropriate ICT tools and features to improve work; and
Exhibit • manage and present their stored work and showcase their learning across the curriculum, using ICT safely and responsibly.	• save using file names and select work to showcase learning digitally.	• select, organise, store and retrieve their work to showcase learning digitally in a personalised area.

Pupils should demonstrate, when and where appropriate, knowledge and understanding of e-safety including acceptable online behaviour.

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Desirable Features	
Interactive Design – Level 3	**Interactive Design – Level 4**
Pupils can: • solve problems using a digital device or environment, *for example plan and create a simple Scratch project or use the 'repeat' command to create patterns or shapes using Logo or Scratch*; • input sequences of commands; and • make modifications to improve their work.	Pupils can: • investigate and solve problems in a digital environment, *for example access and view Scratch projects and modify these for their own use, or create their own Scratch project or Mediascape showing an awareness of audience*; • input more complex sequences of commands, *for example in Scratch use the 'broadcast' and 'when I receive' commands within a script or create and use procedures in Logo*; and • use appropriate ICT tools and features to improve work.

On The Tiles (for use with Blackcat Logo)
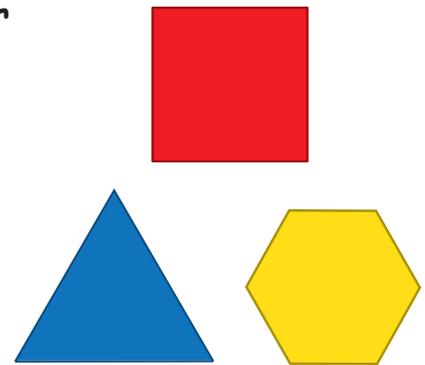
Part 1

Use Black Cat Logo (or other suitable program) to design three shapes which could be tessellated – a square, a triangle and a hexagon.

Use the REPEAT command to make your tessellating shape.

Choose a colour and pen width.

Give your work a name and save it.

Show your shapes to others in the class.

Part 2

Create a procedure using Blackcat Logo or other suitable software to draw a square, triangle and hexagon. Choose one of the shapes and use the repeat command along with your procedure to make a tessellating pattern.

Create a folder and name it. Save your work into it.

Discuss how you made your patterns with others in the class.

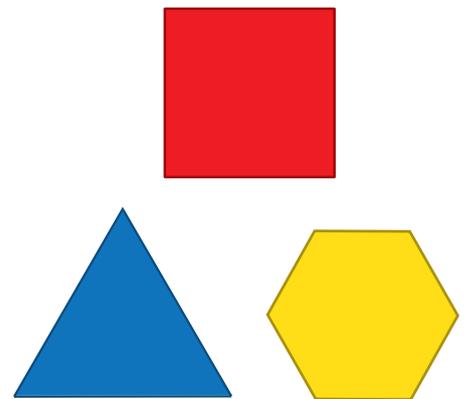# On The Tiles (for use with Scratch)

Part 1

Use Scratch to design three shapes which could be tessellated – a square, a triangle and a hexagon.

Use a REPEAT loop to make your tessellating shape.

Choose a colour and pen width.

Give your work a name and save it.

Show your shapes to others in the class.

Part 2

Use Scratch to draw a square, triangle and hexagon using procedures (broadcast/receive). Choose one of your shapes and use it to make a tessellating pattern.

Create a folder and name it. Save your work into it.

Discuss how you made your patterns with others in the class.